A PROJECT REPORT ON

***“A study on financial performance using ratio analysis of Damodar Valley Corporation*”**



***Submitted in partial fulfilment of the requirement***

***For the award of the degree of Master’s In Business ….Administration.***

***Session: 2019-21***



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## To whom it may concern

This is to certify that the project work entitled “financial performance using ratio analysis”, worked under Damodar Velly Corporation is a bonafid work carried out by Komal Kumari for the MBA session (2019-2021) University department of management, Vinoba Bhave University Hazaribagh. The project report has been approved as it satisfies the academic requirements in respect of project work prescribed for the masters of business administration degree.

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**Declaration**

I do here declare that the project entitled “financial statement analysis using ratio analysis of Damadar Velly corporation”. Submitted by me in the partial fulfilment of requirements for the award of degree of “masters of business management” to the department of management, Vinoba Bhave University, Hazaribagh (Jharkhand) is record of bonafid work carried by me under supervision of mrs. Pooja Pathak .

I further declare that the work reported in this thesis is my original research work and has not been submitted so far either in part or in full, for the award of any other degree or diploma in this university or any other institute/university.

Hazaribagh Komal Kumari

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Komal Kumari

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**Chapter – 1**

**An Introduction To the study**

## Introduction

The institutional training gives the students, as practical knowledge about the functioning of the company as such there is a wide difference between doing things practically and learning the same things theoretically.

The institutional training enlightens the mind of the students about various policies, procedures and program of the organization. In addition, it helps to keep in touch with the person holding high position which enriches.

Institutional training may be described as process of placing the students before an organization, making them familiar with its line of function and asking them to perform some duties, which involves technical skills.

This training bridges of group between for tech theory and down to earth really in an organization. Such training is an added significance because kinds of jobs. So the students are become more adaptable and efficient in the future.

Finance (meaning)

Finance is the life blood and nerve centre of a business, just as circulation of blood is essential in the human body for maintaining life. Finance is very essential for blood is running of business . Right from the very beginning i.e ., conceiving an idea to business finance is needed to promote or establish the business, acquire fixed assets, make investigations such as market surveys etc., develop product, keep men and machines at work, encourage management to make progress and create values. Even an existing firm may require further finance for making improvement or expanding the business.

Financial management

In order to manage finance, a new management discipline was conceived. Such discipline is known as financial management. Financial management was a branch of economics till 1890. Later it was developed into a separate subject. Financial management refers to the management of flow of funds in the firm.

## objective of the study

The project on financial analysis has been undertaken while keeping the following objectives in consideration:

. To analyse and understand the capital structure , leveraging, financial position of the company its performances over the years.

. To study various subsidiary activities undertaken by the company and analyse its socio economic impact.

. To highlight the key areas where action needs to be taken .

## Significance

* + 1. The study has great significance and provides benefits to various parties whom directly or indirectly with the company.
    2. It diagnose the information contained in financial statements so as to judge the profitability of the firm.
    3. It helps us develop an understanding of the aspects that can motivate employees.
    4. Increase their performance and help department establish a strong and trusting relationship with their employees.

## Research methodology

The main aim of the study is to know the financial performance of the damodar valley corporation limited.

Research

Any efforts which are directed to study of strategy needed to indentify the problems and selection of best soluations for better result are knows as research

Research Design

In view of the object of the study listed above an exploratory research design has been adopted. Exploratory research is one which is largely interprets and already available information and it lays particular emphasis on analysis and interpretation of the existing and available information.

1. To know the financial position of the company.
2. To know the credit worthiness of the company.
3. To offer suggestions based on research finding. Data collection methods

## Primary data

Data that has been collected from first –hand-experience is known as data. Primary data has not been published yet and is more reliable, authentic and objective. primary data has not been changed or altered by human beings, therefore its validity is greater than secondary data

## Secondary data

Data collected from a source that has already been published in any form is called as secondary data. The review of literature in any research is based on secondary data. Mostly from books , journals and periodicals

Company balance sheet and profit and loss account

* + Company’s annual reports 2017-2018

2018-2019

Website economicstimes.com

Period of study

The study covers the period of (2017 to 2019)

# Chapter -2

**About the organization**

## 2.1 industry overview

The electric power industry covers the generation , transmission, distribution and sale of electric power to the general public and industry . The commercial distribution of electric power started in 1882 when electricity was for produced for electric lighting. In the 1880s and 1890s ,growing economic and safety concerns lead to the regulation of the industry . What was once an expensive novelty limited to the most densely populated areas ,reliable and economic electric power has become an essential aspect for normal operation of all elements of developed economies.

By the middle of the 20th century, electric was seen as a “natural monopoly”only efficient if a restricted number of organizations participated in the market; in some areas, vertically-integrated companies provide all stages from generation to retail, and only governmental supervision regulated the rate of return and cost structure.

Since the 1990s, many regions have broken up the generation and distribution of electric power to provide a more competitive electricity market. While such market can be abusively manipulated with consequent adverse price and reliability impact to consumers, generally competitive production of electrical energy leads to worthwhile improvements in efficiency. However transmission and distribution are harder problems since returns on investment are not as easy to find.

