# FINANCIAL PERFORMANCE ANALYSIS: A STUDY ON BENGALURU METROPOLITAN TRANSPORT CORPORATION, BENGALURU

Thesis submitted to the BHARATHIDASAN UNIVERSITY in partial fulfilment

Of the requirements for the award of the Degree of

DOCTOR OF PHILOSOPHY IN COMMERCE

BY

## **HEMALATHA.P**

(Ref.No:00932/Ph.DK4/Commerce/Part Time/July 2017)

Under the supervision and guidance of

Dr.R.SAMINATHAN, M.Com, M.B.A., M.Phil, B.Ed., Ph.D.,

**Associate Professor and Head** 



PG AND RESEARCH DEPARTMENT OF COMMERCE
GOVERNMENT ARTS AND SCIENCE COLLEGE,
(FORMERLY BHARATHIDASAN UNIVERSITY CONSTITUENT COLLEGE)
KUMULUR, LALGUDI, TIRUCHIRAPPALLI- 621712.

**JANUARY -2022** 

Dr.R SAMINATHAN, M.Com., M.B.A., M.Phil., B.Ed., Ph.D., Research Advisor, Associate Professor and Head PG and Research Department of Commerce, Government Arts and Science College, (Formerly Bharathidasan University Constituent College) Kumulur, Lalgudi, Tiruchirappali(Dt).

#### **CERTIFICATE**

This is to certify that the Ph.D., thesis entitled "FINANCIAL PERFORMANCE ANALYSIS: A STUDY ON BENGALURU METROPOLITAN TRANSPORT CORPORATION, BENGALURU " is a bonafide record research work done by Mrs.HEMALATHA P (Ref.No.00932/Ph.D/K6/Part Time/July 2017) under my guidance and supervision and the thesis has not previously formed the basis for the award of any degree, diploma, fellowship or similar title. The thesis represents entirely an independent work of the candidate.

Place:

Date:

Dr. R.SAMINATHAN
Associate Professor & Head,
PG & Research Department of Commerce
Government Arts and Science College,
(Formerly Bharathidasan University Constituent College)
Kumulur, Lalgudi, Tiruchirappalli (Dt) Cell: 9443564010

Dr. Suresh C Hegadi, M.Com.,Ph.D., Principal Soundarya Institute of Management and Science Soundarya Nagar, Nagasandra Post, Bangalore -560073

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Place:

Date:

Dr. Suresh C Hegadi

Principal Soundarya Institute of Management & Science

Soundarya Nagar, Sidegahaill, Nagasandra Post, Bengaluru-73

## Curiginal

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Submitted

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Submitted by

Srinivasa ragavan S

Submitter email

bdulib@gmail.com

Similarity

Analysis address

bdulib bdu@analysis urkund.com

Z

Dr. R.SAMINATHAN

Associate Professor & Head,
PG & Research Department of Commerce
Government Arts and Science College,
(Formerly Bharathidesen University Constituent College)
Kumulur, Lalgudi, Tiruchirappalli (Dt) Cell: 9443564010

## **DECLARATION**

Mrs. HEMALATHA P, Ph.D Research Scholar, Bharathidasan University, Tiruchirppalli 620024 do hereby declare that the thesis entitled "FINANCIAL PERFORMANCE ANALYSIS: A STUDY ON BENAGALURU METROPOLITAN TRANSPORT CORPORATION, BENGALURU" submitted to the Bharathidasan University for the award of the degree of DOCTOR OF PHILOSOPHY IN COMMERCE is my original work and that the thesis has not found the basis for the award of any degree, diploma, fellowship or any other similar title.

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Date:

(HEMALATHA.P)

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# FINANCIAL PERFORMANCE ANALYSIS: A STUDY ON BENGALURU METROPOLITAN TRANSPORT CORPORATION, **BENGALURU**

## INTRODUCTION

Financial Management alludes to the essential planning, arranging, coordinating, and controlling of monetary endeavors in an association or a foundation. It additionally incorporates applying the executive's standards to the monetary resources of an association, while likewise having a significant influence in financial administration.

Monetary administration is one of the significant branch of a business venture worried about momentary working capital administration, zeroing in on current resources and current liabilities, and overseeing variances in unfamiliar cash and item cycles, frequently through supporting. The capacity additionally involves the productive and compelling everyday administration of assets, and subsequently covers depository the executives. It is likewise engaged with long haul vital monetary administration, zeroed in on capital design the board, including capital raising, capital planning (capital distribution between specialty units or items), and profit strategy; these last mentioned, in huge corporates, being more the area of "corporate money."

## 1.1 Scope / Elements

- 1. Investment choices includes investment for fixed resources (called as capital planning). Attentiveness in contemporary resources are likewise a piece of speculation choices called as working capital choices.
- 2. Economic choices They recognize with the raising of currency from different assets which will rely upon kind of source, period of financing, charge of financing and the earnings in this manner.
- 3. Dividend choice The money chief needs to take choice concerning the net benefit appropriation. Net welfares are by and large divided into two:
- a. Surplus for investors -Disbursement and its pace must be chosen.
- b. Retained benefits -Amount of held benefits must be finished which will rely on development and broadening plans of the venture.

Monetary exercises manage the acquisition and usage of assets as well as with the surveying of requirements for reserves, raising required money, capital planning, dispersion of excess, monetary controls, and so on Ezra Solomon has portrayed the idea of monetary administration as follows: "Monetary administration is appropriately seen as a vital piece of in general administration as opposed to as a staff extraordinarily worried about reserves raising activities.

In this more extensive view, the focal issue of monetary arrangement is the shrewd utilization of assets and the focal cycle included is a levelheaded coordinating of the upside of possible uses against the expense of elective likely sources in order to accomplish the wide monetary objectives which an endeavor sets for itself.

## **Major functions of Financial Management**

- Profit amplification happens when minor expense is equivalent to peripheral income. This is the fundamental goal of Financial Management.
- Maintaining appropriate income is a short arrived behind schedule of monetary administration. It is fundamental for activities to pay the everyday costs for example crude material, power charges, compensation, lease and so forth A decent income guarantees the endurance of organization; see income estimate.
- Minimization on capital expense in monetary administration can help activities acquire benefit.
- Estimating the Requirement of Funds: Businesses make gauge on reserves required in both short run and since a long time ago run, consequently, they can work on the proficiency of financing. The assessment depends on the spending plan for example deals financial plan, creation financial plan; see Budget expert.
- Determining the Capital Structure: Capital design is the manner by which a firm funds its general activities and development by utilizing various wellsprings of funds. Once the prerequisite of assets has assessed, the monetary supervisor ought to choose the blend of obligation and value and furthermore sorts of obligation.

