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FINANCIAL MANAGEMENT OF WATER SUPPLY SCHEME FOR DRINKING WATER AND SANITATION DEPT. SHRIRAM EPC LIMITED

by

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ABSTRACT

This study delves into the financial management practices adopted by Shriram EPCLimited in executing water supply schemes for the Drinking Water & Sanitation Department. As water scarcity becomes an increasingly pressing issue globally, effective financial management within the water sector is imperative. Through a detailed examination of Shriram EPC Limited's approach, this research aims to highlight key strategies, challenges, and lessons learned in managing finances for water supply projects.

Findings reveal that Shriram EPC Limited employs a proactive approach to financial management, emphasizing stringent budgetary controls, risk assessment, and strategic resource allocation. The company leverages innovative financing mechanisms and technology-driven solutions to optimize project costs and enhanceoperational efficiency. Moreover, collaboration with governmental agencies and local communities is instrumental in ensuring the sustainability and affordability of water supply services.

However, the study also identifies several challenges encountered in financial management, such as fluctuating project costs, regulatory constraints, and limited access to funding sources. Overcoming these challenges requires a multifaceted approach, including enhanced transparency, capacity building, and risk mitigation strategies.

Overall, this research provides valuable insights into the financial management practices of Shriram EPC Limited in the context of water supply schemes. By highlighting successful strategies and addressing key challenges, the findingscontribute to the development of effective financial management frameworks for sustainable water infrastructure development.

CHAPTER-1 INTRODUCTION

In the realm of Water Supply Schemes, effective financial management is paramount for sustainable operations and infrastructural development. Shriram EPC Limited, a pioneering entity in infrastructure development, brings forth a comprehensive approach to financial management tailored for the Drinking Water & Sanitation Department.

1.Understanding Financial Dynamics: Shriram EPC Limited recognizes the intricate financial dynamics inherent in water supply schemes. This understanding forms the bedrock of our approach towards financial management, ensuring optimal resource allocation and utilization.

2.Cost-effective Solutions: Our financial management strategies prioritize cost- effectiveness without compromising on quality. By leveraging our expertise and experience, we devise solutions that optimize expenditure while delivering reliable and efficient water supply systems.

3.Risk Mitigation: Water supply projects often entail various risks, including regulatory, environmental, and financial uncertainties. Shriram EPC Limited employs robust risk management strategies to identify, assess, and mitigate these risks, safeguarding the interests of stakeholders and ensuring project viability.

4.Financial Planning and Budgeting: We emphasize meticulous financial planning and budgeting to align project objectives with available resources. Through thorough analysis and forecasting, we establish realistic budgets, ensuring transparency and accountability throughout the project lifecycle.

5.Funding Strategies: Securing adequate funding is crucial for the successful execution of water supply schemes. Shriram EPC Limited offers expertise in devising comprehensive funding strategies, including public-private partnerships, grants, loans, and innovative financing mechanisms, tailored to the specific requirements of each project.

1.2 INDUSTRY PROFILE

Shriram EPC operates in the broader engineering and construction industry, with a focus on infrastructure development. Here are some key aspects of this industry:

1.Infrastructure Development: Shriram EPC participates in the construction of various infrastructure projects including roads, highways, bridges, water supply systems, irrigation projects, and renewable energy projects. The demand for infrastructure development in India is driven by population growth, urbanization, and government initiatives to improve connectivity and basic amenities.

2.EPC Services: The company specializes in providing Engineering, Procurement, and Construction (EPC) services. This involves end-to-end project execution, starting from design and engineering to procurement of materials and construction. EPC companies play a crucial role in executing large-scale infrastructure projects efficiently.

3.Government Initiatives: In India, the government's focus on infrastructure development through initiatives like Bharatmala, Sagarmala, and Smart Cities Mission presents significant opportunities for EPC companies like Shriram EPC. These initiatives aim to modernize infrastructure and enhance connectivity across the country.

4.Competitive Landscape: The engineering and construction industry in India is competitive, with several players competing for contracts. Companies differentiate themselves based on expertise, project execution capabilities, technological innovations, and track record of completing projects on time and within budget.

5.Challenges: The industry faces challenges such as regulatory hurdles, land acquisition issues, project delays, cost overruns, and financing constraints. Managing these challenges while maintaining profitability is crucial for companies like Shriram EPC.

6.International Expansion: Some Indian EPC companies, including Shriram EPC, also undertake projects outside India. This provides diversification opportunities and access to new markets, albeit with additional risks related to geopolitical factors, currency fluctuations, and regulatory differences.

1.3 COMPANY PROFILE

Shriram epc
Engineering the future

1.3.1*SHRIRAM EPC LIMITED, T.NAGAR, CHENNAI.*

We SEPC Limited provides end-to-end solutions to engineering challenges offering multi-disciplinary design, engineering, procurement, construction and project management services. SEPC is focused on providing turnkey solutions in the following business segments:

Company Snapshot

- Incorporated in 2000 with headquarters in Chennai
- High-end engineering services company providing EPC & Turnkey solutions

Name: Shriram EPC Limited **Founded**: 1995 **Headquarters**: Chennai, India

Key People: T. Shivaraman (Chairman), T. S. Rajagopal (Managing Director)

Sector: Engineering and Construction

Primary Services: Engineering, Procurement, and Construction (EPC) services for infrastructure projects

Operations: Primarily in India, with some international projects

1.3.2 *Our vision and mission*

- To be a leader in engineering and project implementation with a focus on water and infrastructure, process & metallurgy and mining minerals.

- Grow through mutually beneficial associations with the customers, technology partners and vendors, empower and strengthen the skills and competencies of people & quality deliverables.

1.4 Need for the study

Shriram EPC Limited has been tasked with the financial management of a water supply scheme for the Drinking Water & Sanitation Department. The scheme aims to ensure adequate and sustainable provision of drinking water to the community while also addressing sanitation needs. However, effective financial management is crucial for the successful execution and sustainability of the project. The challenges may include budget allocation, cost estimation, fund sourcing, expenditure tracking, and financial reporting. Additionally, considerations for long-term operation and maintenance costs, revenue generation, and financial sustainability must be addressed. The objective is to develop a comprehensive financial management plan that ensures efficient utilization of resources, timely completion of the project, and long-term viability of the water supply scheme.

1.5 Scope and Significance of Study

The scope and significance of studying the financial management of water supply schemes for the Drinking Water and Sanitation Department, particularly in collaboration with Shriram EPC Limited, are multifaceted and crucial. Firstly, understanding the financial management practices within such schemes is imperative for ensuring efficient allocation and utilization of resources, especially in the context of delivering essential services like drinking water and sanitation to communities. By delving into this subject, one can identify areas of improvement in budgeting, expenditure tracking, and financial reporting, thus enhancing transparency and accountability in project implementation.

1.6 Objectives of the study

• To optimize financial resources to ensure the timely completion of water supply schemes within budgetary constraints.

• To Study scope and significance of outcome and completion of watersupply schemes

• fulfilment of the objectives of the scheme

CHAPTER 2 REVIEW OF LITERATURE

2.1 Introduction:

The review of literature guides the researchers for getting better understanding of methodology used, limitation of various available estimation procedures and database, and logical interpretation and reconciliation of the conflicting results. Besides this, the review of empirical studies explores the avenues for future and present research efforts related to the subject matter. In case of conflicting and unexpected results, the research can take the advantage of knowledge of their researchers simply through the medium of their published works. Several research studies have been carried out on different aspects of training and development by the researchers, economists and academicians in India and abroad also. Different authors have analyzed performance in different perspectives.