Electric power industry is commonly split up into four processes. These are electricity generation such as a power station , electric power transmission, electricity distribution and electricity retailing. In many countries, electric power transmission , electricity distribution and electricity stations to transmission and distribution infrastructure .for this reason, electric power is viewed as a natural monopoly . The industry is generally heavily regulated, often with price controls and is deregulation in at least the latter to processes .

The nature and state of market reform of the electricity market often determines whether electric companies are able to be involved in just some these processes without having to on the entire in infrastructure, or citizens choose which components of infrastructure to patronise . In countries where electricity provision is deregulated, end-users of electricity may opt. For more costly electricity.

2.2 company profile

Damodar valley corporation (dvc) is an indian governmental organisation which operates in the damodar river area s of west bengal and jharkhand states of india. The corporation operates both thermal power stations and hydel power stations under the ministry of power , govt. Of india . Dvc is head quarter in the city of kolkata , west bengal, india.

The first dam was built across the barakar river, a tributary of the damodar river at tilailya 1953. The second one, konar dam , was built across the konar river , another tributary of the damodar river at konar in 1955. Two dams across the rivers barakar and damodar where built at maithon in 1957 and panchent in 1959. Both the dams are some 8km upstream of the confluence point of the rivers . These major dams are controlled by dvc . Durgapur barrage was constructed downstream of the four dams in 1955, across the damodar river at durgapur in 1955, with head regulators for canals on either side for feeding and extensive system of canals and distributaries. In 1978, the government of bihar (that was before the formation of the state of jharkhand ) constructed the tenughant dam across the damodar river outside the control of dvc. Dvc proposes to construct a dam across the barakar river at belpahari in jharkhand state. There are hydro electric power station at tailayia ,maithon and panchet , with total install capacity of 144 mw. The one at maithon was india’s first underground hydro – electric power station.

Dvc operates thermal power stations at bokaro , chandrapura, duragapur and mejia, with total derated capacity of 2745 mw. The power station at bokaro was biggest in the country when it was built in the fifties. Dvc is expanding its thermal power capacity and with the completion of its present plans by 2012 it would be generating more than 11000 mw of power. The forthcoming project are raghunath tps (4x600mwz), andal tps (2x500mw), koderma tps (2x500 mw)

maithon rb tps (2x525 mw) ,and bokaro a tps (1x600mw) and bokaro steel city tps (3x250mw).

Below is the list of dvc power stations in operation :

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Location | Capacity | Commissioning |

thermal

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Bokaro ‘b’ | Dist- bokaro state  jharkhand | 630 mw (3x 210mw) | * 1. mar 86   2. nov 90   u-iii aug 93 |  |
| Chandrapura | Dist-bokaro state- jharkhand | 390mw(3x130mw) | U-i oct 64 U- i may 65 u- i july 68 |  |
| Durgapur | Dist- barddhaman state westbengal | 350 mw (1x140mw)  + (1x210mw) | U- iii dec  66 u- iv sept 82 |  |
| Mejia | Dist-bankura state- westbengal | 1340mw (4x210)+(2x250mw) | U-i mar 96 u- ii mar 98 u- iii sept 99 u- iv feb 05 u- v feb 08 u- vi  sept 08 |  |

Total thermal 2710mw

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Location | Existing capacity | Commissioning |

## Hydel

|  |  |  |  |
| --- | --- | --- | --- |
| Tilaiya | River-barakar dist-hazaribagh state-jharkhand | 4 mw (2x2mw) | U-i feb’53 u-ii july’53 |
| Maithon | River-barakar dist-barddhaman state-west bengal | 60 mw (3x20mw) | U-i oct’57 u-ii mar’58 u-ii dec’58 |
| Panchet | River-damodar dist-dhanbad  state-jharkhand | 80mw (2x40mw) | U-i dec;59 u-ii mar’91 |

|  |  |  |  |
| --- | --- | --- | --- |
| Total hydel |  | 144mw |  |
| Grand total |  | 2854mw |  |

**The mission**

Dvc came into existence with the approved mission to mission to tame the turbulent damodar and control damages caused by the recurring and devastating floods in the valley. Following the model of the tennese valley corporation, dvc incorporated other activities to broaden the scope of its scope of its primary mission as follow:

. Flood control

. Promotion and operation of schemes for irrigation

. Water supply for industrial and domestic use

. Navigation and drainage

. Generation , transmission and distribution of electrical energy

. Promotion of afforestation and control of soil erosion in valley area

. Promotion of public health , agriculture , industrial , economic and general well being in damodar valley

The vission

To foster integrated development of damodar valley command area and achieve par excellence in its multifaceted activities of control of floods , provision of irrigation, generation , transmission and distribution of electrical energy and also soil conservation, unified tourism, fisheries socio-economic & health development of village within a radius of 10km 0f its project.

. To establish dvc as one of the largest power major of eastern india while discharging the responsibilities of its other objects adequately.

