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NEED/IMPORTANCE OF THE STUDY
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FINANCING PATTERN AND UTILISATION OF FIXED ASSETS IN BATTERY INDUSTRY IN ANDHRA PRADESH

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ABSTRACT

Batteries are an integral part of our everyday lives. Batteries are portable storehouses of energy. Fixed assets are those assets that are of permanent nature having a life expectancy of more than one year and are used by a firm in its normal operations. The research paper aims at examining the various dimensions of financing pattern and utilization of fixed assets of battery industry in Andhra Pradesh. The analysis of data is carried out through fixed assets to net worth ratio, fixed assets to long term funds ratio and fixed assets turnover ratio. Further, various statistical tools like arithmetic mean, standard deviation, co-efficient of variation, co-efficient of correlation, and students 't'–test are also applied. Graphs and diagrams are presented to illuminate the facts and figures at appropriate contexts. Long term funds constitute owners' funds and long-term debt should alone be used to finance fixed assets. The average fixed assets to net worth ratio was less than the unity in all battery companies in Andhra Pradesh. It indicates that the proprietary funds were sufficient to finance the fixed assets requirement. As a result, all battery companies were depending upon the shareholders' funds to meet their quantum of fixed assets. Fixed assets to long term funds ratio worked out to less than the unity during the entire study period in all battery companies under study and the industry in Andhra Pradesh. It indicates that the long term funds were fully adequate to finance fixed assets as well as the part of current assets. One of the most potent tools employed to evaluate the effectiveness of the utilisation of fixed assets is assets turnover. ARBL and HBL, have become symbols of under utilisation of fixed assets and idle investments. But only one company – NBL – is a rare exception to this phenomenon. It reveals that NBL utilised its fixed assets effectively, whereas ARBL and HBL could not do so.

KEYWORDS

ARBL, HBL, NBL, battery industry in A.P.

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INTRODUCTION

Batteries are an integral part of our everyday lives. Batteries provide us with a mobile source of power that makes many modern conveniences possible. Batteries are portable storehouses of energy. A battery is an electrochemical device in which the free energy of a chemical reaction is converted into electrical energy. Batteries of immense variety and of different sizes are manufactured for industrial, automotive and consumer applications.

Fixed assets are those assets that are of permanent nature having a life expectancy of more than one year and are used by a firm in its normal operations. To quote Finny and Miller, fixed assets are the assets of a relatively permanent nature used in the operation of a business and which are not intended for sale (Finny and Miller 1968). Sometimes, the term fixed assets is used to designate the fixed or permanent investment in tangible assets of a business enterprise. They are necessary for manufacturing firms, since production would be impossible without them (Gitman, 1982).

REVIEW OF LITERATURE

Gangadhar made an important attempt to study the financial analysis of companies in Eritrea. Various ratios relating to profitability, liquidity, solvency and asset management are used for the study. He found that the management of Asmara Brewery Factory Limited had to strive for maximizing the assets efficiency through optimum sales with efficient use of the assets (Gangadhar, 1988). A noteworthy study was undertaken by Sanjib Roy to analyse the financial performance of Indian Tea Industry. He made an attempt to study the financial statement analysis which represents the earning power of an entrepreneur and ratio analysis which can measure managerial efficiencies. He explained that a high degree of fixed assets turnover ratio may mean efficient utilization of plant and machinery etc., (Sanjib Roy, 1998). Rajesh in his study entitled, Financial Performance of Select Drug and Pharmaceutical Industries in Andhra Pradesh, analyses the impact of fixed assets expansion was effective on sales of all the sample units so that the units can make more operating profits (Rajesh, 2008). Padmini in her study, Financial Performance of Pharmaceutical Industry in India, concluded that there is effective use of long term funds to finance the fixed assets and also to finance the core current assets in Industry. She suggests that the proportion of proprietary funds have to be increased in order to provide greater coverage to fixed assets in all the pharmaceutical groups (Padmini, 2012).

OBJECTIVE OF THE PAPER

The research paper aims at examining the various dimensions of financing pattern of fixed assets and utilization of fixed assets of battery industry in Andhra Pradesh.

HYPOTHESES

The hypotheses formulated in the present study are:

i) There is no significant difference between the fixed assets to net worth ratio of individual battery companies and the battery industry in Andhra Pradesh.
ii) There is no significant difference between the fixed assets turnover ratio of individual battery companies and the battery industry in Andhra Pradesh.

