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A Study on Asset Liability Management and Profitability of Aavin Co-Operative Milk Producers in Chennai City

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Abstract. For every business the main motive will be wealth maximisation and profit maximisation. This study Asset – Liability Management will help the banking and Industrial sector to improve their financial performance as well as the way to increase the profitability of the business. The main objective of this study is to determine the performance of asset and liability of Aavin Co-operative Milk Producers as well as to analyse the profitability position for five years. The research design adopted will be Empirical design with Positivism as Research philosophy and deductive approach as the research approach. The financial data required for analysis were taken from Money control website and five years data from 2007 to 2012 were taken for analysis. The tools used to analyse the data will be Ratio analysis, Linear regression analysis used for hypothesis testing and Correlation Matrix. Assets liability management study will determine that whether the company is having sufficient assets to overcome all its liability and what steps can be developed to overcome their difficulties. The researcher has taken the secondary data (Profit & Loss Statement and Balance Sheet) to study the fact which can be extended and applied over a period of time.

Keywords: Asset, Liability, Financial Performance and Profitability.

1 Introduction:

Asset liability Management is a study which is used to increase the financial performance of the company. The financial analysis helps each and every organisation to make a starting point to run the business successfully and to forecast the future plans, to plan, prepare budget, to prepare cost estimates and to determine the working capital requirement to meet their day-to-day requirement. Assets Liability details can be obtained from the balance sheet and the asset turnover ratio, profitability ratio and other ratios will determine the financial ability of the organisation. Asset liability management will help the organisation to plan for increase the value of assets as well as to payback their liabilities to the earliest. Asset can be long term assets, short term assets,

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tangible assets or intangible assets in the same way the liability can be short term liability and long-term liability. It also comprises with the details of loans and advances, fixed deposits and other details such as equity liability. The financial analysis of profitability statement will help to determine the financial position of the company such as present and future profitability position, Operation efficiency, financial stability and so on.

1.1 Objectives of the study:

- To determine the financial stability of Asset Liability Management position of Aavin.
- To analyse the financial Profitability of Aavin Co-operative Milk Producers.
- To provide recommendations to improve the financial performance of Aavin in Chennai City.

1.2 Research Gap:

The Literature study reveals that many researchers has studies the Asset Liability Management Topic in banking sectors by obtaining the data from FBI (Financial Banking Information) which is available in RBI website or through BankScope.Com. There were very few studies which is carried out on companies and organisations. The researcher has used this gap and taken as challenge to do the analysis on Aavin Cooperative Milk Producers Company.

2 Literature Reviews:

Krishnan G (2021), In his Study titled, "Arun Aavin Project" he has analysed the financial performance using ratio analysis as an important tool to find out the profitability and financial stability of Salem District Milk Cooperative Society, He has used current ratio to determine the Asset and Liability Management of Aavin. Mitra and Schwaiger (2011), ALM serves as a financial tool aimed at decision-making to maximize stakeholder value. They have used Asset Liability model to analyse the financial ability of the concern.
Asset-liability management (ALM) is used traditionally, banking and insurance sectors were using accrual accounting for analysing their data. Kaakandikar. R and Ponam. A (2022) in their study titled, "A study of Asset and Liability Management with reference to Dytech Engineering India Pvt Ltd", has used ratio analysis and comparative balance sheet to analyse the information collected. Their major analysis was focusing on the effective asset liability management technique which aims to manage the "volume mix, maturity, rate, sensitivity, quality & liquidity of assets & liabilities" so as to attain a predetermined acceptable risk. They have found out that 50% of Liabilities were matured within a year but only 10% of Asset were matured in a year. This indicates that

there are no sufficient assets to overcome the Liability. ALM helps in co-ordinated management in the balance sheet of the company. This encapsulates “lending, funding, liquidity, capital” and all that goes with it, including interest-rate risk, currency risk, margins and pricing. This is sometimes referred to as Balance Sheet Management. The ALM focuses on credit management, allocation and management of assets and equity, risk management. Bank gains profit on Interest on Loans paid than pay an interest on deposits. Bank faces inability in reaching its originality of financial statements when they approach for Loans, so it finds difficult to compute the exact Asset Liability Management (Shetty. C and Patel. P (2016).