. In order to achieve this goal against the backdrop of the competitive market scenario in the power sector, the objectives of the corporation have been redefined.

Consumers of dvc power

S.no name of the consumer

1. west bengal state electricity distribution company ltd.
2. jharkhand state electricity board
3. Dpsc ltd.
4. Eastern railway
5. South eastern railway
6. Chittranjan locomotive works
7. Bokaro steel plant
8. Sail , iisco steel plant
9. Tata iron and steel plant 10.Eastern coal fields limited 11.Bharat coking coal ltd
10. Hindustan cables ltd
11. A.c.c. sindri
12. Durgapur cement ltd
13. Graphite india ltd
14. Central coal fields ltd
15. Anjani ferro- alloys ltd
16. Mongia hi-tech (p)ltd
17. Nayadih hi-tech (p)ltd
18. Atibir hi- tech (p)ltd
19. Nataraj iron and casting ltd
20. Shivam iron and steel ltd
21. Balaji electro steel ltd
22. Pranneet ispat udyog (p)ltd
23. Dayal steel ltd e.t.c.

Projects / divisions/ offices taken under each main head of accounts are given below

Head 1: power

. All theermal power stations

. All hydel stations

. Transmission & distribution (construction)- t.s.c (including four divisions). A.) T.s.c. i, panchet

B.) T.s.c. ii, panchet C.) T.s.c. iii, panchet

D.) T.s.c. iv, hazaribagh

. Tranmission & distribution (operation-gomd: “ grid operation and maintenance department)

( including five divisions ).

* 1. Gomd-i, howrah
  2. Gomd- ii, maithon
  3. Gomd- iii, jamdedpur
  4. Gomd- iv, putki
  5. Gomd- v, hazaribagh

. Gas turbine

. Direction office :

I . Construction wing (pce’s office )

utilization

1. Operating wing (sr. C.e (o & m)
2. Liaison office
3. Training institute, ctps
4. Commercial engineer’s office including survey and

. Mining & ropeway

. Central services :

* 1. M.m.e.w
  2. C.m.e.s
  3. Accounts office (c.s.o)
  4. C.m.f.s

. Tail pool dam, panchet

. Balpahari dam and hydro – electric project

. Central electrical stores , maithon

. Staff quarters for electricity department. Head 2 : irrigation

. Durgapur barrage and cannals Heads 3 : flood control

. Flood warning station

. Flood forecasting unit Heads 4 : subsdiary activities

. Afforestation

. Soil conservation

* + 1. Director of soil conservation’s office
    2. Evalution scheme

1. Soil conservation engieering
2. Training scheme
3. Strengthening of soil conservtion

. Use of land

a. Panagarh farm

B. Fisheries

. Industrial development- development of tourism

1. Boats and others charges
2. Deer park and bird sanctuary at tilaiya and maithon
3. Crocodile project

. Experimental and research station

. Public health and sanitation

. Economic and ssocial studies

. Socio-economic development

* 1. Village development
  2. Social obligation programme

. Navigation

Head 5: multipurpose dams:

. Civil engineering department , circle- i, panchet

. Civil engineering department , circle-ii , maithon

. Tilaiya dam

. Hazaribagh – tilaiya – civil sub -division

. Konar dam

. Maithon dam

. Panchet dam

Head 6 : general overhead establishment

. Corporation expenses

. Secretary’s office

. Board of consultants

. Financial advisor’s office including internal audit

. Chief accounts officer’s office including

* + 1. Store and stock verification
    2. Employee’s provident funt unit
    3. Management expenses for market loan

. Personnel branch

1. Director of personnel
2. Join director of personnel (l/r) , maithon

. Information branch

1. Cpro ‘s office
2. Pro ‘s establishment,maithon

. Central medical organisation

* 1. Cmo ‘ s office
  2. Central pathological laboratotry, maithon

. Law department

. Training personnel

. Central education estalishment

. Statutory audit office

. Stores depot-calcutta

. Timber workshop

. Construction plant division

. Civil engineer ‘s office (c), maithon

. Planning and designing branch

. Material management department

1. Material management
2. Purchae office

. Meteorological ral, alipore

. M. T. Shop, panchet

. M.t. shop, maithon

. Damodar division

. Reservour operation control

* 1. Manager, reservoir operation
  2. Director, c.w.p.c
  3. Non-agricultural water supply

. Centeral testing division, maithon

. Disposal wing, maithon

. Sedimentation survey

1. Scheme subsidised by g. O. I, ministry of energy
2. Other expenditure

. Hydraulic data division

. Flood warning commericial services

* 1. Tenughat dam unit
  2. Other units

. Co-operative societies

. Chief security officer , maithon

. Controller of stores , maithon

. Drla, hazaribagh

The summarized position of member ‘s fund , considering ploughed back fund is given in the following table:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Item | Central govt. | Wb govt. | Bihar govt. (now jharkhand) | Tatol |
| Loan capital | 1133.43 | 1072.45 | 1106.74 | 3312.62 |
| Power surplus- ploughed back | 176.24 | 176.24 | 176.24 | 528.72 |
| Retained interest | 64.41 | 35.51 | 62.96 | 162.88 |
| Total member’s fund | 1374.08 | 1284.2 | 1345.94 | 4004.22 |