2.1.1 *Review of Literature:*

According to *(Pedro Juan Garcia-2010),* trade debt occurs when there is a delay between the delivery of goods or the provisions of services by a supplier and their payment. For the seller this represents an investment in account receivable, while for the buyer it is a source of financing that is classified under current liabilities on the balance sheet. The literature offers various theories to explain the use of trade debt based on the advantages for suppliers and for customers from the operational, commercial and financial perspective. Trade debt enables firms to create operating efficiencies and cost improvements by separating the exchange of goods and their payment.This reduces cash uncertainty in their payments and provides more flexibilityto respond to variations in demand. From the commercial perspective, tradedebt may stimulate sales in a number of ways. Terms of payment make it possible to modify the price of goods sold by increasing the discount for prompt payment, which is an implicit price reduction. Moreover, trade debt can be used to maintain long term relationship with customers. Trade debt also allows sellers to offer quality guarantees to buyers so that buyers can assess product quality before.

According to the author *Mathew P M (2000),* existing laws often ignore the social framework within which a small entrepreneur must operate. Delayed Payment Act was passed by the Parliament after repeated representations by small entrepreneurs and their associations. But the individual entrepreneurs are reluctant to make use of the provisions of the Act for fear that customers pressed for payment may not place fresh orders. Today, there are several laws applicable to SMEs. However, the entrepreneurs simply do not know the laws and their provisions.

According to *Ira Davidson (2008),* Director of the Small Business Development Center at Pace University, New York, maintaining effective debt policies and collecting on a timely basis are fundamental to good cash management in a small business.

According to *Longenecker et al., (2008)* stated that four factors related to the entrepreneur's decision to extend debt are the type of business, debt policies of competitors, customer's income levels and the availability of working capital.

According to *KhaledSoufani (2002),* in his paper explained the choice of factoring as a financing source and the type of businesses using it in the UK. The tests focused on establishing a profile of borrowers, based on firm's demographic characteristics such as age, turnover, industry, and type of legal ownership, whether there existed any association between the use of factoring and the availability of debt to firms, the collateral requirements by banks and its value, the value of the firm's debt. After a conducting a survey of 3805 companies, it was found 212 were using factoring services.

According to *Francis Chittenden, PanikkosPoutziouris (1999)*, anatomically explored the financial policies and existing capital structure of Organizations in the conservative economy of UK. The Credit management is considered as one of the predominant factors in the financial policies of Organizations. It is found that size, profitability, growth opportunities, risk due to receivables contribute significantly in the growth of Organizations.

According to Stepan, his paper considered the effect of credit policy on the liquidity of manufacturing companies in Nigeria. Credit policy from this perspective was viewed from the angle of controlling or regulating credit sales. The study looked into the problems of non- monitoring and the non- review of the credit policy of organizations as a cause of the liquidity problems associated with credit sales. The study centered majorly on the effects of each of the individual components of credit policy which include the credit standards, the credit period, the cash discount and the collection period on an organization's liquidity. It is also at finding out the type of effects that a company's credit policy has on its liquidity. Four manufacturing companies were selected which include Unilever Nigeria plc, Cadbury Nigeria plc, Nestle Nigeria plc and Nigerian bottling company. The annual reports and accounts of the selected companies as well as questionnaire where relevant data was made use of were statistically analyzed. Analysis of variance (ANOVA) and regression analysis were used in testing the hypothesis. The findings revealed that when a company's credit policy is favourable, liquidity is at a desirable level and lastly, the findings revealed that companies should ensure the monitoring and regular review of their credit policy and the allowance of cash discounts should be minimized as much as possible. We therefore recommended that organization should consider their mission, the nature of their businesses and their business environment before setting up a credit policy.

According to Rosemary (2011), Credit management is one of the most important activities in any company and cannot be overlooked by any economic enterprise engaged in credit irrespective of its business nature. Sound Credit management is a prerequisite for a financial institution's stability and continuing profitability, while deteriorating credit quality is the most frequent cause of poor financial performance and condition. As with any financial institution, the biggest risk in microfinance is lending money and not getting it back. The study sought to determine the effect of Credit management on the financial performance of Microfinance Institutions in Kenya. The study adopted a descriptive survey design. The population of study consisted of 59 MFIs in Kenya that are members of AMFI. A census study was used to carry out the research. Primary data was collected using questionnaires where all the issues on the questionnaire were addressed. Descriptive statistics were used to analyze data. Furthermore, descriptions were made based on the results of the tables. The study found that client appraisal, credit risk control and collection policy had effect on financial performance of MFIs in Kenya. The study established that there was strong relationship between financial performance of MFIs and client appraisal, credit risk control and collection policy. The study established that client appraisal, credit risk control and collection policy significantly influence financial performance of MFIs in Kenya. Collection policy was found to have a higher effect on financial performance and that a stringent policy is more effective in debt recovery than a lenient policy. The study recommends that MFIs should enhance their collection policy by adapting a more stringent policy to a lenient policy for effective debt recovery.

CHAPTER-3 RESEARCH METHODOLOGY

3.1 RESEARCH DESIGN

This research will employ primarily descriptive research design because it will ensure the minimization of bias and maximization of reliability of data collected. In descriptive research different parameters will be chosen and analyzing the variations between these parameters.

3.2 SOURCES OF DATA

3.2.1 *Secondary Data*

The present Study, Secondary data had been collected from company records annual reports, Published book, manage journals, articlePublished by other authors

3.3 PERIOD OF STUDY

The period of study is from January 2024 to March 2024.

3.4 ANALYTICAL TOOLS

The data collected from the employee 's during the survey is analyzed using various tools. Some of the statistical tools applied in study are,

- Percentage Analysis
- Correlation Analysis
- Independent T-Test

CHAPTER 4

DATA ANALYSIS AND INTERPRETATION

4.1 PERCENTAGE ANALYSIS

Table 4.1.1 Ageing bucket statement for quarterly collections during they year 2023

AGEING BUCKET FOR THE YEAR 2023 – QUARTER 1 (JAN-MARCH 2023)

Quarter	Outstanding Period	Debt Collected	Percentage of Debtor collected
I	0 – 15 days	73535723	3.23%
	16 – 30 days	547503196	24.08%
	31 – 45 days	19640836	0.86%
	46 – 60 days	396249742	17.43%
	61-75Days	158921163	6.99%
	61 – 90 days	1077362376	47.39%
	TOTAL	2273213036	100%

INTERPRETATION:

The above analysis on ageing statement is performed for the year of 2023 to asses the collection made during 1st quarter of January 2023 to March 2023. A year was divided into 4 quarters and each quarter was sub divided into 6 periods with 15 days interval. The above chart shows that during the first quarter, the debt was collected during the last 15 days

CHART 1

AGEING BUCKET FOR THE YEAR 2023 – QUARTER 1 (JAN-MARCH 2023)