## **Financial Performance**

Financial Performance in more widespread sense refers to how much monetary destinations being or has been refined and is a significant part of money hazard the executives. It is the way toward estimating the consequences of an

association's approaches and activities in money related terms. It is utilized to gauge company's by and large monetary wellbeing throughout a given timeframe and can likewise be utilized to look at comparative firms across a similar industry or to think about businesses or areas in total

## 1.2 FINANCE PERFORMANCE ANALYSIS:

Monetary execution investigation is the way toward recognizing the monetary qualities and shortcomings of the firm by appropriately building up the connection between the things of asset report and benefit and misfortune account.

Types of Financial Analysis

The most common types of financial analysis are

- 1. Perpendicular
- 2. Parallel
- 3. Leverage
- 4. Progression
- Effectiveness 5.
- Fluidness 6.
- 7. Proficiency
- 8. Cash Flow
- 9. Rates of Return
- 10. Valuation
- 11. Scenario & Sensitivity
- 12. Variance

## 1.3 Transportation:

The initiating of State Transport Undertakings (STUs)<sup>1</sup> in India during the 1960s and 1970s did a monstrous arrangement in interfacing municipalities and towns the nation over, especially in the western and southern parts. Despite the fact that the assistance may pass on a lot to be liked as far as distinction, the significance of STUs lies in the way that, not at all like in most other growing nations, one can interface with pretty much every town in India. Metropolitan regions in India, which incorporate a wide scope of megacities, urban communities, and towns, are not too advantaged as far as intra-city transportation. Transport in this setting has been a casualty of obliviousness, disregard, and disarray. To the extent the public vehicle framework in Indian urban communities is concerned, devoted city transport administrations are known to work in 17 urban communities just and rail travel exists just in 4 out of 35 urban communities with populace more than 1,000,000. Conveyance in India incorporates of transport via land, water and air. Public vehicle is the essential method of street transport for a large portion of the Indian residents, and India's public vehicle frameworks are among the most vigorously utilized in the world.

India's street network is the second-biggest and one of the most active on the planet<sup>2</sup> moving 8.225 billion travelers and more than 980 million tons of freight yearly, starting at 2015. India's rail network is the fourth biggest and second most active on the planet, moving 8.44 billion travelers and 1.23 billion tons of cargo

<sup>&</sup>lt;sup>1</sup> www.researchgate.net > publication > 322244188

<sup>&</sup>lt;sup>2</sup> newsonair.com

yearly, starting at 2019. <sup>3</sup>Flying in India is extensively separated into military and common aeronautics which is the quickest developing flight market on the planet (IATA information) and Bangalore with 65% public offer is the biggest flying assembling center point of India. India's streams organization, as streams, trenches, backwaters and springs, is the 10th biggest stream network on the planet. Cargo transport by streams is profoundly under-used in India with the absolute load moved (in ton kilometers) by inland streams being 0.1 percent of the complete inland traffic in India<sup>4</sup>

Altogether, around 21%<sup>5</sup> of families have bikes while 4.7 percent of families in India have vehicles or vans according to the 2011 Census. The car business in India is as of now quickly developing with a yearly creation of over 4.6 million vehicles, with a yearly development pace of 10.5% and vehicle volume is required to rise enormously later on. The transportation area is a gathering of foundations that convey administrations to ship individuals or products and furthermore the vehicle framework. Transportation is a sub-gathering of the industrials fragment as indicated by the Global Industry Classification Standard (GICS)<sup>7</sup>. The conveyance share encompasses of a limited initiatives comprising airship cargo and coordination's, carriers, marine, street and rail, and transportation foundation. These ventures are additionally stalled into the subenterprises airship cargo and coordination's, aircrafts, marine, rail lines, shipping,

<sup>3</sup> <u>zims-en.kiwix.campusafrica.gos.orange.com</u> 4 <u>https://en.wikipedia.org/wiki/Transport\_in\_India</u>

<sup>&</sup>lt;sup>5</sup> mospi.nic.in →

<sup>6</sup> www.ibef.org > Industry

<sup>&</sup>lt;sup>7</sup> https://www.msci.com/gics

air terminal administrations, interstates and rail tracks, and marine ports and administrations.

The exhibition of organizations in the transportation business is exceptionally touchy to changes in organization income and the cost of transportation administrations. Principle factors influencing organization profit incorporate fuel costs, work expenses, and interest for administrations, international occasions, and unofficial law. A significant number of these components are interconnected. For instance, if the U.S. government passes guidelines that make it harder for individuals to procure their business drivers' permit, this will decrease the stock of drivers, driving up the expense of employing drivers.

Oil costs are a vital factor for transportation, as the ware's cost for the most part affects transportation costs. Gas and fuel costs that ascent will expand costs for a shipping organization, eating into their benefit and conceivably decreasing their stock cost.

Energy costs and the worth of transportation stocks are positively interrelated. Low energy expenses may turn into a factor in boosting the offer cost of different transportation organizations, yet the impact can likewise be switched. At the point when interest for transportation administrations is high the effect will be reflected in quarterly reports of transportation organizations. This data may, once scattered, may spur energy dealers to offer up costs for oil and comparative wares. Nonetheless, if interest for business transportation falls, this data could prompt a decrease in oil costs as well.

## 1.4 History of BMTC

The BMTC is individual of the three Divisions of Karnataka State Road Transport Corporation, with regards to the city's development in the year 1997<sup>8</sup>, Bangalore Transport Service (BTS) was molded. After a timeframe Bangalore Transport Service (BTS) became Bangalore Metropolitan Transport Corporation. It is the unique open transport supporter for Bengaluru, serving metropolitan, submetropolitan and rustic regions. BMTC is devoted to give quality, protected, solid, spotless and moderate travel. The declaration of its prosperity lies in expanding traveler trips regularly by a wide scope of client base. With an end goal to modernize its administrations for worker solace, BMTC endeavors to reinforce data frameworks and further develop measures through presentation of clever innovation arrangement, make limit improvement through foundation advancement, easy to understand trade offices, armada up degree and expansion, aside from its center exercises, which incorporates charge organizing, course network streamlining, arranging and checking. BMTC comes to all over, in each alcove and corner of the city, disclosing transport an alluring travel decision for everybody.