RESEARCH METHODOLOGY

SAMPLE DESIGN

According to A.P. industries website, four registered battery companies are operating in the state of Andhra Pradesh. They include Nippo Batteries Limited (NBL - 1972), Amara Raja Batteries Limited (ARBL - 1985), Hyderabad Batteries Limited (HBL - 1986) and Energy Leader Batteries India Limited (ELBIL - 2007). In order to carryout time series analysis, the companies with ten years of existence were brought into the sample frame. In other words, the companies which were established prior to 2002-03 alone are considered for the purpose of the study. Barring ELBIL, the rest of the battery companies fulfilled this criteria.

DATA BASE

The present study is based on the secondary data only. The data for the study have been primarily obtained from the annual reports of select battery companies in Andhra Pradesh. Relevant information is also gathered from the data published by the reports of battery companies, libraries of various institutions and the companys' website and other related websites on the battery industry were consulted. Also internet, journals, magazines, periodicals and research dissertations on finance and industry have been referred.

PERIOD OF THE STUDY

The present study needs a lengthy period so as to arrive at meaningful and purposeful inferences. Therefore, a ten year period commencing with the financial year 2002-03 and ending with 2011-12 has been adopted.

SCOPE AND LIMITATIONS OF THE STUDY

The present study is confined to issues relating to analyzing the financial pattern and utilization of fixed assets in battery industry in Andhra Pradesh. The present study may not be free from limitations. The figures taken from the annual reports have been rounded off to two decimals of rupees in crores. Secondary data have been collected from more than one source. Hence, there may be slight discrepancies between one source and another on the same variable. The reliability and correctness of calculation and findings depend upon the information obtained through secondary data.

TOOLS AND TECHNIQUES OF ANALYSIS

The data gleaned from the annual reports of select battery companies in Andhra Pradesh has been carefully processed, tabulated, analysed, and interpreted by using well established financial tools. The analysis of data is carried out through fixed assets to net worth ratio, fixed assets to long term funds ratio and fixed assets turnover ratio. Further, various statistical tools like arithmetic mean, standard deviation, co-efficient of variation, co-efficient of correlation, and students 't' – test are also applied. Graphs and diagrams are presented to illuminate the facts and figures at appropriate contexts.

ANALYSIS

FINANCING PATTERN OF FIXED ASSETS

The investment in fixed assets involves commitment of funds for longer periods into the future and usually are difficult and costly to reverse often as they are in large increments (Hunt and Donaldson, 1965). As such, fixed assets represent permanent investment of funds and, therefore, they have to be financed primarily by the owners' funds. Usually, funds provided by the owners should be sufficient not only to finance the entire requirements of fixed assets but also some of the current assets, which are relatively permanent in nature. Further, fixed assets are to be preferably financed through long-term debt. It implies that in any situation, an enterprise's fixed assets should not be financed by the short-term funds. In other words, long-term funds constitute owners' funds and long-term debt should alone be used to finance fixed assets. In order to study the financing pattern of fixed assets in the battery industry, two relevant ratios viz., fixed assets to owners' funds or net worth and fixed assets to long-term funds have been computed.

FIXED ASSETS TO NET WORTH

Fixed assets to net worth ratio is an important tool for judging the margin of safety for long-term creditors. The ratio explains the relationship between fixed assets and tangible net worth. To quote Roy Chowdhary, the ratio of fixed assets to owners' funds indicates the relationship between net worth and investment in fixed assets i.e., gross block less depreciation (Roy Chowdhary, 1970). The ratio is calculated by dividing the net fixed assets with owners' funds (tangible net worth). Thus,

$$\text{Fixed Assets to Net Worth Ratio} = \frac{\text{Fixed Assets (Net)}}{\text{Net Worth}}$$

Table 1 and Figure 1 indicate the ratio of fixed assets to net worth in select battery companies and the battery industry in Andhra Pradesh.