## Financial position (2017-2019)

(Rs. In crore )

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Generation | 2004.29 | 43.38 | 2052.85 | 41.45 |
| Overhead & share of subsidiary object | 174.09 | 3.77 | 147.69 | 2.98 |
| Purchase of power | 252.67 | 5.47 | 316.77 | 2.98 |
| Deprecation | 211.77 | 4.58 | 217.13 | 4.38 |
| Interest | 166.76 | 3.61 | 205.25 | 4.14 |
| Bad debts | 3.43 | 0.08 | 24.15 | 0.49 |
| Rebate on sale of power | 14.31 | 0.31 | 12.8 | 0.26 |
| Income tax | 243.52 | 5.27 | 122.87 | 2.48 |
| Past year’s  adjustment |  | \_ | 663.14 | 13.39 |
| Saving | 1549.04 | 33.53 | 1190.52 | 24.04 |

Income 4619.88 100 4953.17 100

# chapter-3

**Ratio analysis Overview**

## Ratio ananlysis

**Introduction**

The ratio analysis is the most powerful tool of financial analysis . Several rations calculated from the accounting data can be grouped into various classes according to financial activity or function to be evaluated.

Defination:

“ the indicate quotient of two mathematical expressions and as “the relationship between two or more things”. It evaluates the financial position and performance of the firm . As started in the beginning many diverse group of people are interested in analysis financial information to indicate the operating and financial efficiency and growth of firm. These people use ratio to determine those financial characteristics of firm in which they interested with the help of ratio one can determine.

. The ability of the firm to meet its current obligation.

. The extent to which the firm has used its long-term solvency by borrowing funds.

. The efficiency with which the firm is utilizing its assets in generating the sales revenue.

. The overall operating efficiency and performance of firm.

Ratio analysis of financial statements stands for the process of identifying the financial strength and weakness of the firm by properly establishing the relationship between the different items of balance sheet and profit and loss account for a meaningful understanding of the financial position and performance of the firm.

1. Past ratios
2. Competitor’s ratio
3. Industry ratios
4. Projected ratios

Past ratios: ratio calculated from the past financial statements of the same firm.

Competitor’s ratio: ratios of some selected firms, especially the most progressive and successful competitor at the same point in time .

Industry ratios : ratios of the industry to which the firm belongs.

Projected ratios : ratio development using the projected financial statements of the same firm.

Methods of analysis

A financial analyst can adopt the following tools for analysis of the financial statements . These are also termed as methods of financial analysis.

a.) Comparative statement analysis

b.) Common – size statement analysis c.) Trend analysis

d.) Fund flow analysis e.) Ratio analysis

Parties interested in financial analysis

The users of financial analysis can be divided into two broad group. Internals users

1. Financial executives
2. Top management

Eternal users

1. Investors
2. Creditors
3. Workers
4. Customers
5. Government
6. Public
7. Researchers Types of ratios

Management is interested in evaluated every aspects of firm’s performance . In view of the requirement of the various users of ratios , we may classify them into following four important categories .

* 1. Liquidity ratios

It is essential for a firm to be able to meet its obligation as they become due. Liquidity

Ratios help in establishing a relationship between cast and other current assets to current obligation to provide a quick measure of liquidity. A firm should ensure that it does not suffer from lack of liquidity and also that it does not have excess liquidity. A very high degree of liquidity is also bad , idle assets earn nothing . The firm ‘s fund will be unnecessarily tied up in current assets . Therefore it is necessary to strike a proper balance between high liquidity. Liquidity ratio can be divided into three types.

. Current Ratio

. Quick Ratio

. Cash Ratio

1. Current ratio

Current ratio is an acceptable measure of firm ‘s short- term solvency current assets includes cash within a year, such as marketable securities, debtors and inventor. Prepaid expenses are also included in current assets as they represent the payments that will not made by the firm in future. All obligations maturing within a year are included in current liabilities. These includes creditor, bills payable, expenses, short-term bank loan , income-tax liability in the current year

. The current ratio is a measure of the firm’s short term solvency . It indicated the availability of current assets in rupees for every one rupee of current liability

. A current ratio 2:1 is considered satisfactory . The higher current ratio , greater then it indicate more the firm’s ability to meet its obligation . It is a cured and quick measure of the firm ‘s liquidity . Current ratio is calculated by dividing current assets and liabilities.

Current ratio= current assets /current liabilities

1. Quick/liquid/ acid test ratio

Quick ratio establishes a relationship between quick or liquid assets and current liabilities. An assets is liquid if it can be converted into cash immediately or reasonably soon without a loss of value. Cash is the liquid assets that are considered to be relatively liquid assets and includes in quick most assets are

debtors and bills receivables and marketable securities (temporary quoted investments).generally, a quick ratio of 1:1 is considered to represent a satisfactory current financial condition. Quick ratio is a more penetrating test of liquidity than the current ratio, yet it should be used cautiously. A company with a high value of quick ratio can suffer from the shortage of funds if it has slow- paying, doubtful and long duration outstanding debtors. A low quick ratio may really be prospering and paying its current obligation in time.