3 Research Methodology:

Research design: Empirical Analysis, Research Philosophy: Positivism, research Approach: Deductive approach, Research strategy: Grounded Theory Strategy, Data Collection: Secondary data from Websites and Tools used for analysis: Ratio analysis, Paired Sample t test, Descriptive Statistics. Saunders et.al (2019).

4 Data analysis and Interpretation:

Table 1. Showing the details of Net Profit / Loss from 2011 – 2012 to 2018 – 19.

S. No.	Year	Total Sales Revenue	Federation Sales Revenue	Union Sales Revenue	Federation Profit / Loss	Unions Profit / Loss	Net Profit / Loss (Rs.in Cr)
1	2011-12	2652.00	928.48	1723.52	-41.26	-19.91	-61.17
2	2012-13	3284.00	1145.76	2138.24	49.08	66.28	115.37
3	2013-14	3518.00	1205.47	2312.53	10.83	125.35	136.18
4	2014-15	3881.00	1397.72	2483.28	-62.04	16.66	-45.38
5	2015-16	5139.00	1680.56	3458.44	70.40	-82.77	-12.37
6	2016-17	5281.00	1752.44	3528.56	27.56	111.78	139.34

S. No.	Year	Total Sales Revenue	Federation Sales Revenue	Union Sales Revenue	Federation Profit / Loss	Unions Profit / Loss	Net Profit / Loss (Rs.in Cr)
7	2017-18	5478.00	1859.66	3618.34	34.30	-62.26	-27.96
8	2018-19	5994.00	2017.86	3976.14	14.50	-27.86	-13.36
	Total	**35227.00**	**11987.95**	**23239.05**	**103.37**	**127.27**	**230.65**

Source: Secondary data, https://aavin.tn.gov.in/statistical-information

From the above table it clearly indicates that in the financial year 2017-18 and 2018-2019 the Aavin Milk Cooperative Society has faced Net loss in union territory basis in Chennai city. The profit which obtains in federation basis were not sufficient to meet its all liabilities. This reflects that after the year 2016 – 17 Aavin is getting continuously loss only. Even in the previous years also the Aavin milk producers have suffered loss only.

Table 2. Showing the detail of descriptive frequency table

	2020	2019	2018	2017	2016
N	26	26	26	26	26
Mean	14.4	15.9	17.0	12.9	11.5
Median	7.85	8.64	7.96	7.36	6.87
Standard deviation	19.3	21.2	23.3	16.2	13.8
Minimum	0.00	0.00	0.00	0.00	0.00
Maximum	58.0	64.4	69.0	51.4	45.5

Source: Primary data

Fox, J., & Weisberg, S. (2020), Using Jamovi the above descriptive statistics table was generated. Which indicates that the mean difference and standard deviation is comparatively higher that the year 2016 and 2017.

Paired sample T test in testing the hypothesis as shown below:
H_0 = There is no relationship between the Asset Liability of 2020 – 2019 with the data set of 2019 – 2018.

Table 3. Showing the details of Paired Sample t-test

Paired Sample t - test

Year		statistic	df	p	Mean difference	SE difference
2020	2019	-3.275	25.0	0.003	-1.53	0.466
2019	2018	-0.316	25.0	0.055	-1.07	0.396

Table 4. Shapiro – Wilk Normality Test:

			W	p
2020	-	2019	0.674	< .001
2019	-	2018	0.647	< .001

source: Primary data analysis using Jamovi.

With the help of Allen Shapiro – Wilk test of normality from the above table it indicates that the p-value is lesser than .05. The mean difference is highly negative compared to the year 2019 – 2018. The p value is .001 which is highly significant at 95% of confidence level. The null hypothesis was rejected at degree of freedom 1. Which shows that there is some relationship in the asset liability management compared to the year 2019 – 2018.