AMARA RAJA BATTERIES LIMITED

In ARBL, the ratio had exceeded the standard norm of 0.65 times in the initial seven years from 2002-03 to 2008-09. After that the ratio showed below the norm of 0.65 times in the concluding years of the study from 2009-10 to 2011-12. The average fixed assets to net worth ratio of ARBL was higher than the standard norm. The ratio had varied from the lowest of 0.49 times in 2011-12 to the highest of 0.91 times in 2008-09. The volume of net fixed assets had increased from Rs.121.87 crores in 2002-03 to Rs.402.62 crores in 2011-12 with an average of Rs.244.18 crores and net worth had surged up to Rs.823.47 crores in 2011-12 from Rs.175.13 crores in 2002-03. Net fixed assets and net worth have shown an increasing trend over the study period. Net worth had outweighed the net fixed assets during the entire period of study. It reveals that the shareholders' funds were sufficient to finance fixed assets requirement.

TABLE 1: FIXED ASSETS TO NET WORTH RATIO (in times)

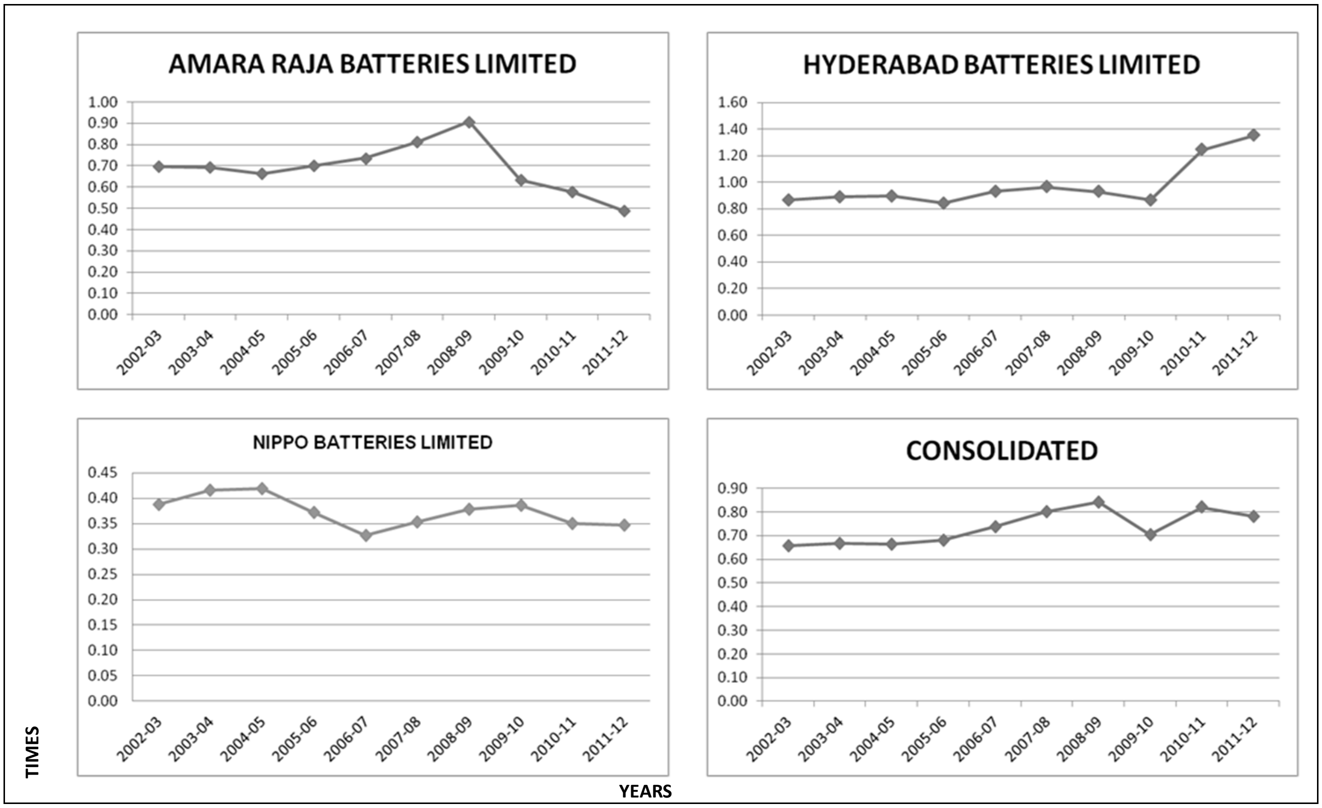
YEAR	ARBL	HBL	NBL	CONSOLIDATED
2002-03	0.70	0.86	0.39	0.66
2003-04	0.69	0.89	0.42	0.67
2004-05	0.66	0.90	0.42	0.66
2005-06	0.70	0.84	0.37	0.68
2006-07	0.74	0.93	0.33	0.74
2007-08	0.81	0.96	0.35	0.80
2008-09	0.91	0.93	0.38	0.84
2009-10	0.63	0.87	0.39	0.71
2010-11	0.58	1.25	0.35	0.82
2011-12	0.49	1.35	0.35	0.78
Average	0.69	0.98	0.38	0.74