Quick ratio= quick assets/ quick liabilities Glossory:

Quick assets : current assets -stock prepaid expense

Quick liabilities : current liabilities bank overdraft cash credit

1. Cash ratio

Cash is the most liquid assets a financial analyst may examine cash ratio and its equivalent current liabilities. Cash and bank balance and short -term marketable securities are the most liquid assets of firm , financial analyst stays look at cash ratio . Trade investment is marketable securities of equivalent of cash . If the company carries a small amount of cash , there is nothing to be worried about the lack of cash if the company has reserves borrowing power . Cash ratio is perhaps the most stringent measure of liquidity . Indeed one can argue that it is overly stringent . Lack of immediate cash may not matters if the firm stretch is payments or borrow money at short notice.

Cash ratio= bank + cash+ marketable securities/current liabilities

* 1. Profitability ratio

A company should earn profits to survive and grow over a long period of time. Profits are essential but it would be wrong to assume that every action initiate by management of a company should be aimed at maximizing profits. Profits is the ultimate ‘output’ of a company and it will have no future if it fails to make sufficient profit . The financial manager should continuously evaluated the efficiency of company in term of profits. The profitability ratio to get interest and repayment of principal regularly. Owner want to get a required rate of return on their investment. Generally two major types of profitability ratio are calculated.

. Profitability in relation to sales

. Profitability in relation to investment

Generally profitability ratio can be divided into five types:

. Gross profit ratio

. Net profit ratio

. Return on investment

. Earns per share

. Operating expenses ratio

1. Gross profit ratio:

First profitability ratio in relation to sales is the gross margin the gross profit margin reflects the efficiency which management produces each unit of product

. This ratio indicates the average spread between the cost of goods sold and the sales revenue. A high gross profit margin is a sign of good management. A gross margin ratio may increase due to any of following factors higher cost of goods sold remaining constant , lower cost of good sold due to firm inability to purchase raw material in higher cost of production or due to fall in prices in market . This ratio shows the margin left after meeting manufacturing costs. It measure the efficiency of profit margin , the proportion of various elements of cost ( labour, material, and manufacturing overheads) to sale may study in detail.

Gross profit ratio= gross profit \*100

net sales

1. Net profit ratio:-

Net profit is obtained when operating expenses, interest and taxes are subtracted from the gross profit . Net profit margin ratio establish a relationship between net profit and sales indicates management efficiency in manufacturing , administering and selling products .

This ratio also indicates the firm capacity to withstand adverse economic conditions. A firm with a high net margin ratio would be in advantageous position to survive in the face of falling selling prices , rising costs of production or demand for product .

net profit ratio= net profit \*100

net sales Return on investment:

This is one of the most important profitability ratio. It indicates the relation of net profit with capital employed in business . Net profit for calculating return of investment will mean the net profit before interest, tax and divided . Capital employed means long term funds.

Return on investment = E.B.I.T/Capital Employed

1. Earning per share:-

This ratio is computed by earning available to equity holder by the total amount of equity share outstanding . It reveals the amount of period earning after taxes which occur to each equity share. This ratio is an important index because it indicates whether the wealth of each share holder on a per share basis as changed over the period.

Earning per share= net profit

number of equity shares

5 Opearting expense ratio

It explains the change in the profit margin ratio. A higher operating expense ratio is unfavourable since it will leave a small amount of opening income to meet interest , dividends . Operating expense ratio is a yardstick of operating efficiency, but it should be used cautiously. It is affected by a number of factors such as external by sales. Operating expense equal cost of goods sold plus selling expense and general administrative expense by sales.

operating expense ratio = operating expense \* 100

sales

* 1. Leverage ratio

Financial leverage refers to the use of debt finance while debt capital is a cheaper source of finance . It is also a risker source of finance. It helps in assessing the risk arising from the use of debt capital . Two types of ratios are commonly used to analyse financial leverage. 1 structural ratios & 2 . Coverage ratios. Structural ratios are based on the proportions of debt and equity in the financial structure of firm. Coverage ratios shows the relationship between debt servicing . Commitments and the source for meeting these burdens . The short – term

creditors like bankers and suppliers of raw material are more concerned with the firm current debt – paying ability . On the others hand long term.

Creditors like debentures holders , financial institutions are more concerned with the firm’s long-terms financial strength. To judge the long-term financial positions of firms, financial leverage ratios are calculated. These ratios indicated mix of funds provides by owners and lenders. There should be an appropriate mix of funds provided by owners and lenders. There should be an appropriate mix of debt and owner equity in financing the firm assets . The process of magnifying the share holder ‘s return through the use of debt is called “financial leverage “ or financial gearing or trading on equity . Leverage ratios are calculated measure the financial risk and the firm’s ability of using debt to share holder’s advantage

.