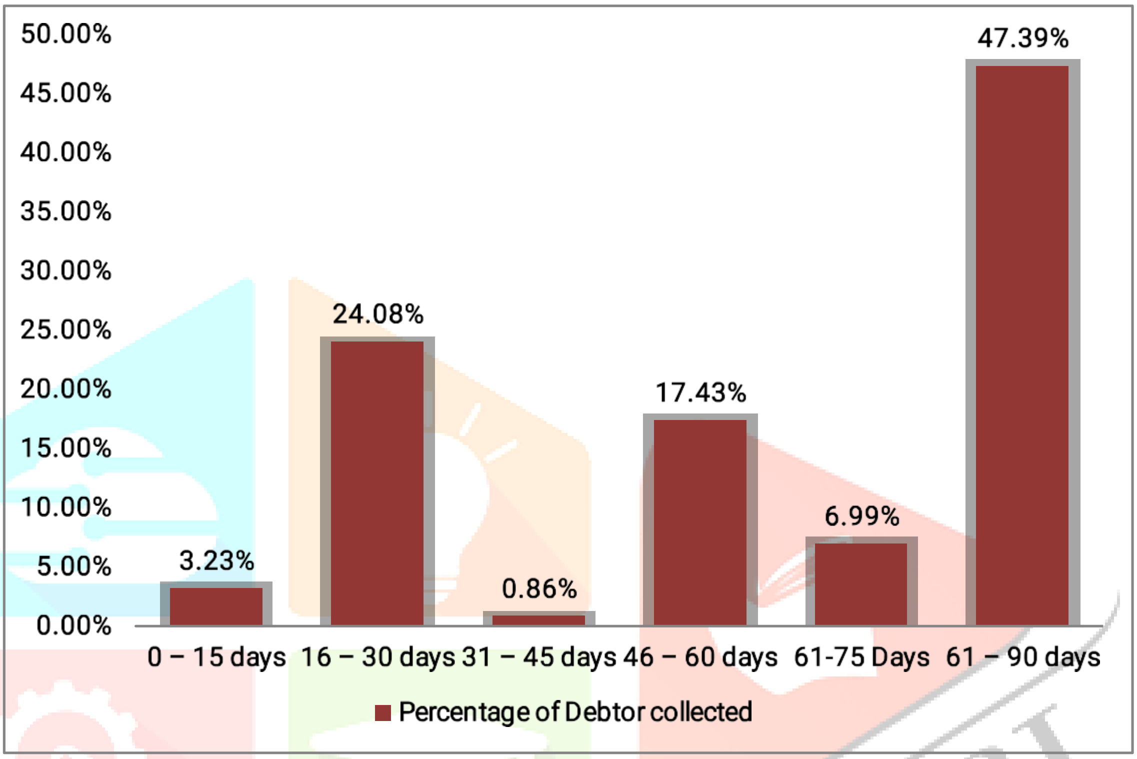

Fig. 4.1.1

TABLE 4.1.2

AGEING BUCKET FOR THE YEAR 2023 – QUARTER II (APRIL-JUNE 2023)

Quarter	*Outstanding Period*	*Debt Collected*	*Percentage of Debtor collected*
II	*0 – 15 days*	*3677706*	*0.86%*
	16 – 30 days	*16524650*	*3.86%*
	31 – 45 days	*3477883*	*0.81%*
	46 – 60 days	*166798855*	*38.97%*
	61-75Days	*9561647*	*2.23%*
	61 – 90 days	*227926553*	*53.26%*
	TOTAL	***427967294***	*100%*

*INTERPRETATION:*The above analysis on ageing statement is performed for the year of 2023 to assess the collection made during 2nd quarter of April 2023 to June 2023. A year was divided into4 quarters and each quarter was sub divided into6 periodswith15 days interval. The above chart shows that during the second quarter, the debt was collected during the last 15 days

CHART 2

AGEING BUCKET FOR THE YEAR 2023 – QUARTER 1 (APRIL-JUNE 2023)

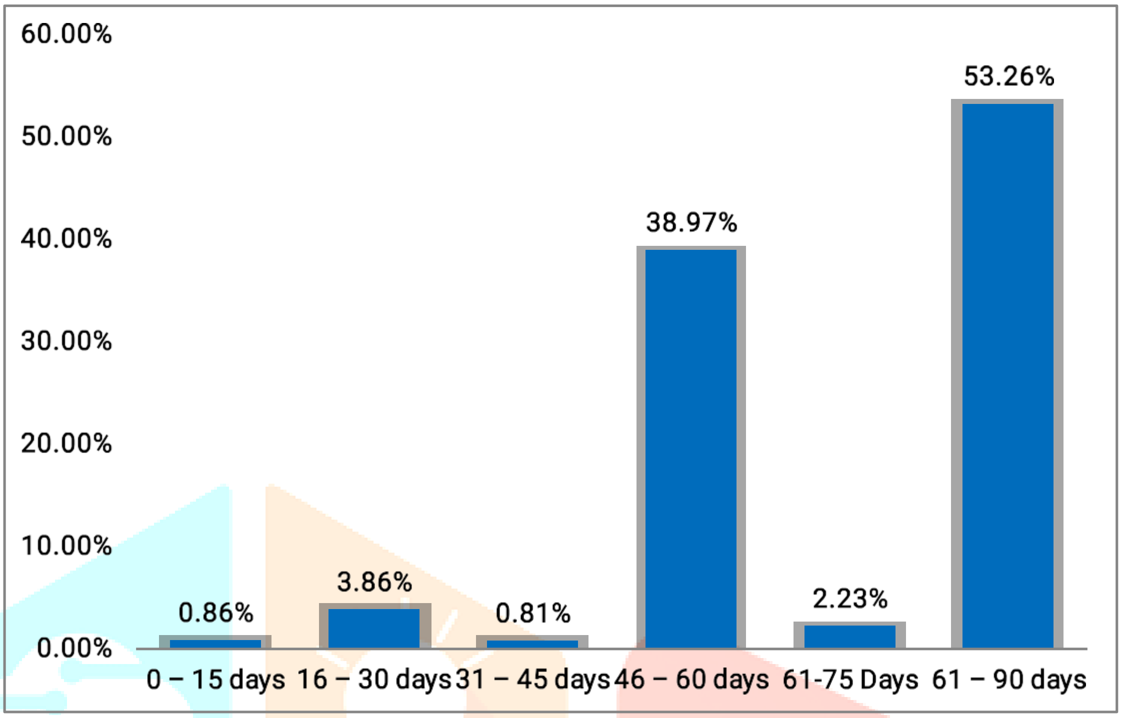

Fig. 4.1.2

TABLE 4.1.3

AGEING BUCKET FOR THE YEAR 2023 – QUARTER III (JULY-SEPTEMBER 2023)

Quarter	*Outstanding Period*	*Debt Collected*	*Percentage of Debtor collected*
III	*0 – 15 days*	*69543644*	*5.48%*
	16 – 30 days	*427644593*	*33.71%*
	31 – 45 days	*44445052*	*3.50%*
	46 – 60 days	*250032888*	*19.71%*
	61-75Days	*40742478*	*3.22%*
	61 – 90 days	*436118873*	*34.38%*
	TOTAL	*1268527528*	*100%*

INTERPRETATION:

The above analysis on ageing statement is performed for the year of 2023 to assess the collection made during 3rd quarter of July 2023 to September 2023. A year was divided into 4 quarters and each quarter was sub divided into 6 periods with 15 days interval. The above chart shows that during the third quarter, the debt was collected during the last 15 days

CHART 3

AGEING BUCKET FOR THE YEAR 2023 – QUARTER 3 (JULY – SEP 2023)