## Present Position of BMTC

Bangalore is the biggest city in the territory of Karnataka and is viewed as the Information Technology (IT) capital of India. This has contributed straightforwardly and by implication to the quick populace development in Bangalore. To cook the various necessities of the developing city populace BMTC had acquainted various administrations with cater the various sections of

<sup>&</sup>lt;sup>8</sup> https://mybmtc.karnataka.gov.in/info-1/History/en

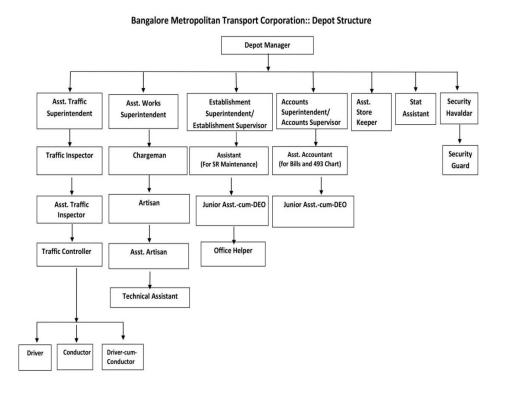
the public transportation clients. The fluctuating client fragments of the BMTC clients have totally different prerequisites. A few portions of the shoppers are very value delicate, while another fragment will pay a premium for solaces. BMTC has been running premium administrations utilizing vehicles worked by TATA Marco polo and Volvo. These top notch administrations began their activity in 2006. These top notch administrations work to various private and IT centers in the city. An independently marked Vayu Vajra Premium administrations gives consistent availability between significant spaces of the city to Bangalore International Airport Limited (BIAL). A sum of 665 Volvo and Marco polo transports are worked with in the city and to the air terminal. This establishes some 10% of the complete number of transports in the BMTC stock. These cooled transports are allotted and worked from 4 stations (see Figure 1). A sum of 3700 outings is being worked by all the premium transports and continues 0.1 million travelers consistently. The principle objective of this paper is to break down the exhibition of the four premium assistance terminals of BMTC.

Table 1: Table depicting the BMTC at a glance as on: March 14, 2020

1	No of Schedules	6161
2	No. of Vehicles	6661
3	Daily Service kms.(Lakhs)	11.71
4	No. of Trips	67115
5	Everyday Traffic Revenue(Rs. Crores)	5.07

6	No of buses under PPP	
7	Infrastructure established	
	Depots	45
	Bus stations	58
8	Staff Employed	33334
9	Bus Staff Ratio	5.41

## Organization Structure of BMTC<sup>9</sup>



Services run by BMTC<sup>10</sup>

https://mybmtc.karnataka.gov.in/info-1/Organization+Structure/en
 https://en.wikipedia.org/wiki/Bangalore\_Metropolitan\_Transport\_Corporation

General: The customary Non-AC transports with a blue-white shading plan.
 (Presently all Non-AC transports go under this classification)

Samartha: Green Colored recently purchased transports supplanting the more seasoned ones.

- Suvarna: Similar admission to conventional transports serving significant feeder courses, painted in red or green/white plan. Presently converged with the customary ones with blue-white tone.
- BIG 10: Suvarna class transports with extraordinary green and jug green uniform employing on 12 significant halls towards the focal business region. These transports are numbered with a G prefix. Presently same uniform as the overall ones.
- BIG Circle: Suvarna class transports with extraordinary white hued BIG Circle uniform. These transports utilize on inward and external ring streets. Transports are numbered with a C prefix or a K prefix. Presently same attire as the overall ones.
- Atal Sarige: Low admission transports painted with Indian tri-shading uniform.
- Vajra: Air molded Volvo transports painted in blue uniform (prior red)
   running on significant courses serving the IT organizations and major local locations.
- Vayu Vajra: Indigo hued Volvo conveyances worked in 12 sequences correlating with Kempegowda Universal Airport. Free Wi-Fi access is prearranged to the employees in these buses. [11]

- Marco polo AC and Corona AC: Air molded transports with lower toll than
   Vajra administrations employing on select routes. (Marco polo AC and Corona
   AC is presently unavailable)
- Metro Feeder: Special transports running on 18 courses as feeder organization to the Metro stations
- Hop on Hop Off: This assistance was presented for touring in Bengaluru. It covers a course associating around twenty tourist spots of incredible notable, strict and logical significance. (No administration now)

BMTC has likewise presented Mercedes Benz transports on a preliminary premise. BMTC has likewise presented transports fueled by sun oriented energy being investigated premise in Bengaluru.

The BMTC declared that it would obtain 150 electric transports by September 2017. The task will be financed by the Union Government's Faster Adoption and Manufacturing of Electric Vehicles plan of National Electric Mobility Mission Plan 2020.

Major Bus Stations<sup>11</sup>

BMTC Bus Station on Mysore Road

BMTC ensures 34 bus locations across the metropolis and the 3 foremost bus locations are located at:

- 1. Kempegowda Bus Station, Majestic
- 2. K.R Market
- 3. Shivajinagar

<sup>&</sup>lt;sup>11</sup> https://en.wikipedia.org/wiki/Bangalore Metropolitan Transport Corporation

## 1.5 Purpose of the Study

In India, high development of populace and quick urbanization prompted the abrupt development of traveler administration in the country. Since 1950<sup>12</sup>, the street length in the nation expanded from 4 lakhs to 33 lakhs. India is the third biggest country as far as street organization. During this period the all-out number of vehicles on street has expanded from 3 lakh to 409 lab (multiple times). The level of metropolitan populace to the all-out populace was 20.2 in 1971 and over a time of 30 years it rose to 34.5<sup>13</sup>.

Transports are the most mainstream and helpful method of transportation in metropolitan urban areas. More than 1.6<sup>14</sup> million transports are enrolled in India, and the public transport area works 170,000 transports conveying about 70 million individuals each day. Nonetheless, transport transportation has not had the option to oblige the developing travel interest.