Source : Annual reports of select battery companies in Andhra Pradesh

HYDERABAD BATTERIES LIMITED

In HBL, the ratio had exceeded the idle norm of 0.65 times over the study period. At the same time, the ratio had outstripped the unity only in two years i.e., 2010-11 and 2011-12. It implies that the company was not able to finance its fixed assets comfortably in the last two years of the study. Net fixed assets had reported an increasing trend from Rs.84.17 crores in 2002-03 to Rs.716.39 crores in 2011-12 and net worth had increased from Rs.97.39 crores in 2002-03 to Rs.530.03 crores in 2011-12. The ratio varied between the minimum of 0.84 times in 2005-06 and the maximum of 1.35 times in 2011-12 with an average of 0.98 times. It may be observed that the company not only used ownership funds but also borrowed funds to finance fixed assets in the concluding years of the study.

FIGURE 1: NET FIXED ASSETS TO NET WORTH RATIO



NIPPO BATTERIES LIMITED

In NBL, the ratio had never touched the norm of 0.65 times over the study period. In other words, the company had been moving satisfactorily in the right direction of financing its fixed assets and part of permanent current assets completely by owners' funds. The ratio varied between the minimum of 0.33 times in 2006-07 and the maximum of 0.42 times in the years 2003-04 and 2004-05 with an average of 0.38 times. Net fixed assets had surged from Rs.38.07 crores in 2002-03 to Rs.49.33 crores in the year 2011-12 and net worth increased from Rs.98.36 crores in 2002-03 to Rs.142.38 crores in 2011-12. Net fixed assets had fluctuated while net worth shows a rise over the study period. It is observed that the ratio was less than the norm during entire study period. It indicates that the shareholders' funds were sufficient not only to finance fixed assets but were also used to finance current assets.

CONSOLIDATED

In the consolidated position, the average ratio was 0.74 times and the ratio had shown an inconsistency over the years. The ratio had exceeded the norm of 0.65 times over the study period. It is observed that the ratio was less than unity in consolidated position indicating that the shareholders' funds were sufficient not only to finance fixed assets but a meagre quantum of current assets.

An overall observation of fixed assets to net worth ratio indicates that the battery industry had only used ownership funds. The ratio depicts a mixed trend of ups and downs. It may be concluded that the fixed assets were less than the net worth in all battery companies in Andhra Pradesh. It indicates that the proprietary funds were sufficient to finance the fixed assets requirement. As a result, all battery companies were depending upon the shareholders' funds to meet their quantum of fixed assets.

APPLICATION OF 't' - TEST FOR FIXED ASSETS TO NET WORTH RATIO

Application of 't' - test for fixed assets (net) to net worth ratio of select battery companies and the battery industry in Andhra Pradesh is presented in Table 2.

To determine whether there was any significant variation in the fixed assets to net worth ratio between the individual battery companies and the battery industry in Andhra Pradesh, the following hypothesis was formulated and it was tested through students 't' - test.

H_o: There is no significant difference between the fixed assets to net worth ratio of individual battery companies and the battery industry in A.P.

TABLE 2: APPLICATION OF 't' - TEST FOR FIXED ASSETS TO NET WORTH RATIO

PARTICULARS	ARBL	HBL	NBL	CONSOLIDATED
Mean of FA to NW ratio	0.69	0.98	0.38	0.74
SD of FA to NW ratio	0.12	0.18	0.03	0.07
CV of FA to NW ratio	16.86	17.90	8.17	9.46
'r' of FA to NW ratio	0.92	0.96	0.79	0.99
Calculated value of 't'	-1.04865638^{NS}	4.062274**	-15.0055**	
p – value	0.308213411	0.000731	1.28E-11	
Table value of 't'	2.10092204	2.10092204	2.10092204	

Source : Computed from Table 1

Notes

i) NS indicates Not Significant at 5 per cent level of significance

ii) ** indicates highly significant at 5 per cent level of significance

It is found that there is no significant difference between fixed assets to net worth ratio of ARBL and the consolidated position, whereas there is significant difference between fixed assets to net worth ratio of HBL and NBL and that of consolidated position. It is concluded that in the case of individual battery companies when compared with consolidated position, null hypothesis was accepted for ARBL and rejected for HBL and NBL.

