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"A Study on Liquidity, Profitability, Efficiency, and Solvency with Special Referance to Ajay Engineering Works At Hosur."

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ABSTRACT:

The research paper entitled "A STUDY ON LIQUIDITY, PROFITABILITY, EFFICIENCY, AND SOLVENCY OF AJAY ENGINEERING WORKS AT HOSUR." is to analyze and assess the efficiency of working capital management practices during 2019–2024. Working capital is a key component for the successful operation and financial well-being of any organization that provides operational liquidity and profitability. The project majorly depends on secondary data taken from company financial statements such as balance sheets and profit and loss accounts. Analytical tools like ratio analysis (liquidity, profitability, turnover, and solvency ratios) were utilized to measure various aspects of working capital management

Key findings; reveal that while Ajay Engineering Works maintained a healthy current ratio and improved its

INTRODUCTION

The capital needs of all business entities may be broadly categorized into fixed capital and working capital. Fixed capital is defined under the context of investment in fixed assets. Fixed assets are the essential tools or means of production. Locking in investments in fixed assets is dead investment, as it does not allow the funds to circulate. In the same way, every organization needs some funds to carry on its operations and produce goods for sale to earn profits. This is represented through current capital, which is used in the existing stages of production and also in current assets that support the distribution of goods.

RESEARCH BACKGROUND

To manage the current asset and understand that current liabilities arise at current asset level; it is requisite for any organization to provide sufficient working capital, as will easily understood if the organization size is considerably bigger the level of current assets will increase the liquidity position, and if it is smaller then the overall profitability will be likely greater, however will have a serious affect on the liquidity, and add to an overall risky positioning, as currently if the enterprise is incapable of achieving an acceptable level of working capital it is likely to become insolvent.

The area of working capital management underpins the operation of every function in a business design. The policy governing the working capital has a snow-ball affect to other functions such as human resource, production, marketing etc. It can be deduced that working capital management is an important factor for the sustainability of any business unit and that is part of the overall organizational management process

IDENTIFIED PROBLEM

Working capital management consists of the problem of deciding how to invest various amounts of current assets with a view to maintaining the liquidity of the firm's funds to meet obligations in a timely and efficient manner. This is the issue for which the study is undertaken to analyze working capital management.

OBJECTIVES OF THE STUDY

To research the company's position with current assets andcurrent liabilities
To analyze the effect of profitability on working capital.
To analyze the company's financial position
To analyze the determination of working capital
To offer a suggestion on behalf of the company

REVIEW OF LITERATURE

This section discusses the conclusion of previous studies and the theorhetical perspectives as generated from the study discussed. A literature review is a critical and homogeneous evaluation of prior studies. It is a periodical review and summary of a specific area of studies. A literature review deals with published and unpublished literature in a given area of study. A literature review can simply be a brief summary of the individual sources but usually has some organizational structure and consists of both summary and synthesis.

Chadda (1964) studied the inventory management practices of Indian companies and noted that there was very little coordination in managing the individual components of inventory. The study proposed the use of more modern tools like operations research to guarantee more efficient management of working capital.

Mishra (1975) study sample consisted of six public sector units in India where he identified four fundamental problem areas concerning cash, debtors, inventory, and financing of working capital in the sample companies. The study concluded that it is because of these chronic problems that the sample companies failed miserably in achieving 'effective' working capital management. The study recognized the dire need for the efficient and effective use of funds to accomplish 'efficient working capital management.'

Lal (1981) conducted his study of Modi Steels Ltd with the objective of the study being to examine inventory management. He found that the company did not consider the price variable in inventory management, which Mr. Lal developed a model that recognizes the price variable. The study recommended extremely specific policies for appropriate management of working capital which must consider both internal and external factors.

Khandelwal (1985) continued the half completed empirical research started by late N.M.Agarwal, of 40 small scale industries among Jodhpur industrial estate, and attempted to look into Working selected units between 1975-80. The study found that the sample firms had more investments in inventories than necessary, moreover, management of receivable was found very unmanageable. Bills receivables were identified as making up as much as 50% of total current assets. The study which highlighted the sickness in Jodhpur Industrial estate substantially attributed the outstanding issue to unmanageable management of working capital. The study which does not reach any substantial conclusions based on those findings recommends the entrepreneurs need to be educated about the base concepts and appropriate manner of Working Capital Management.