There is a need to work on the presentation of the street transportation as it assumes a vital part in the Indian transportation administrations and among them the method of transport transportation is focused on as it is the need of great importance, the explanation being a large portion of the Indian public lean toward transport transportation as it is financially practical for the more unfortunate areas of the general public who structure a significant piece of the general public subsequently improvement in the proficiency of the transport can lessen the weight on its travelers and furthermore contribute in a superior proportion for the advancement of the economy

<sup>12</sup> https://morth.nic.in/sites/default/files/Basic%20 Road Statics of India

<sup>13</sup> https://censusindia.gov.in/2011-prov-results/paper2/data\_files/india/Rural\_Urban\_2011

<sup>14</sup> https://www.intelligenttransport.com/transport-articles/21458/city-public-transportation-india

## 1.6 Research Gap:

In the previous few decades a few examinations have been led on monetary execution investigation in transportation area. From the audit of writing it is seen that there is a horrendous requirement for directing the examination through essential information, to bring Bengaluru metropolitan vehicle partnership under the domain of the investigation. This assists with giving more dependable report as the investigation focuses on the BMTC area alone to dissect its presentation and commitment to the financial advancement of the country. Geological contrasts have likewise added to comprehend the offices offered by the transportation in various states as contrasted and Bengaluru which has started the examination. We discover experimental methodology in a portion of the past investigates while in the ebb and flow research the distinct procedure and a complete report are followed which is more relevant. The procedure of exploration is additionally to be thought of and the flow research has selected the examination utilizing proportions which isn't a lot of saw in the past research henceforth the momentum research is more functional and appropriate

#### **1.6 Statement of the Problem:**

Transportation administrations assumes a vital part in the advancement of an economy and it is essential for non-industrial nations like India where greater part of the populace rely out and about transport particularly transports for doing their everyday plans for getting work done. On the off chance that the BMTC could offer a superior assistance at a sensible value it would be of an incredible help to the improvement of the general public and the economy yet essentially the BMTC area experiences different issues the monetary circumstance of the State Transport Corporations is in a problematic circumstance with the offices not in any event, having sufficient assets to pay the compensation of their workers. A large portion of the income produced id

spent on the tasks and support cost and has been ceaselessly enduring misfortune over the long haul henceforth the flow research has been started to assess the explanations behind the present circumstance and discover solutions for the improvement of the monetary circumstance and execution of the BMTC area which would bring about the upliftment of the financial situation of the country.

## 1.7 Research Questions:

- 1. To know the financial performance of the BMTC
- 2. To know the reasons behind such performance
- 3. To find out ways to improvise the financial performance of BMTC
- 4. To analyze the importance of BMTC sector in the development of the economy

## 1.8 Objectives of the Study

For any country transportation is vital for financial turn of events. It has become a fundamental need as when we discussed globalization and portability of labor besides. Taking everything into account, one can't disregard the need of public traveler administrations required by individuals. As a section of social duty in blended economy one cannot overlook the need of general public. Till now government has not changed the administrations of rail line is still syndication of the public authority. The private member has entered in the street transport benefits yet government is additionally dynamic in giving it to individuals. Hence, through the current research, the scientist means to consider the job of Bangalore Metropolitan Transportation Corporation in giving protected, affordable vehicle. State transport undertaking in India is making a huge damage. So an inquiry emerge is there any extent of expanding the income?

Operational expense is expanding day by day as there is a climb in fuel costs, staff cost, tire cost, spare parts cost and so on

After studying the working of BMTC and analysing several financial constraints following objectives has been drawn for the study purpose

- To Study the areas of total cost and its influence on the financial performance of BMTC
- To study the areas of total revenues and its influence on financial performance of BMTC
- 3. To assess the Total Value of Inventory Management of BMTC
- 4. To analyze the operational result and its influence on components of BMTC
- 5. To Study the working Results and its Influence on components of BMTC
- 6. To find out the areas of improvement and to give recommendation for improving performance of BMTC

## 1.9 HYPOTHESES OF THE STUDY

Hypothesis is typically considered as the chief instrument in research. A research assumption is a predictive statement, fit for being tested by logical methods, that relates an independent variable to some reliant variable. These assumptions are proficient of being empirically proved and experienced. Constructed on the above purposes following assumptions are framed.

 There is an significance association of Total Cost on the financial performance of BMTC

H<sub>0</sub>- There is no Significance relationship between total expenses among divisions of BMTC

- $H_1$  There is a significance relationship between total expenses among divisions of BMTC
- 2. There is a significance association of total revenues on the financial performance of BMTC
  - $H_0$  there is no significance relationship between Total revenues on the financial performance
  - $H_1$  there is a significance relationship between total revenues on the financial performance
- There is a significance relationship between Total investment on Inventories in the management of Store Items in BMTC
  - $(H_0$  There is no Significance relationship between Total Investment on Inventories
  - H<sub>1</sub>- There is a significance Relationship between Total Investment on Inventories)
- 4. There is a significance relationship Between Operating results and its influence  $(H_0-There\ is\ no\ Significance\ Relationship\ between\ components\ of\ operating \\ Results\ of\ BMTC$ 
  - H<sub>1</sub>- There is a Significance Relationship between components of Operating Results of BMTC)
- There is a significance relationship between working Results among components of BMTC
  - ( $H_0$  There is no significance relationship between working results of BMTC  $H_1$  There is a significance of relationship between working results of BMTC)

## 1.10 Scope of the Study

The scope of this investigation is controlled to the investigation of monetary exhibitions alone of Bengaluru metropolitan vehicle enterprise. The investigation endeavors to present prized ideas to build the degree of monetary execution in this association area. This examination upholds administrations to find the defenseless considers prompting decrease the exhibition and targets directing administration in changing those marks of weakness into strength by giving the ideal ideas or arrangement

## 1.10.1 Research Methodology

Exploratory research design was adopted for the study. The study was based on secondary data collected from the accounts and statements of BMTC, Report of the comptroller and auditor general of India, Economic Review brought out by the Planning Board, and other related sources.

## 1.10.2 Secondary data

The study is concerned with the past 8 years from the year 2012-2013 ending March every year. This is based in the secondary data the consolidated key financial ratios of Bangalore Metropolitan Transport Corporation, Bengaluru, have been calculated with the help of financial statements and audit reports published by the company. A related analysis of the Capital structure, working capital management and dividend policy adopted by the company is analysing besides that, books, journals, websites and published articles.