FIXED ASSETS TO LONG TERM FUNDS

Fixed assets to long-term funds is yet another ratio to study the financing pattern of fixed assets. It is related to net fixed assets with long-term funds. The long-term funds for this purpose include owners' funds, as represented by tangible net worth, plus long-term borrowed funds. Normally, funds provided by the owners should be sufficient to cover the fixed assets. However, if it is necessary to finance fixed assets under certain conditions by borrowed funds, only long-term funds should be preferred. Otherwise, it would result in financial embarrassment. In such a situation, the total long-term funds should be sufficient to finance fixed assets and leave a part of these to finance core current assets. The ratio indicates whether the long-term funds are sufficient to finance company's fixed assets or the extent of fixed assets financed by the current debt due to inadequacy of long-term funds. Ideally, this ratio should not exceed unity. If it is less than unity, it means that the long-term funds are more than the fixed assets and they are used for the purpose of other than the acquisition of the long-term assets, i.e., for financing working capital (Hingorani and Ramanathan, 1977). The ratio is calculated by dividing fixed assets (net) with the long-term funds. Thus, the formula for the derivation of this ratio is:

$$\text{Fixed Assets to Long-term Funds} = \frac{\text{Fixed Assets (Net)}}{\text{Long - term Funds}}$$

Table 3 depict the ratio of net fixed assets to long-term funds for the select battery companies and the battery industry in Andhra Pradesh.

AMARA RAJA BATTERIES LIMITED

In ARBL, on an average, fixed assets formed 0.54 times of long-term funds, thereby leaving 0.46 times to finance working capital needs. The ratio had shown an overall fluctuation over the study period. It varied between the minimum of 0.42 times in 2007-08 and the maximum of 0.66 times in 2002-03. It implies that the availability of long-term funds to finance working capital needs had been increasing after meeting the fixed assets requirements completely compared with the previous years of study.

HYDERABAD BATTERIES LIMITED

In HBL, the ratio of fixed assets to long-term funds had registered ups and downs. On an average, it had recorded 0.51 times and leaves 0.49 times to finance a part of current assets. The ratio varied between the minimum of 0.45 times in 2007-08 and the maximum of 0.64 times in 2011-12. It may be observed that long-term funds were sufficient to finance fixed assets requirement. In other words, the surplus long-term funds in HBL enabled to strengthen its working capital financing.

TABLE 3: FIXED ASSETS TO LONG TERM FUNDS RATIO (in times)

YEAR	ARBL	HBL	NBL	CONSOLIDATED
2002-03	0.66	0.50	0.39	0.54
2003-04	0.64	0.55	0.42	0.55
2004-05	0.59	0.46	0.42	0.50
2005-06	0.59	0.48	0.36	0.50
2006-07	0.47	0.54	0.32	0.48
2007-08	0.42	0.45	0.34	0.42
2008-09	0.53	0.48	0.37	0.49
2009-10	0.54	0.47	0.38	0.49
2010-11	0.50	0.53	0.35	0.51
2011-12	0.44	0.64	0.33	0.54
Average	0.54	0.51	0.37	0.50
SD	0.08	0.06	0.03	0.04
CV (%)	15.22	11.21	9.48	7.50
(r)	0.98	0.98	0.73	0.99

Source : Annual reports of select battery companies in Andhra Pradesh

NIPPO BATTERIES LIMITED

In the case of NBL, the fixed assets to long term funds ratio recorded, on an average, 0.37 times. This can also be stated as a part of current assets being financed on an average at 0.63 times of the long term funds. The ratio had varied between the lowest of 0.32 times in 2006-07 and the highest of 0.42 times in 2003-04 and 2004-05. The long-term funds were fully adequate to finance fixed assets as well as the part of current assets as the ratio was very less. It is observed that the ratio had been declining, leaving heavy surplus long-term funds for the financing of current assets, which enabled the company to strengthen its working capital base.