1. Debt equity ratio

It indicates the relationship describing the lender contribution for each rupee of the owner’s contribution is called debt-equity ratio. Debt equity ratio is directly computed by dividing total debt by net worth . Lower the debt-equity ratio, higher the degree of protection . A debt-equity ratio of 2:1 is considered ideal. The debt consist of all short term as well long term and equity consist of net wroth plus preference capital plus deferred tax liability.

debt equity ratio = total debt

total equity

1. Intrest coverage ratio :

The interest coverage ratio or the time interest earned is used to test the firm’s debt servicing capacity. The interest coverage ratio is computed by dividing earning before interest and taxes by interest charges are covered by funds that are ordinarily available for their charges are covered by funds that ` are ordinarily available for their payment. We can calculated the interest average ratio as earning before deprecation, interest and taxes divided by interest.

Interst coverage ratio = E.B.I.T

Interst

1. Proprietary ratio

The total shareholder’s funds is compared with the total tangible assets of the company . This ratio indicates the general financial strength of concern. It is a test the soundness of financial structure of the concern. The ratio is of great significance to creditors since it enables them to find out the proportion of share holder funds in the total investment of business.

proprietary ratio = shareholder funds

total assets / fixed assets

1. Debt ratio/solvency ratio

Several debt ratio may used to analysis the long- term solvency of a firm. The firm may be interested in knowing the proportion of the interest-bearing debt in the capital structure. It may therefore compute debt ratio by dividing total debt by capital employed on net assets. Total debt will include short and long-term borrowing firm financial institutions, debenture/bond deferred payment arrangement for buying equipment, bank, borrowing, public deposits and any other interest- bearing loan. Capital employed will include total debt net worth.

Debt ratio= total debt

total assets

* 1. Activity ratio

Turnover ratio also referred to as activity ratios or assets management ratios, measure how efficiently the assets are employed by a firm. These ratios are based on the relationship between the level of activity, represent by sales or costs of goods sold and levels of various assets. The improvement turnover ratios are inventory turnover average collection period receivable turn over fixed assets turnover , over, fixed assets turnover and total assets turnover. Activity ratios are employed to evaluated the efficiency with which the firm managers and utilize its assets. These ratios are also called turnover.

ratio because they indicate the speed with which assets are being converted or turned over into sales. Activity ratios thus involve a relationship between sales and assets. A proper balance between sales and generally reflect that asset utilization.

Activity ratios are divided into four types:

1. Inventory turnover ratio
2. Debtors turnover ratio
3. Fixed assets turnover ratio
4. Working capital turnover ratio 1.inventory turnover ratio/stock turnover ratio

Inventory turnover ratio indicates the efficiency of the firm in producing and selling its products. It ‘s calculated by dividing the cost of goods sold by average inventory.

stock turnover ratio= cost of goods sold

average inventory

* 1. debtors turnover ratio

Debtor’s turnover ratio indicates the relationship between sales and average debtors. It’s calculated by dividing sales by average debtor’s. Higher the turnover ratio indicates better performance and lower turnover indicates inefficiency

debtors turnover ratio= net sales/ average debtors

* 1. fixed assets turnover ratio

The firm may which to know its efficiency of utilizing fixed assets and current assets separately. The use of depreciated value of fixed assets in computing the fixed assets turnover may render comparison of firm performance over period or with other firm. The ratio is supposed to measure the efficiency with which fixed assets employed a high ratio indicates a high degree of efficiency in assets utilization and a low ratio reflects .

Inefficient use of assets. However in interpreting this ratio, one caution should be borne in mind , when the fixed assets of firm are old and substantially depreciate the fixed assets turnover ratio tends to be high because the denominator of ratio is very low.

fixed assets turnover ratio = net sales/ fixed assets

* 1. working capital turnover ratio:

This ratio measure the relationship between working capital and sales. The ratio shows the number of times the working capital results in sales. Working capital as usual is the excess of current assets over current liabilities . The following formula is used to measure the ratio.

Working capital turnover ratio= sales / working capital

## Financial ratio analysis:

Ratio analysis is one of the basic financial tool which helps to analysis the financial position of the firm. It best tools available to analysis the financial performance of company. Good financial control is essential for any business. Ratio analysis gives an overall view of how business is performing and provides indications of trends and patterns. It helps in identifying the financial strengths and weaknesses of the firm by properly establishing relationships between the items of balance sheet and the profit and loss account.

Certain important ratio of dvc are as follows:

## liquidity ratio:

it helps to check the company’s ability to pay its debts. Short item liquidity involves the relationship between current assets & current liabilities.

Current ratio:-

= current assets / current liabilities

|  |  |  |  |
| --- | --- | --- | --- |
| Year | Current  Assets (amount Rs.) | Current  Liabilities (amount Rs.) | Ratio |
| 2018-2019 | 58666458286 | 36200125732 | 1.62 |
| 2017-2018 | 48935665010 | 29343459396 | 1.66 |

“the company has sufficient liquidity to meet its short term maturity obligation” it shows it good credit worthiness and creditor’s confidence.