" Swami (1987) analyzed the materials management processes of five central public sector enterprises in the state of Rajasthan. In the study, he discovered that inventories accounted for 61% of total current assets during the five-year study period (1977-1982). The growth of inventories during the period was very high, that in fact established that there was no control of these inventories. Based on his finding, Swami concluded that the materials management of the selected companies was not effective and he made the study recommendations for improvement by way of continually monitoring the situation and taking corrective actions as necessary.

In an essay, Oppedahl and Richard (1990), pointed out that capital budgeting projects take up much of the time of a firm's management group and as a result have negative effect on the quality of working capital decisions. They stressed that the business executive needs to be more aware of the working capital decisions that their firms are faced with on a daily basis. The writing in the essay stressed two areas of importance with working capital, accounts receivables and marketable securities. Their essay revealed how managers need to be careful with their decisions involving accounts receivables and marketable securities.

Jain (2000) Research examined seven paper companies in the country of India to assess the individual components of working capital. It was determined that the public sector current ratio during the time of the study varied by substantial degrees, while the private sector current ratio declined at a steady rate. As far as inventory was concerned the study found that inventory in the public sector undertaking units was unplanned in comparison to private sector units. The study added a great deal of knowledge in terms of understanding the disciplines of working capital in all details.

Joshi (1999) examined and discussed in his article the importance of maintaining a fair degree on the levels of inventory in terms of management practices and principles. The author posits that it was useful to include inventory control within the scope of production control with the over all objectives of maintaining a steady flow of materials needed to lubricate the efficient and continuous conversion of raw materials into production activities. The author also mentions the need for coherence and co-ordination with the production programmers.

The study of VST Industries Ltd. by Sarma and Chary (2003) found that the sample unit was inefficient in Working Capital Management. In the sample unit, there was a corresponding investment in current asset in relation to sales which resulted in falling working capital turnover ratio. The company did not follow any consistent policy in respect of investment and financing of working capital. Although there were numerous opportunities to utilize trading on equity and edging for efficient management of working capital, the company never used it. Having measured working capital in terms of current ratio, quick ratio, working capital turnover ratio, inventory turnover ratio, debtors turnover ratio and average collection period, working capital study shows that the company was unsuccessful in managing inventory efficiently resulting in lower profitability.

Sivarama (2010) studied Working Capital Management in Indian Paper Industry highlighting on the individual current assets like cash, receivable and inventory. The study finds that between 1984-93 working capital comprised 47.2% of total net assets. The rate of return on the current assets was negative or insignificant in all selected paper mills, which indicates that there was inefficient management of working capital. The correlation analysis indicated close nexus between profitability and working capital efficiency suggesting that.

Singh (2018) conducted a study examining working capital in Lupin Laboratories ltd. His study has proceeded to assess the importance of management of working capital through working capital ratios and operating cycle. Analyzing seven years data (1995-2002), he reported in his study that "the liquidity position of the company has been very good, which means, the percentage of current assets is very high in comparison with corresponding percentage for net fixed assets and the operating cycle showed declining tendency. In element wise analysis of working capital the first one to note was that trade debtors formed the highest percentage of the current assets, followed by loans and advances, inventories, and cash and bank balances. The study has brought out the need to manage debtors which formed the highest percentage of current assets." It is clear from the aforementioned references that a number of authors appear to have opined that keeping proper liquidity and managing it correctly have positive implications for long-run returns and the ongoing existence of the organization. Moreover, the company's stronger financial position is maintained when its credit worthiness continues to be upheld.

RESEARCH GAP

Although extensive research has been conducted on various aspects of working capital management, several gaps remain unaddressed. The majority of existing studies, such as those by Chadda (1964), Mishra (1975), and Swami (1987), focus primarily on individual components like inventory or receivables, without providing a holistic view of integrated working capital practices. Furthermore, many studies rely on data from the 1970s to early 2018s, which may not reflect the evolving financial environment influenced by globalization, digital transformation, and changes in regulatory frameworks.