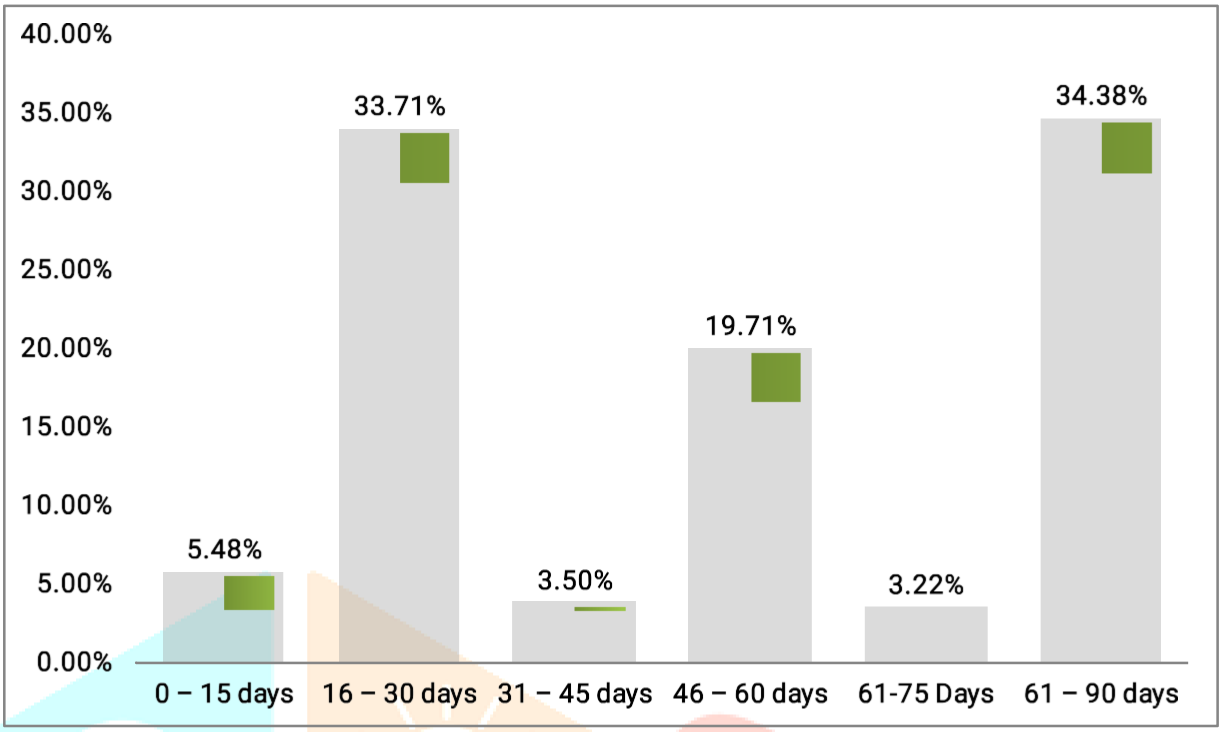

FIG. 4.1.3

TABLE 4.1.4

AGEING BUCKET FOR THE YEAR 2023 – QUARTER IV (OCT-DEC 2023)

Quarter	*Outstanding Period*	*Debt Collected*	*Percentage of Debtor collected*
IV	*0 – 15 days*	*96410892*	*5.37%*
	16 – 30 days	*300252136*	*16.73%*
	31 – 45 days	*49882292*	*2.78%*
	46 – 60 days	*469380034*	*26.15%*
	61-75Days	*188728896*	*10.52%*
	61 – 90 days	*690022541*	*38.45%*
	TOTAL	*1794676791*	*100%*

INTERPRETATION:

The above analysis on ageing statement is performed for the year of 2023 to assess the collection made during 4th quarter of October 2023 to December 2023. A year was divided into 4 quarters and each quarter was sub divided into 6 periods with 15 days interval. The above chart shows that during the fourth quarter, the debt was collected during the last 15 days

CHART 4

AGEING BUCKET FOR THE YEAR 2023 – QUARTER 4 (OCT – DEC 2023)

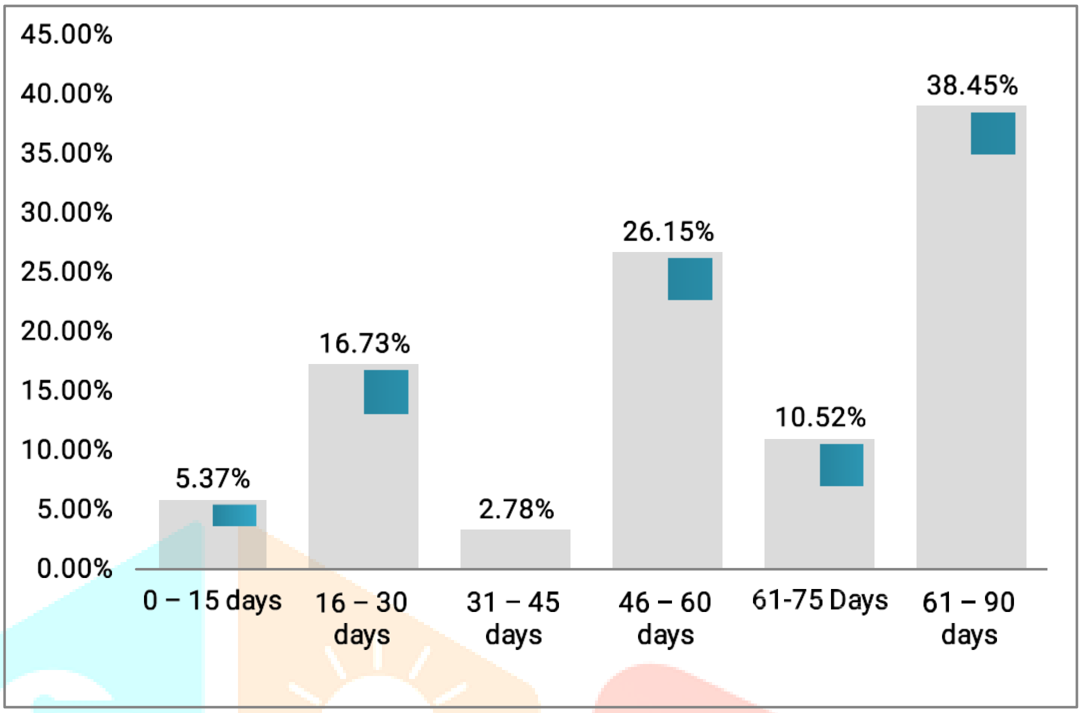

FIG 4.1.4

TABLE 4.1.5

TABLE SHOWING COMPARATIVE QUARTERLY DEBTORS AND SALES FY 2023

TABLE 5

Quarters	*Sales*	*% of change*	*Increase/ Decrease*	*Debtors*	*% of change*	*Increase/ Decrease*
Jan–March 23	*7917042838*	-	-	*2273213036*	-	-
April– June23	*1630048495*	*-0.794*	*Decrease*	*420611882*	*-0.815*	*Decrease*
July–Sept 23	*4024920292*	*1.469*	*Increase*	*1268527528*	*2.016*	*Increase*
Oct–Dec-23	*3531635091*	*-0.123*	*Decrease*	*1794676790*	*0.415*	*Increase*
Jan–March 24	*2062028074*	*-0.416*	*Decrease*	*2488021062*	*0.386*	*Increase*

INTERPRETATION: During the second, fourth and fifth quarters, the percentage of change in sales showed a decreasing trend but the change percentage of sales was positive during last three quarters.