Quick ratio:-

= quick assets / current liabilities

|  |  |  |  |
| --- | --- | --- | --- |
| Year | Quick assets (amount Rs.) | Current liabilities(amount Rs.) | Ratio |
| 2018-2019 | 54155635988 | 36200125732 | 1.49 |
| 2017-2018 | 45102203775 | 29343459396 | 1.53 |

(ref:-b/s)

“the company has sufficient funds to cover all its immediate long term obligation”. It represents that the company is prospering.

Turnover ratio-:

These ratio are employed to evaluated the efficiency with which the firm manage and utilize its assets. They involve the relationship between sales and assets. They indicate the speed with which assets are being converted or turned over into sales. A proper balance between sales and assets generally reflect that assets are well managed.

Fixed assets turnover ratio= net sales/fixed assets

|  |  |  |  |
| --- | --- | --- | --- |
| Year | Net sales (amount Rs.) | Fixed assets (amount Rs.) | Ratio |
| 2018-2019 | 44880000000 | 24517800000 | 1.83 |
| 2017-2018 | 43140000000 | 20997800000 | 2.05 |

“this condition is considered good for the electric generating companies.” The ratio over the period has improved as the firm is able to turn its fixed assets faster.

Current asset turnover ratio= net sales/current assets

|  |  |  |  |
| --- | --- | --- | --- |
| Year | Net sales (amount Rs.) | Fixed assets (amount Rs.) | Ratio |

|  |  |  |  |
| --- | --- | --- | --- |
| 2018-2019 | 44880000000 | 165105000000 | 0.27 |
| 2017-2018 | 43140000000 | 57663300000 | 0.74 |

“the organisation is able to turn its fixed assets faster than current assets.” The firm is less efficient in utilizing its current assets as compared to fixed assets.

Capital turnover ratio=net sale/capital employed.

|  |  |  |  |
| --- | --- | --- | --- |
| Year | Net sales (amount Rs.) | Capital employed (amount Rs.) | Ratio |
| 2018-2019 | 44880000000 | 142177200000 | 0.315 |
| 2017-2018 | 431400000000 | 38731300000 | 1.11 |

“the capital turnover ratio has reduced from the previous years because of the increase in paid-up capital due to transfer of surplus funds and retained interest.”

Solvency ratio:-

These ratio indicate mix of funds provided by owners and lenders. It signifies the shareholder return as well the risk.

a.) Debt to networth ratio:-= long term debts / shareholders fund

|  |  |  |  |
| --- | --- | --- | --- |
| Year | Long term debts (amount Rs.) | Shareholders fund (amount Rs.) | Ratio |
| 2018-2019 | 37444897000 | 162803900000 | 0.23 |
| 2017-2018 | 22063602000 | 66859400000 | 0.33 |

(ref.b/s)

The ratio implies a greater claim of owners than creditors.it represents a satisfactory situation since a high proportion of equity provides a larger margin of safety for the. “the company is executing projects involving huge capital outlays, predominantly through internal accruals.’’

B.) Capital employed to net worth ratio-:

= capital employed/net worth

|  |  |  |  |
| --- | --- | --- | --- |
| Year | Capital employed (amount Rs.) | Net worth (amount Rs.) | Ratio |
| 2018-2019 | 38731300000 | 66859400000 | 0.57 |
| 2017-2018 | 26636600000 | 54031700000 | 0.49 |
|  |  |  |  |

(ref-P&l a/c)

“the company ‘s earning adequately cover fixed charge liabilities.” The firm is flexible in its operation . The shareholder earning have improved from the previous years as the ratio has increased.

Profitability ratio:

The ratio shown how successful a company is in term of generating returns or profit on the investments that it made in the business. They represent the operating efficiency of the firm.

* 1. Gpm(gross profit margin) ratio=gross profit x 100/ sales

(Amount in lakhs)

|  |  |  |  |
| --- | --- | --- | --- |
| Year | Gp | Sales | Ratio |
| 2018-2019 | 1977 | 4487.52 | 44% |
| 2017-2018 | 1793 | 4313.51 | 42% |
|  |  |  |  |
|  | | | |

(ref.- p&l a/c)

“the company has been able to keep production cost optimal level.” The firm is able to produce at relative lower cost. It is a sign of good management.

* 1. Net profit ratio = pat x100/sales

(Amount in lakhs)

|  |  |  |  |
| --- | --- | --- | --- |
| Year | Pat | Sales | Ratio |
| 2018-2019 | 1125.20 | 4488 | 25% |
| 2017-2018 | 1238.65 | 4314 | 29% |
|  |  |  |  |

“ the net profit from the previous year has decreased because the operating expense relatives to sales have been increasing.

fund

* 1. Return on equity ratio (roe):-

= Npait/equity shareholder

|  |  |  |  |
| --- | --- | --- | --- |
| Year | Npait (amount Rs.) | Equity  shareholders fund (amount Rs.) | Ratio |
| 2018-2019 | 11252000000 | 162803900000 | 7% |
| 2017-2018 | 12386500000 | 66859400000 | 19% |

Npait- net profit after interest and tax (ref:-schedule 15 & b/s)

“ roe is lower due to increase in reserve. Company is currently executing some key project involving huge outlay, return on which are expected to materialize over the next few years, which would results in higher roe in the future.”