There is also a noticeable lack of sector-wise comparative analysis between public and private sector enterprises or small and large-scale industries, which could offer more tailored insights into industry-specific challenges. Additionally, the role of modern technology, financial software, and the banking sector in enhancing working capital efficiency—though briefly touched upon by Applegate (2018)—remains largely unexplored. Behavioural factors influencing managerial decision-making in working capital allocation are also absent from most studies. These gaps highlight the need for contemporary, comprehensive, and technology-inclusive research that addresses working capital management in a more integrated and practical.

RESEARCH METHODOLOGY

- **Type of Study:** Analytical and Descriptive
- **Research Design:** Descriptive research design to explain trends and patterns using quantitative data
- **Data Source:** Secondary data collected from Gabriel India Limited's annual reports (FY2019–2024), industry publications, books, and journals

- **Tools and Techniques Used:**
  - Financial Ratio Analysis
  - Excel-based data analysis
  - Graphical representation (bar charts, line graphs)

- **Key Financial Ratios Analyzed:**
  - **Profitability:** Net Profit Margin, Return on Assets (ROA), Return on Equity (ROE)
  - **Liquidity:** Current Ratio, Quick Ratio
  - **Solvency:** Debt-to-Equity Ratio, Interest Coverage Ratio

- **Sample Unit:** Gabriel India Limited
- **Study Period:** Five years (2019–2024)
- **Comparative Benchmarking:** Competitor and industry average insights used where applicable.

LIMITATION OF THE STUDY

- Entirely dependent on secondary data from published financial reports.
- No primary stakeholder interviews or surveys included.
- Data restricted to FY2019–2024 only.
- No segment-wise financial analysis.

DATA ANALYSIS AND INTERPRETATION

4.1.1 CURRENT RATIO.

Year	Current assets	Current liabilities	Ratio
2019-2020	225385396	164365312	1.37
2020-2021	259261308	209933945	1.23

2021-2022	236273282	189236447	1.25
2022-2023	267601022	218463723	1.22
2023-2024	227232963	167906765	1.35

Table 4.1.1 Current Ratio

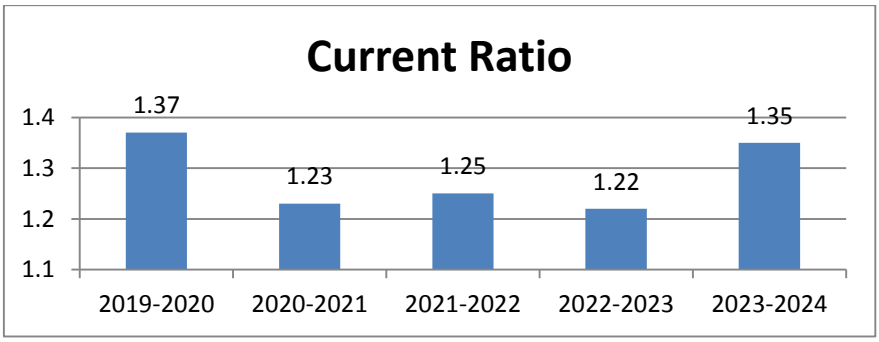

FIG 4.1.1 Current Ratio

INTERPRETATION

Based on our analysis, an ideal current ratio is 2:1. For the five years examined, AEW's current ratio was less than 2, which does not represent a good current ratio and it is determined that AEW's liquidity position is unsatisfactory, as it either needs to increase current assets or decrease current liabilities.

4.1.2 NET PROFIT RATIO.

Year	Net profit	Net Sales	Ratio
2019-2020	8062795	483472831	0.016
2020-2021	1615879	532042508	0.003
2021-2022	2398478	549190676	0.004
2022-2023	3838286	584750408	0.006
2023-2024	6313508	609125112	0.010