CHART SHOWING PERCENTAGE OF CHANGE IN DEBTORS

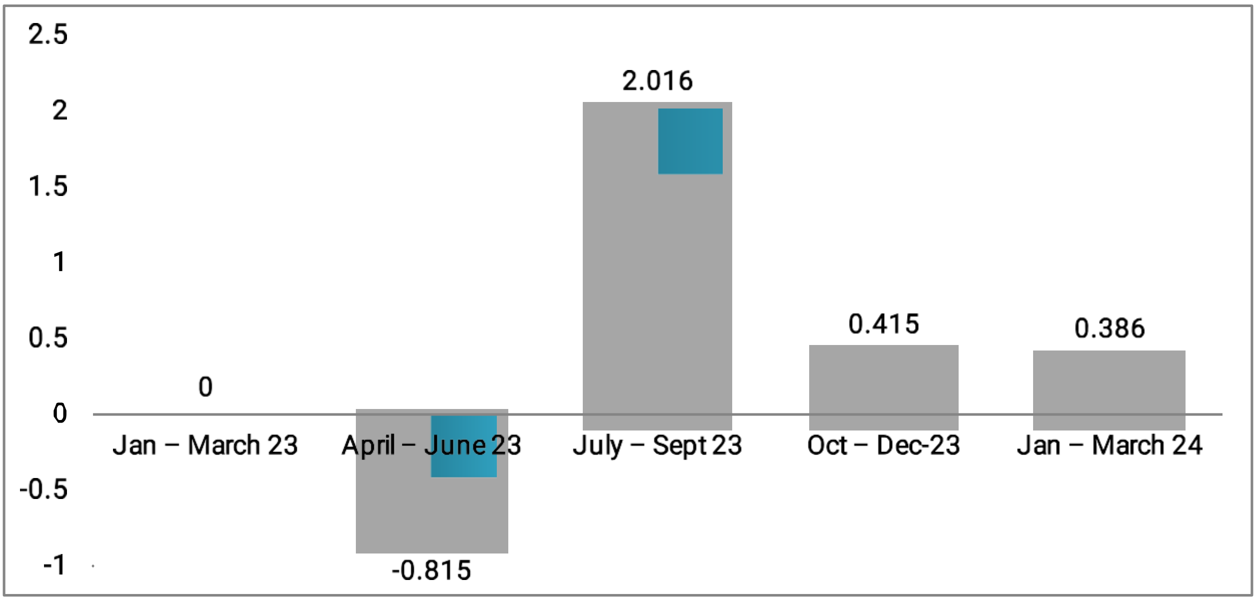

FIG 4.1.5

TABLE 4.1.6

CHART SHOWING COMPARATIVE QUARTERLY DEBTORS AND SALES

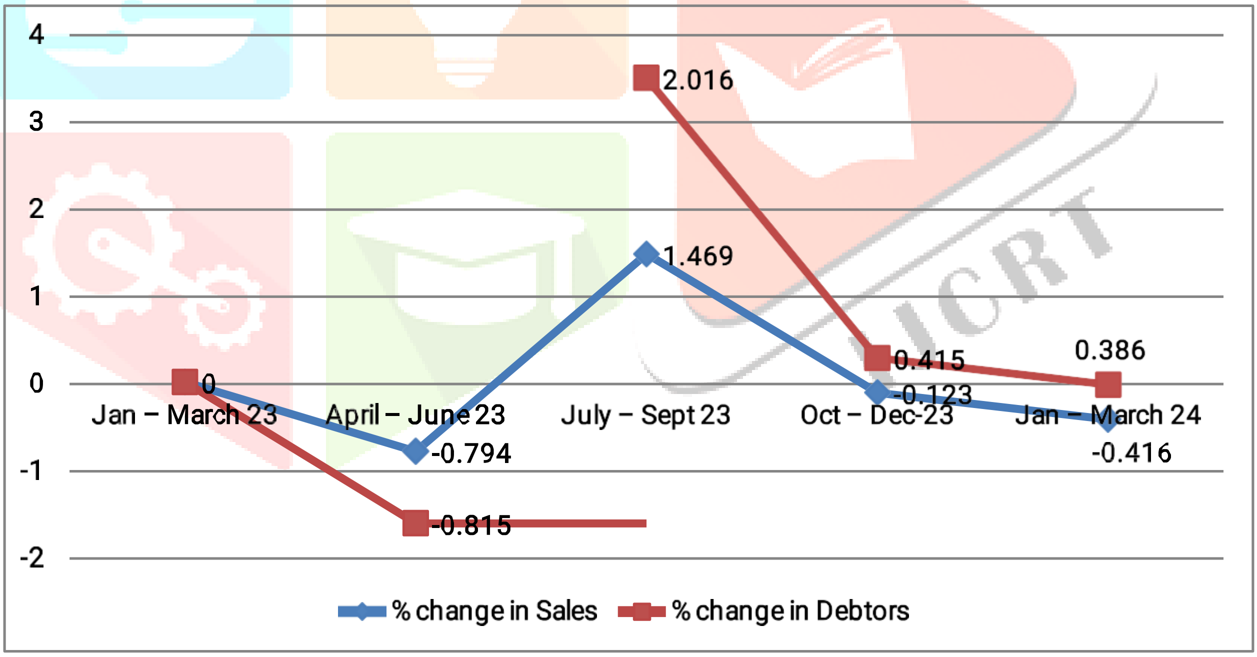

FIG 4.1.6

INTERPRETATION:

The above chart showed a comparative trend of change percentage between sales and debtors during the quarters of 2023 and first quarter of 2023.

TABLE 4.1.7

SHOWING COMPARATIVE QUARTERLY DEBT COLLECTION PERIOD 2023

Quarters	*Jan-March 2023*	*Apr-June 2023*	*July-Sep-2023*	*Oct-Dec 2023*	*Jan-March 2024*
A.Sales	*7917042838.40*	*1630048495.32*	*4024920291.61*	*3531635090.83*	*2062028074.33*
B.Debtors	*2273213036*	*420611882.1*	*1268527528*	*1794676790*	*2488021062*
C. Per Day sales	*87967142.65*	*18111649.95*	*44721336.57*	*39240389.9*	*22911423.05*
D.Debt collection	*26 Days*	*23 Days*	*28 Days*	*46 Days*	*109 Days*

INTERPRETATION: During the year2023,the per day sales was high during the first quarter of January 2023. Debt collection period was less during April to June 2023 as 23 days and higher during January to March 2019 as 109 days. The company can concentrate more on reducing the quarterly debt collection period as it was high during the last two quarters of the study period

CHART SHOWING PER DAY SALES (Rs)

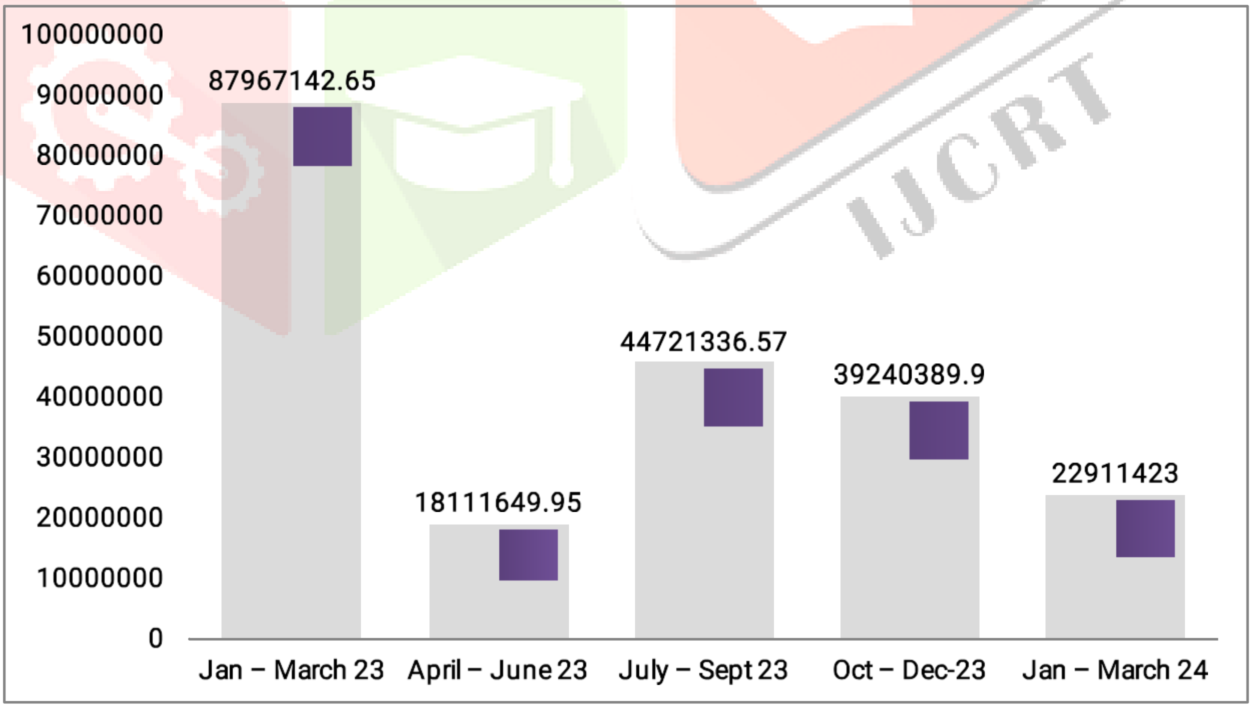

FIG 4.1.7

TABLE 4.1.8

7

TABLE SHOWING COMPARATIVE DEBT COLLECTION PERIOD FY 2019-2023

Particular	*2019*	*2020*	*2021*	*2022*	*2023*
A.Sales	*42246.59*	*47978.89*	*48424.65*	*39108.83*	*30182.98*
B. Debtors	*102.14*	*123.43*	*1415.20*	*2654.77*	*61.00*
C. Day sales (A/365)	*115.74*	*131.45*	*132.67*	*107.15*	*82.69*
D. Debtors collection period (B/C)	*1*	*1*	*11*	*25*	*1*
E. Rank	*II*	*III*	*IV*	*V*	*I*

INTERPRETATION: During the year 2021, the per day sales was higher as 132.67. Debt collection period was less during the years 2019, 2020 and 2023 as 1 day and higher during the year 2022 as 25 days.