CONSOLIDATED

It is apparent that long-term funds advanced from Rs. 450.11 crores in 2002-03 to Rs. 2179.85 crores in 2011-12. The ratio had varied between a minimum of 0.42 times in 2007-08 and the maximum of 0.55 times in 2003-04. The ratio points out that the long-term funds were sufficient to finance their fixed assets. It also reflects that even after meeting the fixed assets requirements completely, the industry was able to provide, on an average, 0.50 times of long-term funds to finance the net working capital. In other words, the long-term funds were adequate to finance the entire fixed assets and a part of current assets too.

An analysis of individual battery companies points out that, all battery companies have long-term funds quite sufficient to finance the fixed assets as well as part of current assets, as their average ratio worked out to less than the unity. However, none of the individual battery companies reported a constant trend during the study period. To conclude, the financing pattern of fixed assets through long-term funds was appropriate in all battery companies under study in Andhra Pradesh.

Standard deviation of ARBL, HBL, NBL and Consolidated are 0.08, 0.06, 0.03 and 0.04 respectively. Co-efficient of variation (CV) explains that if CV is less in NBL compared with other battery companies, and then a series having less CV is best. The co-efficient of correlation between the fixed assets and long-term funds had a high positive relationship in all individual battery companies in Andhra Pradesh. But such relationship was relatively lower in NBL whereas it was higher in ARBL and HBL.

EFFICIENCY IN THE USE OF FIXED ASSETS

One of the most potent tools employed to evaluate the effectiveness of the utilisation of fixed assets is assets turnover (Srivastava, 1979). The turnover of fixed assets denotes their contribution to sales. It is, therefore, an important ingredient of overall profitability. Westiwick also suggests the application of fixed assets turnover ratio to measure the utilisation of fixed assets (Westiwick, 1973). Turnover means the number of times an asset flows through a firm's operations into sales. The turnover of fixed assets investment is defined as the relationship between the volume of business done and the amount of capital tied-up in fixed property investments (Bogen, 1957). The ratio is calculated by dividing net sales with net fixed assets (Pandey, 1979). Thus,

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

A reasonably high fixed assets turnover ratio indicates the effective utilisation of fixed assets in generating sales. But low ratio indicates idle capacity and inefficient utilisation of fixed assets. The standard norm of this ratio is five times in manufacturing industry (Mohsin, 1980).

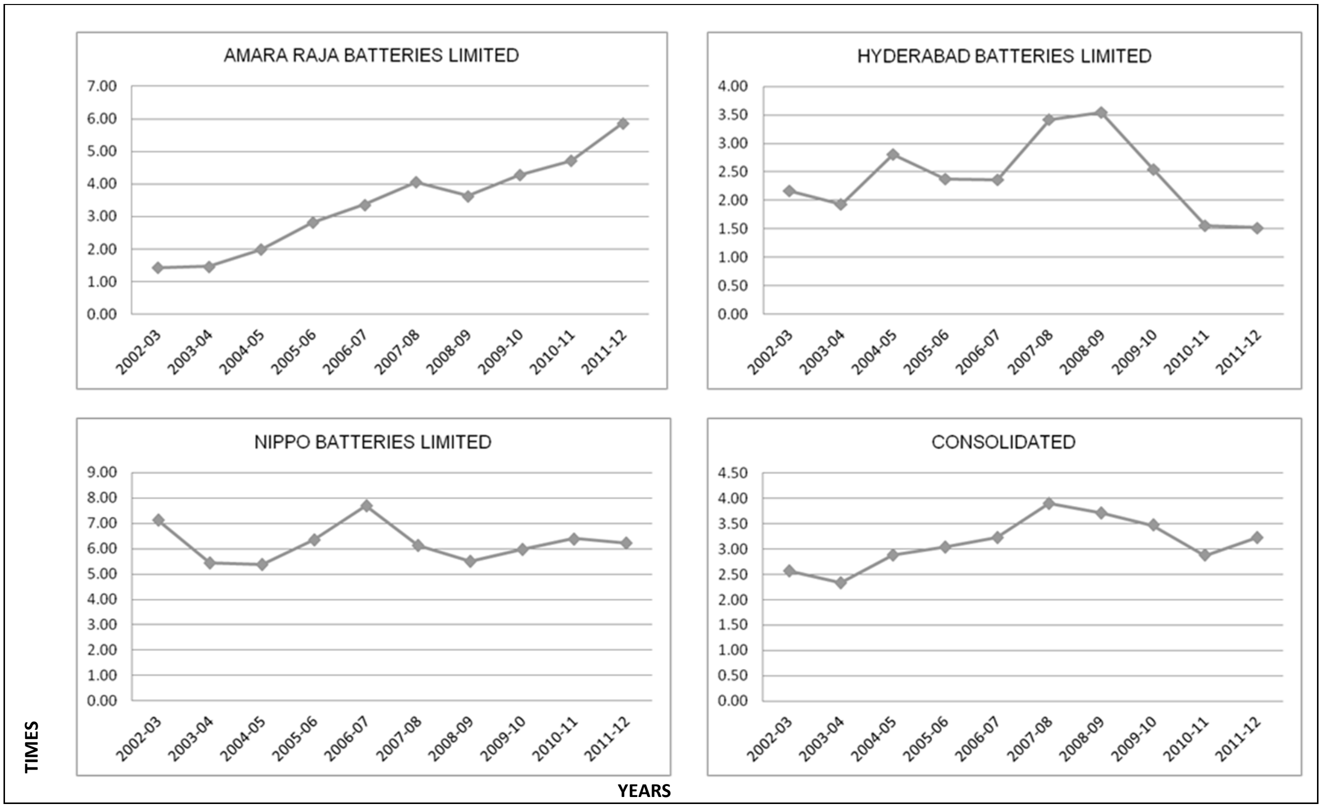
The fixed assets turnover ratio of select battery companies and the battery industry in Andhra Pradesh is presented in Table 4 and Figure 2.