Table 4.1.2 Net Profit Ratio

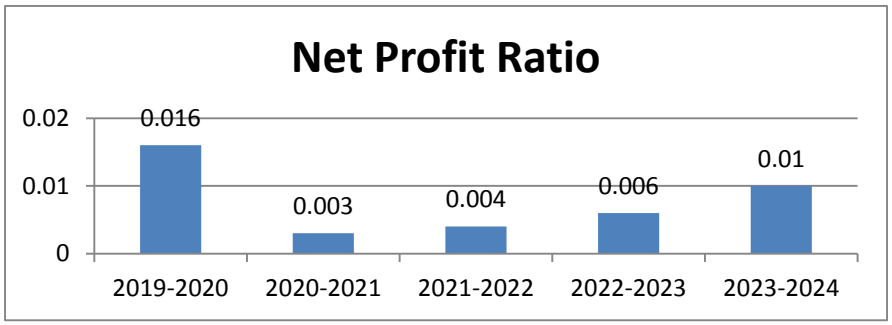

Table 4.1.2 Net Profit Ratio

INTERPRETATION

This analysis indicates, The lower ratio suggests that the company has a large amount of manufacturing costs. The company should try to cut its selling or distribution costs so they can increase their net profit.

4.1.3 WORKING CAPITAL TURNOVERRATIO

Year	Cost of sales	Net Working Capital	Ratio
2019-2020	483472831	61020084	7.92
2020-2021	532042508	49327363	10.79
2021-2022	549190676	47036835	11.66
2022-2023	584750408	49137299	11.90
2023-2024	609125112	59326198	10.28

Table 4.1.3 Working Capital Turnover Ratio

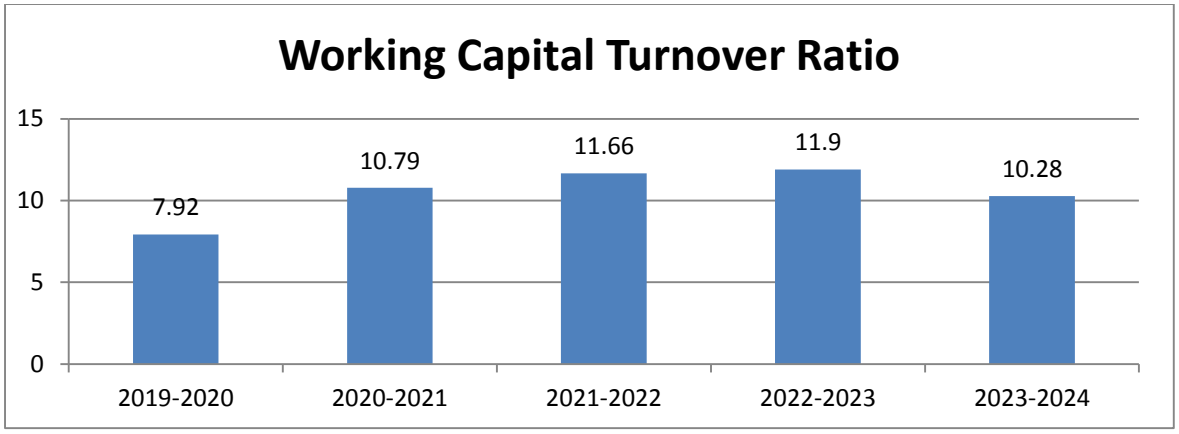

Table 4.1.3 Working Capital Turnover Ratio

INTERPRETATION

The table above clearly demonstrates the firm shows a favorable working capital turnover ratio, which suggests efficiency or effectiveness regarding realizing its resources. In the year 2022-2023 the firm shows a favorable working capital turnover ratio.

SUMMARY OF FINDINGS

This analysis, The liquidity position of the NHCL is not satisfactory once more. After the current ratio it also observed that the the quick ratio isn't good for the years in the period of this analysis. The company ceased to achieve a ideal ratio 1:1 , indicating that the company needs to be concerned about its financial position.

The amount, and level of sales, accounted for gross profit ratio. The gross profit ratio is constant from 2019 to 2022. whereas in 2023-2024 it was decreased due to low selling prices.

The low Return on sales , Net profit ratio =0.09 ie 9%. The net profit ratio of NHCL is very low. So lower ratio indicating that the concern has large amount of manufacturing expense.

The return on capital employed ratio measures whether the proprietors fund have been utilized sanctioned to discharge its operating business. NHCL shows growth in return on capital employed ratio showing utilization of funds.