TABLE SHOWING COMPARATIVE SALES AND DEBTORS FY 2019-2023

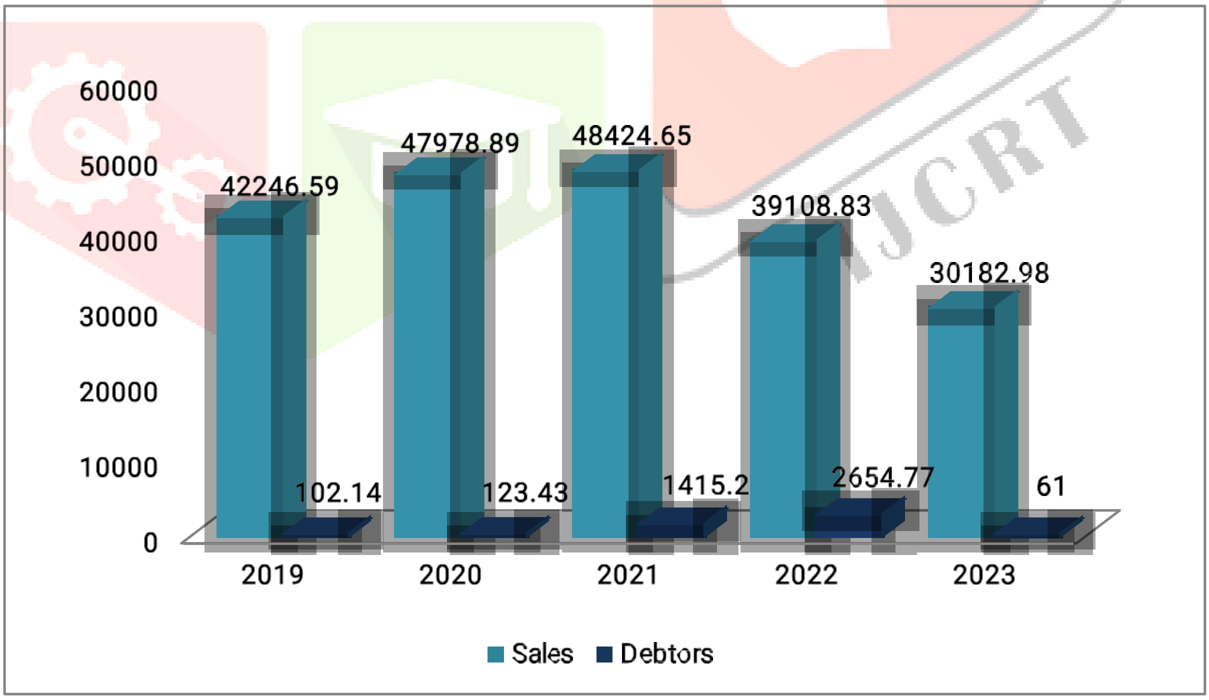

FIG 4.1.8

Table 4.1.9

TABLE SHOWING DEBT TO EQUITY RATIO

Year	*Total Debt*	*Shareholders' Equity*	*Debt to Equity Ratio*
2019	102.14	489.52	0.209
2020	123.43	489.52	0.252
2021	1415.20	489.52	2.891
2022	2654.77	489.52	5.423
2023	61.00	489.52	0.125

INTERPRETATION: The ratio of debt-to-owner's equity or net worth indicates the degree of financial leverage you're using to enhance your return. A rising debt-to-equity ratio may signal that further increases in debt caused by purchases of inventory or fixed assets should be restrained. The above chart shows, Debtor's Turnover Ratio keeps on decreasing from 2019 and increased in 2021 and met a sudden fall in 2023. This shows a decrease in sales volume as well as debtors' volume. From the above graph it is clear that in the 2019, debtors' turnover ratio is 0.0051 & it has been decreased 0.0018 in 2023

CHART SHOWING DEBT TO EQUITY RATIO

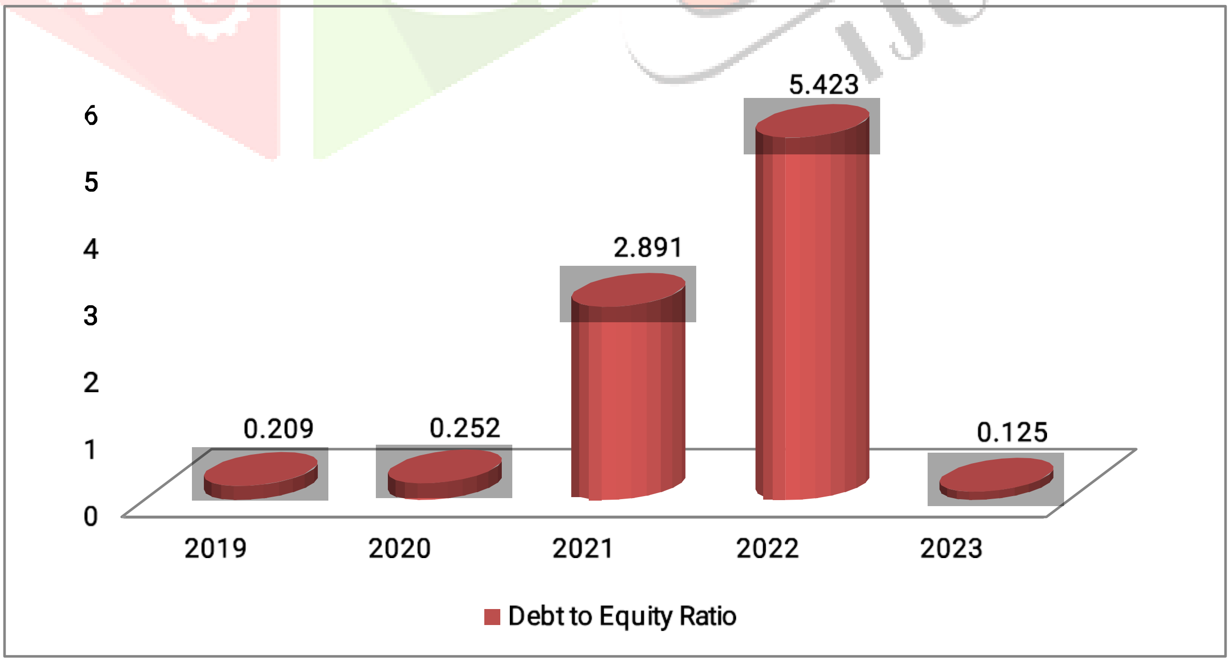

Fig 4.1.9

Table 4.1.10

TABLE SHOWING DEBT TO ASSETS RATIO

Year	*Total Debt*	*Total Assets*	*Debt to Assets Ratio*
2019	102.14	20,255.98	0.0050
2020	123.43	25,496.64	0.0048
2021	1415.20	31,859.30	0.0444
2022	2654.77	35,701.82	0.0744
2023	61.00	34,145.60	0.0018