TABLE 4: FIXED ASSETS TURNOVER RATIO (in times)

YEARS	ARBL	HBL	NBL	CONSOLIDATED
2002-03	1.42	2.17	7.13	2.57
2003-04	1.47	1.93	5.43	2.33
2004-05	1.99	2.81	5.37	2.88
2005-06	2.81	2.37	6.35	3.04
2006-07	3.36	2.37	7.68	3.22
2007-08	4.06	3.42	6.14	3.90
2008-09	3.63	3.54	5.49	3.71
2009-10	4.28	2.54	5.96	3.47
2010-11	4.72	1.55	6.39	2.87
2011-12	5.87	1.52	6.23	3.22
Average	3.36	2.42	6.22	3.12

Source : Annual reports of select battery companies in Andhra Pradesh

FIGURE 2: FIXED ASSETS TURNOVER RATIO



AMARA RAJA BATTERIES LIMITED

It is evident that ARBL registered, on an average, 3.36 times, which is above the combined average and below the standard norm of five times. The ratio showed an increasing trend over the study period except in the year 2008-09. The ratio varied between the minimum of 1.42 times in 2002-03 and the maximum of 5.87 times in 2011-12. The ratio depicted an improvement over the years and reached the standard norm of five times by the end of the study period. It means that utilisation of fixed assets was effective in the last two years of the study but the company failed to make use of fixed assets effectively in remaining years of the study.

HYDERABAD BATTERIES LIMITED

In HBL, the ratio had fluctuated between the minimum of 1.52 times in 2011-12 and the maximum of 3.54 times in 2008-09. HBL might be signalled out for its total failure in making use of fixed assets effectively as the average ratio worked out to 2.42 times which is below the standard norm. It indicates that the ratio was less than the standard norm in all the years of study, thereby denoting that fixed assets were not effectively utilised by the management. It reflects the ineffective utilisation of fixed assets.

NIPPO BATTERIES LIMITED

In NBL, fixed assets turnover ratio had varied between the minimum of 5.37 times in 2004-05 and the maximum of 7.68 times in 2006-07. Undoubtedly, NBL had used its fixed assets efficiently as is evident from its turnover ratio, which is above the standard norm of five times over the entire study period. Hence, it may be concluded that there was effective use of fixed assets in the company.