The net worth ratio showed fluctuations during the period of analysis. In 2019-2020 high rate of return on equity shareholders favoured investors.

The working capital turnover ratio measures how efficiency the working capital is turned over by the firm. In 2022-2023 company shows the highest working capital turnover ratio among the periods of analysis.

SUGGESTION

1. Adopting more efficient inventory management systems can reduce holding costs and increase cash flow. For example, if inventory turnover of the company is sluggish, using a Just-In-Time (JIT) model will help minimize excess stock and provide for greater turnover.
2. Increase cash inflows by tightening credit policies, performing due diligence on credit assessments, and offering early payment discounts to customers. You can reduce the amount of time it takes to collect in cash, and therefore increase liquidity.
3. Arrange, if at all possible, to lengthen payables terms with suppliers without incurring penalties. By doing so you will be in a position to hold and use cash longer, thereby improving cash conversion cycles.
4. By regularly projecting your cash flows, you will be able to foresee and plan around cash shortages or surpluses, and manage to avoid liquidity issues.
5. Using financial management software may be the correct decision to streamline any repetitive tasks, cut down on errors by managing cash conversion elements of working capital, and provide you with real-time data.

CONCLUSION

The study on working capital management of Ajay Engineering Works from 2021 to 2024 illustrates financial trends. The company's liquidity position improved over 2021-2022 and 2022-2023, supported by significant growth in working capital, signifying better financial welfare and operational performance. However, there was a slight decrease in liquidity from2023-2024, suggesting continuous observation. With respect to profitability, the gross profit ratio of 1.02 was stable over the period of investigation, meaning the level of profitability remained unchanged. In contrast, the net profit ratio declined in 2022-2023 with a small recovery in 2023-2024.

High operating ratios between 97% and 99% suggests operating expense absorbed considerable proportions of revenue, restricting profitability. In terms of turnover or efficiency, increases in working capital turnover ratio indicates improved utilization of capital, and inventory turnover indicates its reasonably efficient management despite variation in 2023-2024. Regarding the debtor's turnover ratio, however, a decline suggests longer waits to

collect receivables, and longer receivable periods.

Indicators measuring financial stability suggest that the creditor's turnover ratio improved (suggesting that supplier payments were made quicker); however, the debt equity ratio increased, as did the capital gearing ratio, which suggests an increasing reliance on borrowed funds and current assets.

In conclusion, Ajay Engineering Works has shown significant growth

DIRECTIONS FOR FUTURE RESEARCH

While this study has provided valuable insights into the working capital management of Ajay Engineering Works for the period 2021–2024, there are several areas that future research could explore for a deeper and broader understanding. Firstly, future studies could focus on the impact of digital transformation and financial technologies (FinTech) on working capital efficiency, particularly in areas like automated receivables management, dynamic inventory control, and predictive cash flow analytics. As industries evolve rapidly, understanding how digital tools influence working capital management will be critical.

S econdly, comparative sectorial analysis between similar engineering firms or between public and private sector enterprises could provide richer benchmarks and industry-specific insights. Studying the influence of macroeconomic factors—such as interest rates, inflation, and supply chain disruptions—on working capital trends would also add depth to the findings.

F finally, a longitudinal study extending beyond 2024 would help observe long-term effects of current policies and strategies, especially with the company's rising debt levels and operational cost structure. Integrating primary data through interviews with financial managers and operational heads could further enrich future analyses.

T thus, future research should adopt a holistic, technologically informed, and sector-sensitive approach to strengthen the understanding of working capital management and its strategic role in financial sustainability.

REFERENCE:

1. Annual Reports of Ajay Engineering Works for the years 2021–2022, 2022–2023, and 2023–2024.
2. Chadda, (1964). Study on Inventory Management Practices in Indian Companies.
3. Mishra, (1975). Working Capital Management Issues in Public Sector Units.
4. Applegate, (2001). Role of Banks in Working Capital Management of Small Businesses.
5. Singh, (2004). Working Capital Management Analysis at Lupin Laboratories Ltd.
6. Secondary Data Sources:

✓ Books, journals, and websites related to financial management and working capital.
✓ Online articles and financial research databases.