Table 5. Showing the details of Asset and Liabilities for 5 years

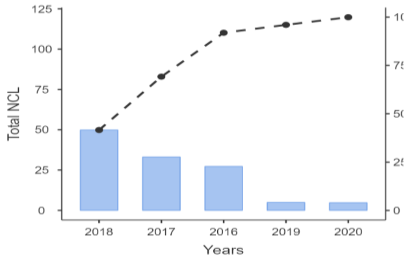
Year	Total Shareholders fund	Total Non-Current Liabilities	Total Current Liabilities	Total Non-Current Assets	Total Current Assets
2020	8.95	4.73	35.91	7.85	50.18
2019	8.95	4.91	41.92	8.98	55.44
2018	8.95	49.84	2.25	10	59.01
2017	8.95	33.08	2.03	11	40.42
2016	8.95	27.23	2.47	10.88	34.63

Source: Primary data

Interpretation:

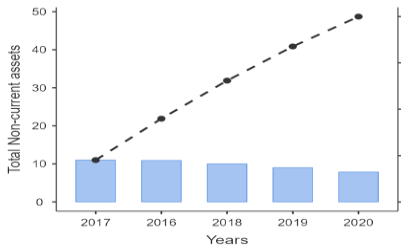
From the above table it is clearly understood that the share holders' funds contribution remains same every year whereas the total noncurrent liabilities were drastically reduced in the year 2019 and in the year 2020 it is further more reduced. The Asset Liability Management can be explained with the following charts given below.

Chart 2.1: Showing the details of stability of Non-Current Liability



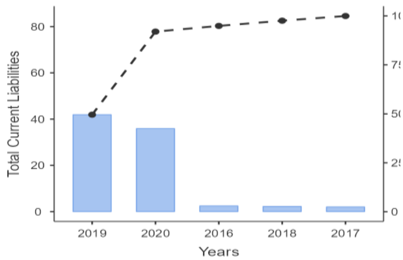
Interpretation: The Non-current liabilities were stable after the year 2016.

Chart 2.2: Showing the details of stability of Non-Current Assets



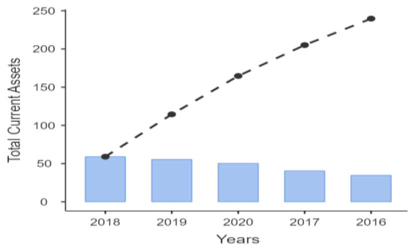
Interpretation: The Non-current Assets were showing constant growth every year.

Chart 2.3: Showing the details of stability of Current Liability



Interpretation: The current liabilities were stable and were high in the year 2019 and 2020.

Chart 2.4: Showing the details of stability of Current Assets



Interpretation: The Current Assets were showing stable growth in the year 2018, 2019 and 2020. That indicates that there were sufficient Assets to meet their liabili-

Table 6: showing the p value of normality test.

			W	p
Total Non Current Assets	-	Total Non-current Liabilities	0.916	0.504

Table 6: showing the p value of normality test.

			W	p
Total Current Assets	-	Total Current Liabilities	0.915	0.500

Interpretation: The P values shows that the low volatility of assumptions made for ALM

Table 7: Showing the Paired Samples T-Test

		statistic	df	p	Mean difference	SE difference	Effect Size
Total Non CA	Total Non CL	1.73	4.00	0.016	14.2	8.24	0.772
Total CA	Total CL	-3.84	4.00	0.018	-31.0	8.08	-1.717

Table 6: showing the p value of normality test.

	W	p

From the below results the hypothesis testing done for the below two statements:

1. Whether there is sufficient non- current Assets to meet all the non-current liabilities

H_0- There is no sufficient Non-Current Assets to meet all the non-current Liabilities
H_1- There is sufficient Non-Current Assets to meet all the non-current Liabilities.
Result: The p value is 0.504 which is greater than 0.05 at 5% level of significance as per t test. H_0 was accepted and the alternative hypothesis were rejected. (Friedman Test or Kruskal Wallis Test) So, it is proved by t test that there is no sufficient Non-current Assets to meet all their non-current Liability.