## 1.10.3 Statistical tools used

The following accounting techniques have been used for measuring financial performance of BMTC:

## 1. Ratio Analysis

- 1) Gross profit ratio (GPR)
- 2) Operating profit ratio (OPR)
- 3) Net profit ratio (NPR)
- 4) Return on capital employed (ROCE)
- 5) Return on net worth (RONW) Liquidity & solvency ratio
- 1) Current ratio (CR)
- 2) Quick ratio (QR)
- 3) Debt equity ratio (DER)
- 4) Capital gearing ratio (CGR)
- 6) Activity Ratios
- 1) Stock turnover ratio
- 2) Debtors Turnover ratio
- 3) Fixed Assets turnover ratio
- 4) Capital Employed ratio
  - 7) Profitability Ratios
- 1) Gross profit ratio
- 2) Net profit ratio
- 3) Return on Investment
- 4) Return on capital
- 5) Operating ratio

## 2. Z-Score Analysis

The Z-score is a multivariate procedure that measures the monetary wellbeing of an organization also, predicts the likelihood of bankruptcy within two years. Z-score examination has been set up to assess the overall pattern in the monetary wellbeing of an endeavour over a timeframe.

The information gathered were first examinations with the assistance of five accounting Ratios. These various proportions are joined into a solitary measure Z-score examinations with the assistance of Numerous Discriminate Analysis (MDA). The equation used to assess the Z score investigation as set up by Altman is as follow

Z= 0.0123P1+0.014P2+0.033P3+0.006P4+0.999P5

"Z" is the general index and the variables P1 to P4 are figured as absolute percentage values while P5 is computed in number of times.

Variables Ratios used in Z Score Analysis:

The following accounting ratios are used as variables to combine them into a single measures, which is efficient in predicting bankruptcy

P1- The ratio of working capital to total assets (working capital / Total assets \*100) it is the measure of the net liquid assets of a concern to the total capitalization.

P2- The ratio of net operating profit to net sales (Net Operating Profit / Sales \* 100). It specifies the effectiveness of the administration in manufacturing, sales, administration and other activities.

P3- The ratio of earnings before interest and taxes to total assets (Earnings before Interest and tax / total assets \* 100) It is a measure of productivity of assets employed in an enterprise. The eventual survival of an enterprise is constructed on the receiving power

P4- The ratio of market value of equity to book value of debt (market value of equity / BVD\*100) it is reciprocal of the familiar debt-equity ratio. Equity is value of all shares while debt includes both current and long term liabilities. This measures shows how much assets of an enterprise can decline in value before the liabilities exceed the assets and the concern becomes insolvent

P5- The ratio of sales to total assets (S/ Total assets). The capital turnover ratio is a standard financial measures for illustrating the sales generating capacity of the assets.

## Altman Guidelines for Healthy Zone:

Privately held companies	Interpretation	Public Companies
Score		Score
2.90 and above	Safe "Zone company has low	3.073 and above
	probability of bankruptcy	
2.90-1.23	Grey area- Company requires	3.075-1.875
	careful monitoring	
1.23 and below	Distress" Zone Likelihood of	1.875d below
	insolvency within 12 months	

## 3. Coefficient of Correlation

It is utilized to address the inquiry does there exist affiliation or connection between (at least two) factors? Coefficient of correlation was utilized to gauge the reason impact relationship. In the investigation it was utilized to gauge the association between:

- Relationship between the fixed assets ratio and Long term Loans
- Relationship between the operating expenses and Net sales
- The employee cost ratio and Net sales of BMTC
- The Correlation between Welfare expenses and Net sales
- The relationship between Administrative expenses and Net sales

## 4. Analysis of variance (ANOVA)

It is used to test variances between the means of the populations by inspecting the amount of variation within each of the samples, relatives to the amount of variation between the samples. Here in the learning, one-way (or single factor) ANOVA was measured. All the divisions of BMTC for last Eight years i.e. from 2012-13 to 2019-20 was taken for analysis purpose

## 1.10.4 Soft Ware Used

SPSS 24 and AMOS 20.0 version were used in the study, Excel

## 1.10.5 Period of the Study

Eight year 2012-2013 to 2019-2020) time period was considered for the study purpose. All the required data of these years were available, so a study on financial performance of these specific years was undertaken.

Significance of the Study

This is a comprehensive study of Financial Performance Analysis: A Study On Bengaluru Metropolitan Transport Corporation, Bengaluru. It progresses acquaintance and understanding as to how the various ratios support in analysing the financial performance of BMTC and it may also be used to assist organizations in formulating strategies to increase its performance for the betterment of the society, state and the country.

# 1.10.6 Limitations of the Study

- Information gathered are for a specific time frame outline so study won't remain constant at all the occasions. Most recent eight years information's have been chosen which may not really address the general exhibition of BMTC for the future coming years
- As the investigation was affirmed to generally speaking execution of BMTC,
   Division shrewd and stations astute examination was not embraced. Barely any terminal or Division might be acceptable at certain boundaries
- Yearly Report and combined functional outcome arranged by BMTC has not followed a uniform arrangement of introducing the information and data. Yearly information accessible was in Bangalore (for few Years).
- The examination is bound to Bangalore city and it centre is just around Bengaluru
   Metropolitan Transport Corporation
- A Comparative investigation of BMTC with other company was not embraced as the necessary information for the equivalent was not accessible

# 1.11 CHAPTER SCHEME

The study has been divided into five chapters to make it illustrative, comprehensive and presentable. The outline of the thesis is presented as below:

**Chapter-I: INTRODUCTION** gives a detailed introduction to the concept of financial performance of BMTC and its impact on the economy. It includes Introduction, history and present position of the BMTC, services offered, organization structure the major bus stations and Research Design of the study.

**Chapter-II: REVIEW OF LITERATURE**: gives the review of literature available on various aspects of financial performance of the transportation sector with special reference to bus transports and the research gap is also mentioned.

**Chapter-III: INDUSTRY PROFILE**: This chapter throws light on BMTC regarding the historic background, current scenario and the structure of BMTC industry.

Chapter-IV: ANALYSIS OF FINANCIAL PERFORMANCE OF BMTC: This chapter mainly deals with the scrutiny of the quantitative data that has been collected to satisfy the objectives of the research.

**Chapter-V: FINDINGS, SUGGESTIONS AND CONCLUSION**: This chapter summarizes the findings of the study, provides suggestions to BMTC to improve its financial performance.