INTERPRETATION

This ratio measures whether the total assets are enough for total debt. Historically, a debt-to- asset ratio of no more than 50 percent has been considered prudent. A higher ratio indicates a possible overuse of leverage, and it may indicate potential problems meeting the debt payments. The Debt asset ratio was 0.0050 in 2019, it increased in 2021 to 0.0444 and has a sudden fall in 2023 to 0.0018

CHART SHOWING DEBT TO ASSETS RATIO

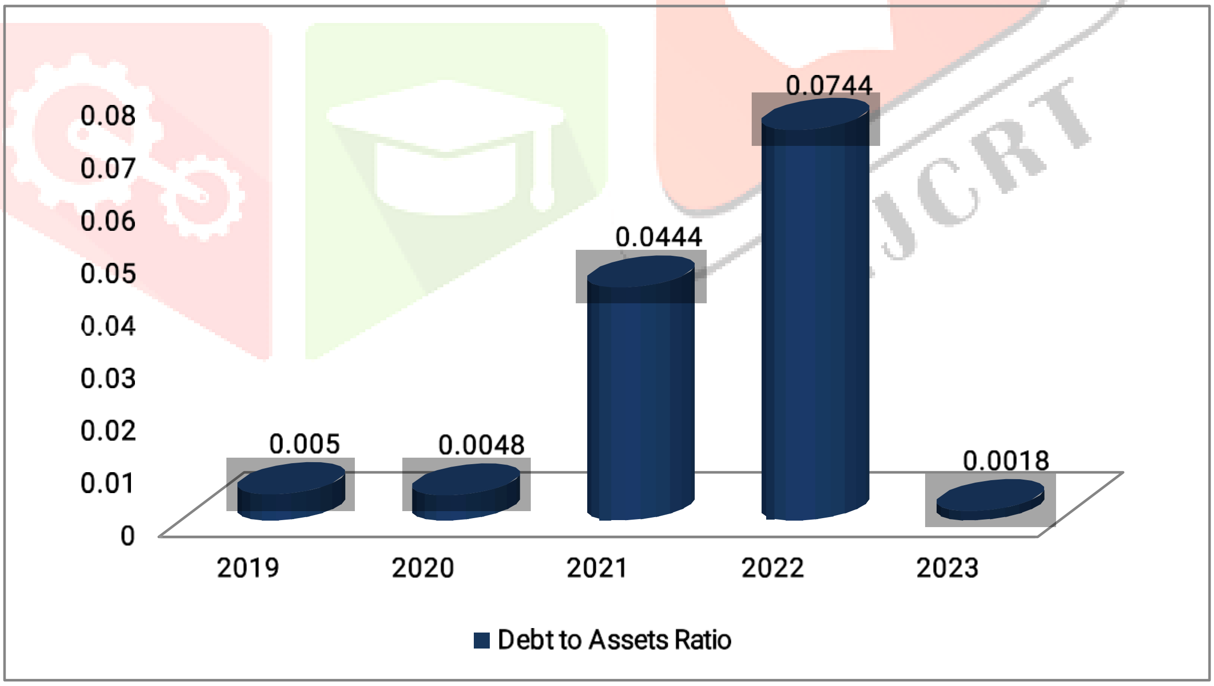

Fig 4.1.10

Table 4.1.11

TABLE SHOWING QUARTERLY DEBTORS TURNOVER RATIO DURING THE YEAR 2023

Quarters	*Sales*	*Debtors*	*Debtors Turnover Ratio*
Jan–March 2023	7917042838	2273213036	3.483
April– June2023	1630048495	420611882	3.875
July–Sept 2023	4024920292	1268527528	3.173
Oct–Dec-2023	3531635091	1794676790	1.968
Jan-March 2024	2062028074	2488021062	0.829

INTERPRETATION

The above chart shows, Debtor's Turnover Ratio keeps on decreasing from 1st Quarter and meets a sudden fall. This shows and decrease in sales volume as well as debtors' volume. From the above graph it is clear that in the quarter January 2023-March 2023, in January-March.

CHART SHOWING QUARTERLY DEBTORS TURNOVER RATIO DURING THE YEAR 2023

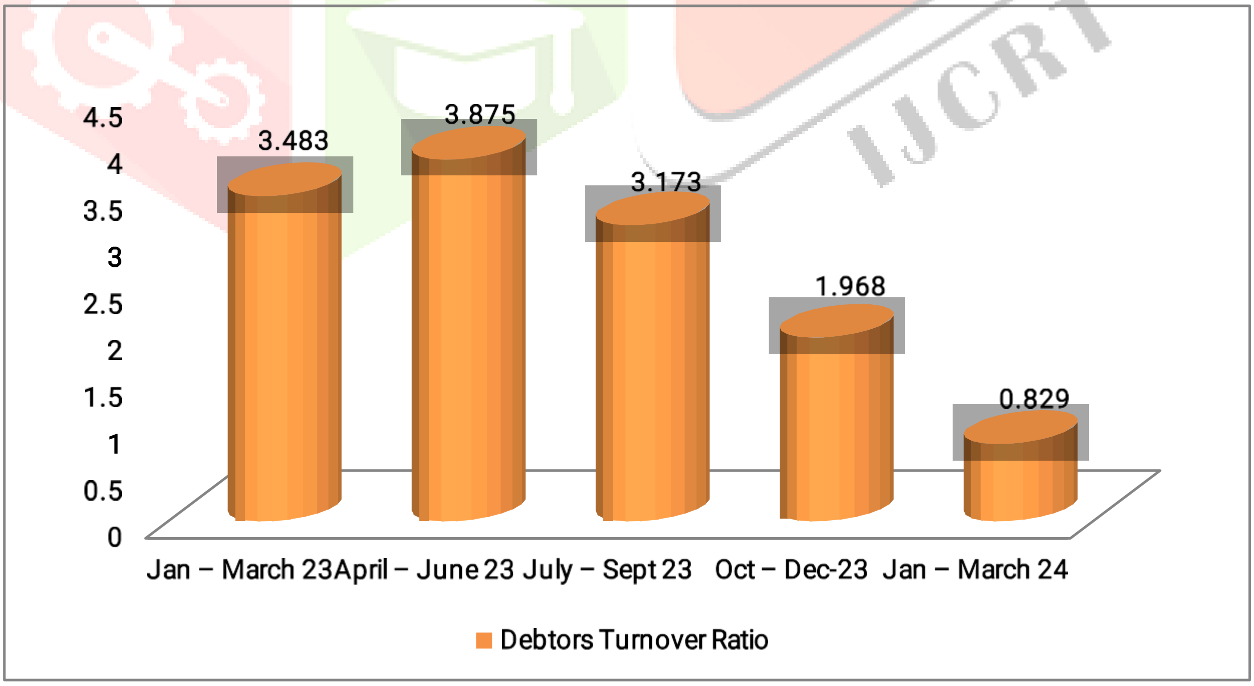

Fig 4.1.11

table 4.1.12

TABLE SHOWING DEBTORS TURNOVER RATIO

Years	*Debtors*	*Sales*	*Debtors Turnover Ratio*
2019	20,103.50	42246.59	2.10
2020	26,336.13	47978.89	1.82
2021	29,234.49	48424.7	1.66
2022	28,071.92	39108.83	1.39
2023	26,223.50	30182.98	1.15

INTERPRETATION:

During the study period from 2019 to 2023, the debtor turnover ratio was found to be higher in 2019 with 2.10 and decreased marginally over the period of time and stands at 1.15 during 2023