2. Whether there is sufficient Current Assets to meet all the current Liabilities.

H_0- There is no sufficient Current Assets to meet all the current Liabilities
H_1- There is sufficient Current Assets to meet all the current Liabilities
Result: The p value is 0.018 which is lesser than 0.05 at 5% level of significance as per t test. H_0 was rejected and the alternative hypothesis were accepted. So, it is proved by t test that there is sufficient current Assets to meet all their current Liability.

Table 8: Showing the details of descriptive statistics of ALM.

Descri2pives

	N	Mean	Median	SD	SE
Total NCL	5	23.96	27.23	19.34	8.650
Total Non-current assets	5	9.74	10.00	1.33	0.596
Total Current Liabilities	5	16.92	2.47	20.19	9.031
Total Current Assets	5	47.94	50.18	10.22	4.569

Interpretation

The descriptive statistic shows the status of Asset and Liability the Standard deviation indicates that among the other sources of CL and NCL the deviations were more and among the Assets the standard deviations were comparatively less. This indicates that the Asset position in the company remains constant every year.

3. Findings

- From the Profit and Loss statement it is seen that there is decrease of 13.36 crores of net profit for the year 2018 – 19. And 27.96 crores net loss in the year 2017 – 2018. It is found out that the Aavin milk Producers company in Chennai is in Financial Crisis.
- The Shapiro – Wilk test proves that there is significant relationship between the non-current liability and non-current assets as per the p value which is less than 0.05.
- It is also found out that the share holders fund contribution remains same every year which is 8.95 crores. As well as there is sufficient Assets to overcome their liabilities.
- The financial stability is shown in the charts and it indicates that the Non-current Liability and Current liability were decrease in the financial year 2018 and 2019 respectively but there is some constant stability in the current assets and non-current assets. Which indicates that the asset position is managed well in the Aavin milk Producers company.
- The hypothesis testing result indicates that the H_0 is rejected in the both hypotheses and it indicates that there is some relationship between (NCL and NCA) & (CA and CL), which represents that the asset liability management is done efficiently. The financial position is positive even the mean difference and standard deviations were more among the Assets and liabilities.

4. Suggestions and Recommendations

The financial position from the balance sheet were not good compared to the previous years this may be due to covid scenario as in Chennai city the sales revenue and the net profit were declined. It is recommended that if the cost of milk and the product of milk product were reduced by providing offers and discounts it may increase the sales revenue as well as it may increase the profitability position in the future. The profitability of the company can be increased when the milk productivity expenses were reduced and attractive promotional strategies, effective advertisement were used. The price of Aavin is comparatively high in comparison with Hatsun, Arokya and Country milk. If still Aavin is going to continue the same pricing strategy it will be in financial crisis. As well as Aavin should also use the mobile applications like country delight, Zepto to sell their milk Products to capture the entire market in Chennai City. The shareholders funds can be increase to invest in the growth of the organisation and bring variety of difference in the milk products to attract the buyers. Aavin should also advertise based on segmentation especially focusing on different age group of the people. Such as ice-cream in different flavours than usual vanilla and strawberry flavours. They can also attract the distributors by supplying different product such as different layer of ice-cream layers in ice-cream cake. Different fruit flavours with raw fruits can also provide nutritive values to the product. Innovative and creativity in the products will definitely increase the profitability in the future.

5. Conclusion

This study is carried out with the secondary data availed from various websites, even the current financial year data were not able to obtained may be due to covid circumstances the Aavin Milk Productivity may be topped as well as there may not be any financial statements available. This study helps to get an understanding about financial position and profitability based on the secondary data analysis. This study findings and recommendations will further provide a path way for the future research where the researcher can to comparative analysis as well as set a trend for the future forecasting. Finally, to conclude if Aavin increase the sales revenue by doing attractive advertising and use digital marketing strategies it can increase its profitability. The old strategy of marketing mic 4 P's should not be used, instead the 4 E's of marketing mix can be adopted. The pricing strategy should also be changed with attractive offers it can bring in to have good asset liability management in Aavin milk Producers Society in Chennai City.

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