# Chapter- 2

### **REVIEW OF LITERATURE**

### 2.1 INTRODUCTION

The review of literature guides the scholar aimed at getting better understanding of methodology used, limitations of various available guesstimate processes, data base, lucid analysis and resolution of the inconsistent results. Besides this, the reviews of earlier studies explore the opportunities for present and upcoming research related to the subject matter. A number of research studies have been carried out on different aspects of performance analysis by the researchers, economists and academicians in the area of finance in India and abroad. A review of this analysis is important in order to develop an approach that can be employed in the context of the present study. Therefore, in this part, a review of earlier studies related to financial performance has been made and rationale for the present study is given. There is an extensive range of literature offered on financial performance analysis of different companies in conforming to its dynamic value and significance of distinctive nature. A good dealing in analytical part of few literature exists at broad levels like size and technology, problem Associated with productivity, financial performance, and ability consumption. Appropriate prevailing literature and studies have been cropped below. The researcher has studied of this literature for procuring insight into the problem

### 2.2 REVIEWS

1. Nand Kishore Sharma (2002)<sup>15</sup> this Study on financial assessment of cement industry in India, has found that the current ratio and quick ratio showed a declining trend and also these ratios varied from time to time. On comparing the current ratio and quick ratio of cement industry, six companies were found higher than the average and four recorded lower than the average of industry. The debtequity ratio has showed a decreasing trend in the first 4 years of study, after that, it registered an increasing trend. The ratio of fixed assets to total debt always showed more than 100 percent which indicated that the claims of outsiders were covered by the fixed assets of the cement companies. The financial evaluation of the cement companies and the financial evaluation of transport company difference as it is left with hands of government decisions the major thrust of our study is the analyze the performance of using various ratios in the Bengaluru road transportation.

2. K.Zionraj (2004)<sup>16</sup> has expressed the need of financial structures that with the operating up our country to world through liberalization. Privatisation and Globalization, it converted very challenging for our country's products to deal with the competition of products from other countries which are providing great superiority products at a low charge. The cost factor thus has become a major concern for the industries companies change their manufacture areas to the areas where they might get low-cost labour to cut down their costs in this situation, where the cost plays a major role. The study on cost management is conquering it

<sup>15</sup> Nand Kishore Sharma (2002), Financial Appraisal of Cement industry in India, The Management Accountant, 36(9), pp. 622-625

<sup>&</sup>lt;sup>16</sup> K.Zionraj, The Dissertation entitled Activity Based Costing - A Dynamic Costmg System with Special Reference to Costmg System of Neyveli Lignite Corporation Limited, submitted to Bharathidasan University, MBA Degree, July 2004,

proficiently through costing procedures which is the need of the hour for the Management and so the study on activity based costing and effectiveness of implementing it is studied. The major emphasis of our study is analyzing financial structure of the transport company in Bengaluru which is headed by government.

- 3. Pradeep Singh Karola (2004)<sup>17</sup> the research was carried out with an objective of explaining the economy of public transport system, factors affecting the cost of operation of bus system, the manpower related parameters, the mechanized parameters and the traffic related parameters relating to public transport system as specified in the research is related to a public transport which is management by government agency the major thrust of our study is to analyze the financial performance of the Bengaluru Metropolitan Transport corporation using various ratios like quick ratio, current ratio, working capital ratio etc. have been studied to know the fluctuation in the road transportation which is considered as the primary services for the public in Bangalore from rich to poor and the cost of operations differs from place to place
- **4. Toshiyuki Sueyoshi** (2005)<sup>18</sup> this research papers concentrates on the financial ratio analysis of the electric power industry. This methodology associates 147 no default businesses with 24 default businesses of US power/energy market in terms of the financial performance and this is a kind of non-parametric discriminant examination which affords the weights of linear discriminant function the major emphasis of our study is to analyze the financial

<sup>17</sup>. Pradeep Singh Kharola, (2004), "The High Capacity Urban Bus: Pre-requisites and Advantages", Indian Journal of Transport Management, Vol.28

<sup>&</sup>lt;sup>18</sup> Toshiyuki Sueyoshi (2005) "Financial ratio analysis of the electric power industry" Asia-Pacific Journal of Operational Research, Volume 22, Issue 03.

performance using ratios of transport company in Bengaluru the various ratios are been used to scrutinize the study

**5. Scholl, Lynn** (2006)<sup>19</sup> This paper reviews the research and arguments on privatization in the form of contracting, including its effects on cost-efficiency, quality of transit provision, and labour the researcher suggested Accelerating costs, diminishing efficiency, and constraints on capitalizing for transit have stimulated many public transit interventions to return to privatization Early studies on contracting of fixed bus routes in the U.S. have found cost savings from contracting that range from 10 to 40 percent. The Review depicts effects on various expenses. This research emphasis on analysing the financial performance analysis of Bengaluru Metropolitan Transport Corporation

**6.Al-Aameri and Alrikabi** (2007) <sup>20</sup>was focusing on one of the important techniques in financial analysis, namely, the financial ratios, for the purpose evaluating the performance of petroleum projects company, and to find out the main strength and weakness points, so as to suggest the remedial actions for treatment of negative points and enhance the positive one. The paper's contains detail study for the data included in financial statements to explain the financial performance of the company, and that will help the management for planning the future according to the previous performance, and also contain the converting process of the data of financial statements to meaningful information through several techniques, the financial statement analysis among them.

<sup>&</sup>lt;sup>19</sup> Paper Titled: Title Privatization of Public Transit: A Review of the Research on Contracting of Bus Services in the United States

Al-Aameri, Zahara Hassan and Al-Saiyyid Ali Khalaf Al-Rikabi (2007). "Importance of Financial Ratios in Assessment of Performance – A Case Study of Oil Projects Company"

7. Singh and Pandey, (2008)<sup>21</sup> this research paper covers other studies considering performance assessment expressed by earnings before interests and taxes (EBIT) and the associated risk resulted from the influence of using a certain financing structure. The earnings of the company is very important for any organization which represents the financial position of the organization this helps to analyse the performance .Risk is always concerned with any business firm . The major emphasis of our study is to analyse the performance using suitable ratios of the transport company.