CONSOLIDATED

A glance at the fixed assets turnover ratio shows that, on an average, it recorded 3.12 times, which is far, less than the standard norm of five times in the combined position of select battery companies in Andhra Pradesh. The average turnover of fixed assets is only three-fifth of the standard norm and in none of the years the ratio touched the standard norm. It reached the peak level of 3.90 times in the year 2007-08 and the lowest level of 2.33 times in the year 2003-04. It is noticed that the ratio registered fluctuations throughout the study period. In other words, the fixed assets have not been efficiently utilised in all the years under reference. It is evident that, an evaluation of individual battery companies, NBL reveals a different picture from that of the combined position. Average fixed assets turnover ratio of NBL (6.22 times) had shown an impressive performance. ARBL shows a ratio, an average of 3.36 times, resembling the industry average of 3.12 times. In HBL, an average fixed assets turnover (2.42 times) was very low, disclosing ineffective utilisation of fixed assets. It may be concluded that two out of three battery companies have become symbols of under utilisation of fixed assets and idle investments. But only one company – NBL – is a rare exception to this phenomenon. It reveals that NBL utilised its fixed assets effectively, whereas ARBL and HBL could not do so.

APPLICATION OF 't' - TEST FOR FIXED ASSETS TURNOVER RATIO

Application of 't' - test for fixed assets turnover ratio of select battery companies and the battery industry in Andhra Pradesh is presented in Table 5.

To determine whether there was any significant variation in the fixed assets turnover ratio between the individual battery companies and the battery industry in Andhra Pradesh, the following hypothesis was formulated and it was tested through students 't' - test.

H_o: There is no significant difference between the fixed assets turnover ratio of individual battery companies and the battery industry in Andhra Pradesh.

TABLE 5: APPLICATION OF 't' - TEST FOR FIXED ASSETS TURNOVER RATIO

PARTICULARS	ARBL	HBL	NBL	CONSOLIDATED
Mean of FAT ratio	3.36	2.42	6.22	3.12
SD of FAT ratio	1.46	0.69	0.74	0.49
CV of FAT ratio	43.31	28.52	11.94	15.67
'r' of FAT ratio	0.97	0.81	0.45	0.98
Calculated value of 't'	0.494193^{NS}	-2.61159*	11.01422**	
p – value	0.627147	0.017664	1.98E-09	
Table value of 't'	2.100922	2.100922	2.100922	

Source : Computed from Table 4

Notes

i) NS indicates Not Significant at 5% level of significance

ii) * indicates significant at 5% level of significance

iii) ** indicates highly significant at 5% level of significance

It is observed that there is no significant difference between fixed assets turnover ratio of ARBL and the consolidated position, whereas there is significant difference between fixed assets turnover ratio of HBL and NBL and that of the consolidated picture. Therefore, it is confirmed that with regard to the individual battery companies when compared with consolidated position, the null hypothesis was accepted for ARBL and rejected for HBL and NBL.

CONCLUSION

Fixed assets are those assets that are of permanent nature having a life expectancy of more than one year and are used by a firm in its normal operations. Usually, funds provided by the owners should be sufficient not only to finance the entire requirements of fixed assets but also some of the current assets, which are relatively permanent in nature. Further, fixed assets are to be preferably financed through long-term debt. The average fixed assets to net worth ratio was less than the unity in all battery companies in Andhra Pradesh. It indicates that the proprietary funds were sufficient to finance the fixed assets requirement. As a result, all battery companies were depending upon the shareholders' funds to meet their quantum of fixed assets. It is found that there is no significant difference between fixed assets to net worth ratio of ARBL and the consolidated position, whereas there is significant difference between fixed assets to net worth ratio of HBL and NBL and that of consolidated position. Fixed assets to long term funds ratio worked out to less than the unity during the entire study period in all battery companies under study and the industry in Andhra Pradesh. It indicates that the long term funds were fully adequate to finance fixed assets as well as the part of current assets. It is observed that there is no significant difference between fixed assets turnover ratio of ARBL and the consolidated position, whereas there is significant difference between fixed assets turnover ratio of HBL and NBL and that of the consolidated picture. Therefore, it is confirmed that with regard to the individual battery companies when compared with consolidated position, the null hypothesis was accepted for ARBL and rejected for HBL and NBL.

The battery companies instead of depending excessively on shareholders' funds, should raise the debt funds for meeting the fixed assets requirements since the debt capital is a cheaper source than equity finance. The reason is that the interest on debt is tax deductable.

ARBL and HBL, have become symbols of under utilisation of fixed assets and idle investments. But only one company – NBL – is a rare exception to this phenomenon. It reveals that NBL utilised its fixed assets effectively, whereas ARBL and HBL could not do so. Hence, the managements of these companies shall utilise their fixed assets effectively through productive employment of shareholders' funds.

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