CHART SHOWING DEBTORS TURNOVER RATIO

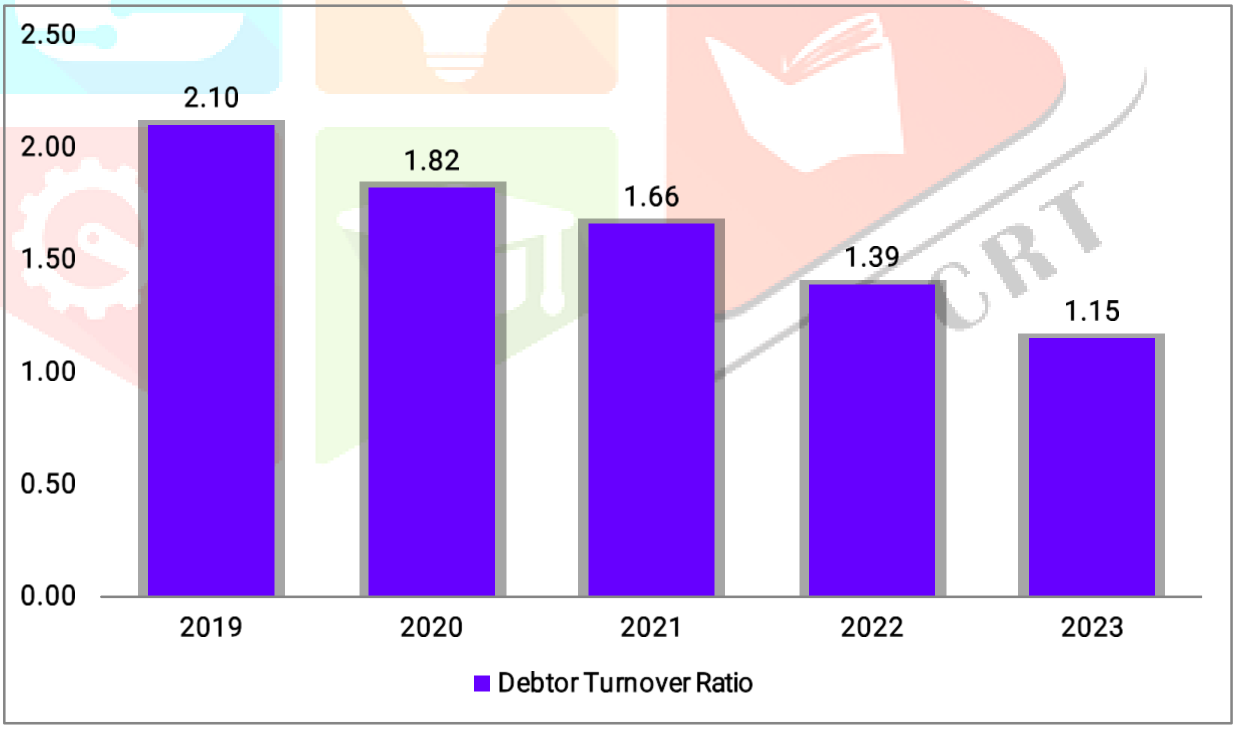

Fig 4.1.12

4.2 CORRELATION ANALYSIS

TO ANALYZE RELATIONSHIP BETWEEN TIMELY COMPLETION OF WATER SUPPLY SCHEME AND BUDGET

Null Hypothesis (HO): There is no significant relationship between the time completion and budget

Alternative Hypothesis (H1): There is significant relationship between the time completion and budget

Time	Pearson Correlation	1	.442**
	Sig. (2-tailed)		.000
	N	120	120
BUDGET	Pearson Correlation	.442**	1
	Sig. (2-tailed)	.000	
	N	120	120

Correlation is significant at the 0.01 level (2-tailed)

Inference:

Since r is positive, there is positive relationship between the time and budget Hence **(H1) Accepted.**

4.3 INDEPENDENT T-TEST

TO EVALUATE RELATIONSHIP BETWEEN SCOPE AND CHANGE IN SIGNIFICANCE OUTCOME

Null Hypothesis (HO): There is no significant relationship between the scope and change in outcome.

Alternative Hypothesis (H1): There is significant relationship between the scope and change in outcome.

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	G . 2- tailed	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Change in Outcome	Equal variance assume	1.310	.259	.551	38	.585	.083	.151	-.223	.389
	Equal variances not assumed			.560	33.930	.579	.083	.149	-.219	.386

Sig value .585 is greater than 0.05

Inference:

From the above table it is interpreted that the sig value for change in outcome pattern is 585. Since the value is greater, there is a significance between the scope and change in outcome. Hence **(H1) Accepted.**

CHAPTER 5 FINDINGS

FINDINGS OF THE STUDY

1.*Initial Investment*: This includes the cost of infrastructure like pipelines, treatment plants, storage facilities, and distribution networks.

2.*Operational Costs*: These encompass day-to-day expenses such as energy costs for pumping water, salaries for staff, chemical costs for treatment, and any other ongoing operational expenses.

3.*Maintenance Expenses*: Regular maintenance is crucial to ensure the proper functioning of the water supply system. Budgeting for repairs, equipment replacements, and upgrades is essential.

4.*Revenue Sources*: Depending on the context, revenue can come from user fees, government subsidies, grants, or public-private partnerships. It's essential to establish a sustainable revenue model to cover operational and maintenance costs.

5.*Financial Planning and Monitoring*: Developing a comprehensive financial plan and implementing effective monitoring mechanisms are crucial for ensuring financial sustainability and accountability.

6.*Risk Management*: Identifying and mitigating financial risks, such as fluctuating water demand, unexpected maintenance issues, or changes in regulatory requirements, is vital for the long-term success of the water supply scheme.

CHAPTER 6 SUGGESTIONS AND CONCLUSION

SUGGESTIONS

1.*Budgeting:* Create a detailed budget that includes all costs associated with the water supply scheme, such as infrastructure development, maintenance, operation, and staff salaries.

2.*Cost Recovery Mechanisms:* Implement user fees or tariffs to recover the costs of providing the water supply service. Consider different pricing structures based on usage and ability to pay.

3.*Public-Private Partnerships (PPPs):* Explore partnerships with private companies for funding, operation, and maintenance of the water supply scheme. PPPs can bring in additional expertise and investment.

4.*Grant Funding:* Seek grants from government agencies, international organizations, or NGOs to fund initial setup costs or infrastructure development.

5.*Revenue Management:* Establish efficient revenue collection systems and procedures to ensure timely collection of user fees and tariffs. Use technology such as mobile payment platforms for convenience and transparency.

6.*Cost Reduction Measures:* Identify opportunities for reducing operational costs through efficiency improvements, such as optimizing energy usage, minimizing water losses through leak detection and repair, and streamlining administrative processes.

7.*Financial Planning:* Develop long-term financial plans to ensure the sustainability of the water supply scheme. Consider factors such as inflation, population growth, and infrastructure maintenance requirements in financial projections.

CONCLUSION

In conclusion, effective financial management is imperative for the sustainable operation of water supply schemes for drinking water. By implementing sound financial practices, such as budgeting, cost control, revenue generation, and proper allocation of funds, water authorities can ensure the availability of clean and safe drinking water to communities.

Furthermore, securing adequate funding through grants, loans, and user fees is crucial for the maintenance and expansion of water supply infrastructure. Collaborative partnerships between government agencies, private sectors, and community stakeholders can also provide additional resources and expertise to enhance financial sustainability.

Moreover, investing in modern technologies and efficient management systems can optimize operational costs and improve service delivery. Additionally, raising awareness among consumers about the value of water and the importance of paying for its services can foster a culture of responsibility and support financial viability.

In essence, a well-managed financial strategy not only ensures the affordability and accessibility of drinking water but also safeguards the environment and promotes public health and well-being for generations to come.

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