- 8. Burange and Shruti Yamini (2008)<sup>22</sup> This Research paper analyses the performance of Indian Cement Industry The competitive landscape. The experience of the boom on the account of overall growth of Indian Economy by the cement industry is because of the expanding of investment and industrial activity in the cement sector. This paper reviews that analysing the performance is important even for the cement industry. The major emphasis of our study is based on secondary data which mainly concentrates on performance analysis of transportation sector specifically in Bengaluru
- **9.** A study in South Korea by Lee, (2008)<sup>23</sup> This research Articles is depended on board information for the country from 2000-2006 on the proprietorship design of the links and monetary execution, which uncovered that firm execution, is accomplished at a hump shaped level between the proprietorship structure convergence of the association and firm execution. The examination further gave some exact outcomes on the linkage between hierarchical possession construction

<sup>&</sup>lt;sup>21</sup> Singh J. P., Pandey S., 2008. Impact of working Capital Management in the Profitability of Hidalgo Industries Limited. ICFAI University Journal of Financial Economics, vol. 6(4), pp.62-69

<sup>&</sup>lt;sup>22</sup> L.G. Burange and Shruti Yamini, (April 2008), "Performance of Indian Cement Industry: The Competitive Landscape", the Journal of Finance, Vol.39, No.1, pp.127-145.

<sup>&</sup>lt;sup>23</sup> Lee, S. (2008). Ownership Structure and Financial Performance: Evidence from Panel Data of South Korea. Corporate Ownership and Control, 6(2), 1-30.

and firm execution, which indicated a positive relationship. The financial performance of the company is necessary to measure management as the individuals and groups within the organization that subsidies towards the economic objectives of the company. The proposed research framework can be of practical value for the firms. Managers can benefit from the outcomes of the paper by having a clear picture of organizational factors and conducting necessary research in order to find out the true nature of these factors.

10. Ghosh Santanu Kumar and Mondal Amitava (2009)<sup>24</sup> study on the relationship of intellectual capital and finance performances for a period of 10 years from 1999 to 2008 of 70 Indian banks. The measurement of financial performance used in this analysis were return on equity, return on assets and assets turnover ratio of Indian Banks but this review of the literature depicts that only few ratios is been used to find out the financial performance analysis but there is a requirement of analysing the performance using different ratios even in other public sector services. Therefore our study concentrates in meeting various objectives in Bangalore Metropolitan Transport Corporation in Bangalore.

11. Malhotra, et al (2009)<sup>25</sup> investigated the credit crisis in the financial markets had led to tremendous turmoil in the financial services industry. As a result, a substantial decline in the profitability and liquidity of the financial services companies was seen. They analyzed the financial performance of thirteen leading financial services firms to evaluate their relative standing in the industry. They illustrate the use of data envelopment analysis (DEA), an operations research

<sup>&</sup>lt;sup>24</sup> Ghosh Santanu Kumar and Mondal Amitava, (2009), "Intellectual Capital and financial performance, Evidence from the Indian Banking Industry, Proceedings of the European Conference on Intellectual Capital", pp.217-227

<sup>&</sup>lt;sup>25</sup> Malhotra, Rashmi D.K. Malhotra, and C. Andrew Lafond (2009). Analysing Financial Services Industry using data Envelopment Analysis, International Journal of Applied Management Science, 1, No.3, 217-246

technique, to evaluate the relative financial strength of thirteen financial services firms by benchmarking the financial ratios of a firm against its peers. DEA clearly brings out the firms that are operating more efficiently in comparison to other firms in the industry, and points out the areas in which poorly performing firms need to improve.

**12. M Kumbirai, R Webb** (2010)<sup>26</sup> A financial ratio analysis of commercial bank performance in South Africa. This paper investigated the South Africa's performance of commercial banking sector period for 2005-2009.this financial ratio is used to measure the liquidity, profitability and credit quality performance of large five commercial banks of South Africa

13. Shilpa M Trivedi(2010)<sup>27</sup> The research thesis Studies with an objective to analyse the liquidity position efficiency and revenue trend using various statistical tools which reveals the utilization of current assets in generation of revenue is not much satisfactory and also decreasing over the time, the author suggested that the government should establish special institutional set up for funding GSRTC to improve the profitability to the organization and also to take complete measures by ensuring private operators to pay the same registration fee like GSRTC for establishing fare, healthy and competitive environment for transport operators. The efficiency and revenue utilization of vehicles and other resource vary from place to place and also the registration fee in GSRTC will not be the same when it is compared from one place to other so The emphasis of our research is on verifying many more aspects

<sup>&</sup>lt;sup>26</sup> M Kumbirai, R Webb (2010) "A financial ratio analysis of commercial bank performance in South Africa" African Review of Economics and Finance Vol 2, No 1 (2010).

<sup>&</sup>lt;sup>27</sup> Research paper titled: An analysis of financial performance of state road Transport Corporation in Gujarat

14. Satyanarayana Chary and Sampath Kumar (2011)<sup>28</sup> discussed in their article that working capital is one of the vital decisions of financial management function. Profitability and working capital relationship is frequently emphasized for deciding on the level of investment in working capital. All manufacturing firms need to understand the association between these two variables to arrive at optimal financial decisions. Though theories exist on the topic, empirical methods are inadequately focused in arriving at conclusions. Use of statistical methods in understanding the relationship is systematic and scientific, which may provide better insight for decision making. This research is an endeavor to understand the relationship between working capital and profitability in a detailed manner.

15. Camelia Burja (2011) <sup>29</sup>deals in his research that the information about company performance, especially about its profitability, is useful in substantiating managerial decisions regarding potential changes in the economic resources that the company will be able to control in the future. The objective aims achieving superior economic results that will increase the company's competitiveness and will satisfy the shareholders' interests. The research presents some company performance analysis models, which highlight the influencing factors. The models are based on regression analysis, and the obtained results emphasize the strong connection between the profitability of the analyzed company expresses through Return on assets and the management of available resources.

<sup>&</sup>lt;sup>28</sup> Satyanarayana Chary and Sampath Kumar, (2011). Relationship between Working Capital and Profitability - A Statistical Approach, International Journal of Research in Finance & Marketing, 1(7), 1-16.

<sup>&</sup>lt;sup>29</sup>. Camelia Burja, (2011). Factors Influencing the Companies' Profitability, Annales Universities Apulensis Series Oeconomica, 13(2), 215-224.