* 1. Return on assets ratio = net profit x 100/assets

(Amount in lakhs)

|  |  |  |  |
| --- | --- | --- | --- |
| Year | Net profit | Assets | Ratio |
| 2018-2019 | 1125.2 | 22854.13 | 5% |
| 2017-2018 | 1238.65 | 11046.02 | 11% |

“ the return have decreased due to revaluation of assets”

# conclusion

The final chart of activities and rate of scaling up has been arrived at based on detailed assessment of the capabilities of the organisation in carrying out the same in an efficient and timely manner. The expansion plan has been charted out

By collecting detailed data and plans from the dvc staff member who are actually responsible for implementing the same programmes at the grass root level, which then have been cross checked by the technical consultants.

. The study reflects damodar valley corporation’s (dvc) business strengths that are derived from the dominant market position that it enjoys in the damodar valley region, the liberal tariff norms under the dvc act, its pithead plants that result in low cost of generation and a customer base

. The analysis reflection the company’s favourable financial profile, which is characterised by low gearing, healthy coverage ratios, stable operating margins and surplus liquidity through short-term deposits.

. Dvc has projected an aggressive, largely debt-funded capacity addition programme under the tenth five year plan, which would vitiate its current financial profile. Dvc has also engaged the national thermal power corporation (ntpc) for supervising the progress of its renovation and modernisation (r&m) project.

. Even after accounting for its plants’s low operating efficiency, dvc’s tariffs

Are competitive compared to other central sector generation and the sebs primarily because of its depreciated generating assets, low transmission and distribution (t&d) losses and favourable consumer mix (which excludes subsidised agricultural and domestic consumers).

. Dvc’s entire transmission and distribution infrastructure is at high voltage, which results in low t&d losses and favourable consumer mix ( which excludes subsidised agricultural and domestic consumers).

. Dvc entire transmission and distribution infrastructure is at a high voltage, which results in low t&d losses. Thus, even with its generating inefficiencies, the corporation is able to charge competitive tariffs from its consumers.

. Healthy financial position: dvc’s monopoly status in the valley ensures a stable operating income. Moreover, dvc benefits from having its generation facilities

located at the coal pithead, low T&D losses and its ability to pass through all through all fixed costs. This has helped the corporation to earn stable and healthy operating margins.

. The function of soil conservation through promotion of afforestation and control of soil erosion in the damodar valley and promotion of public health and agriculture, industrial, economics and general well being of the residents of damodar valley are statutory mandates for dvc under section 12 of the dvc act. Thus, dvc has to carry out the same for overall development of the damodar valley as envisaged by the dvc act.

. There has been a widening of the economic gap among certain sections of the population and thus the requirement of such activities by dvc is all the more important. Dvc is one of the lowest cost power producers due to reduction in cost of production and thus the additional cost required for the subsidiary activities would not lead to any tariff shocks to consumers.

. The expansion plans as outline in this report is achievable by dvc given their present knowledge base of te valley region. They have adequate experienced man power to execute the same and the financial resources to meet the funding requirement comfortably.

# Recommendations

Dvc is poised in a very advantageous position to implement the soil conservation, afforestation and sip programmes due to its huge knowledge and database of the valley that is has accumulated during its operation in the valley over the last five decades. The cumulative economic benefits that would trickle down to the community at large in the command area of dvc would be multiple times the expenses incurred for delivering the same. Dvc could well act as an extension of the government in a sense that it can supplement many of the govt. Initiatives and efforts, as many of its programmes are in principle in line to state developmental efforts.

however for better and smoother performance and also to generate adequate feedback for its activities for fine turning, dvc should also undertake the following:

. Conduct a rapid economic and social assessment of the command area, either using its own data collected over the operational period of dvc or by employing external social surveyors and thus obtain the baseline data against which to monitor the progress and outcome of the various schemes.

. Dvc should conduct regular performance review of the various schemes under implementation. The can be done in multiple manners like taking feedback from beneficiaries as to what they perceive of the programmes, would they like it to continue or not, any modification are required in the programmes or not, or through appointing external auditors on selective basis who are well experience in social audits to conduct reviews of the programmes.

. Based on the periodic reviews about the efficacy and outcomes, dvc should be able to scale up or scale down the activities accordingly .

.dvc can consider alternative organisation structures for implementation of the programmes, if it wants to speed up the implementation. It can choose from a centralized or a decentralized approach, or can also consider contracting some works to reputed outside agencies.

. Dvc can recover the expenses it incurs on these activities of natural resource conservation and social integration based on the essential costs and truing up of actual expenditure can be done at regular intervals.

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