16. Satyanarayana, B.N.V. (2011)<sup>30</sup> This research paper attempted to comprehend the effect of advancement, privatization and globalization on open area endeavours as to telecom area in India. The investigation focused on one example unit – Hindustan Cables restricted. 300 respondents containing chiefs, administrators and bosses at all levels were chosen haphazardly for the examination. The examination tosses light to the way that the organization is going to close its tasks. The organization which appreciated the situation with a sole provider to the branch of telecom couldn't currently withstand the opposition from different players. The examination likewise brings up that association for its endurance in this serious world ought to be extremely delicate and receptive to the outer changes and rapidly adjust inside by settling on essential choices

17. Abdulrahman, T.Q. and Mushtaq M.S. (2011)<sup>31</sup> In their investigation attempted to survey the exhibition of Islamic banks using complex monetary examination dependent on the utilization of two devices utilizing monetary proportions and examination of progress and the overall pattern based on the base year. The examination was directed to pass judgment on the exhibition of these banks and the effectiveness of the executives in using monetary assets ideally and to accomplish financial and social targets. The investigation test comprised of Iraqi Islamic Bank and Jordan Islamic Bank for the time frame 2000-2008. The investigation found that if Islamic banks need to accomplish monetary and social targets in accordance with their essential base, they ought to have extraordinary dynamic, monetary approaches tentative arrangements fortify the situation of

<sup>&</sup>lt;sup>30</sup> Impact of Liberalization, Privatization and Globalization on Public Sector Undertakings in India -A Case Study of Hindustan Cables Limited Hyderabad (Ph. D) Sri Krishnadevaraya University, Andhra Pradesh.

<sup>&</sup>lt;sup>31</sup> Evaluating the Performance of Islamic Banks By Using Financial Analysis Composite: A Comparative Study of the Iraqi Islamic Bank Performance with the Jordan Islamic Bank for the Period (2000-2008). Journal of Kerkuk University for Administrative and Economic Sciences, 2(1), 152-171

these banks in the general public just as they should utilize monetary instruments given by the monetary examination to arrive at the ideal objectives

18.Ar Anui Jaiswal, Dr. Ashutosh Sharma (2012)<sup>32</sup> This study is concerned of assessment of public transport demand for Bhopal and identifies the major factors for poor ridership with estimation of the probable shift of personal vehicle users to bus due to the increase in its level of service also identifies ways to account for qualitative factors in the public transport project evaluation by adjusting travel time values to reflect comfort and convenience. This can help to find innovative solutions to the current problems such as increasing traffic congestion, energyconsumption etc. and can increase the efficiencies as well as support for alternative modes of public transport, making them more acceptable by the people & achieving their equity objectives and increased economic efficiency both also a new approach is required to estimate the actual public transport demand so that most feasible and suitable system can be selected to optimize the public transport demand the dependence of the urban trips on the public transport is based on numerous parameters like the city size, geographical considerations, land use & functional segregation of activities over the city. Also, due to the previous negligence in the transport planning exercise in case of Small & Medium Cities, there is an absolute need of complete overhauling of the existing transport facilities in these cities, especially in the public transport facilities, so as to make the system efficient for fulfilling the arising transportation demands in the cities & to make them competent for addressing the future demand projections.

<sup>&</sup>lt;sup>32</sup> Research Paper: Optimization of Public Transport Demand: A Case Study of Bhopal/International Journal of Scientific and Research Publications, Volume 2, Issue 7, July 2012

19. Anurag. B.Singh, (2012)<sup>33</sup> examined the financial performance of ICICI and SBI bank with a comparison of private and public sector. (Amalendu Bhunia, 2011) evaluates the financial performance of pharmaceutical company. The study was mainly focused on long term and short term solvency, liquidity and profitability, efficiency and behaviour of profitability and liquidity position. The study suggested that, the sector poised with new challenges and sustain the growth

20. Marimuthu KN (2012),<sup>34</sup> in his investigation, "Monetary execution of Textile industry: An investigation of recorded organization of Tamil Nadu" and its investigates states that Coimbatore is known as Manchester of South India. 76% of India's all out material market is from Erode (Tex-City or Loom-City of India) and 56% of knitwear trades come from Tirupur. Each organization could contribute based on current execution contrasted and earlier year or with other organization. Dynamic, extra venture, liquidity position changes in working capital rely on the exhibition and return of organization reports. Assets are profoundly needed for everyday business activities of the firm and how to use it and how ought to dodge loses from the speculation are talked about here furthermore, it occurs by incapable administration. The goal of the paper is to investigate the exhibition of material industry in the chose organizations from Tamil Nadu. Likewise, the information gathered from the CMIE and utilized the instruments of ANOVA and clear measurements. The examination finished up

<sup>&</sup>lt;sup>33</sup> Dr.Anurag.B.Singh., Ms. Priyanka Tandon. 2012. "A Study of Financial Performance: A Comparative Analysis of SBI & ICICI Bank". International Journal of Marketing, Financial Services and Management Research, 1, 56-71.

<sup>&</sup>lt;sup>34</sup> Financial Performance of Textile Industry: A Study on Listed Companies of Tamil Nadu, International Journal of Research in Management, Economics and Commerce, Vol.2, No.11, pp.365-377.

among the five organizations these two organizations for example KPR factory ltd and Rajapalayam factories ltd monetary position was acceptable.

21. Raghavendra Prasad, U. (2012)<sup>35</sup> this Research paper attempted to look at the effect of disinvestment of public area undertakings on Indian economy. For the presentation examination four organizations were chosen and an example of 300 financial backers was taken dependent on comfort testing technique. The examination supported the way that benefits made by open endeavors were used towards financing monetary advancement of the country. The significance of public area undertakings has again been featured because of their significant pretended in saving the country from the impacts of worldwide monetary emergency. Such financial strategies were executed by administration of India through open area to shield the country from worldwide emergency. The examination closed with the idea that administration needs to zero in not just on benefit disclosing focal area undertakings yet in addition on the issues of debilitated focal public area ventures and pushed to take measures improve execution of focal public area endeavors and not to privatize focal public area endeavors.

22. Akram Alkhatib, Murad Harsheh(2012)<sup>36</sup> The motivation behind this investigation is to experimentally look at the monetary exhibition of five Palestinian business banks recorded on Palestine protections trade (PEX). In this paper, financial execution has been estimated by utilizing three pointers; Internal—put together execution estimated by Return with respect to Assets, Market-based execution estimated by Tobin's Q model (Price/Book estimation of Equity) and

<sup>&</sup>lt;sup>35</sup> Disinvestment of Public Sector Enterprises in India (Ph. D) Sri .Krishnadevaraya University, Anantapur.

<sup>&</sup>lt;sup>36</sup> Financial Performance of Palestinian Commercial Banks: International Journal of Business and Social Science Vol. 3 No. 3; February 2012

Economic—based execution estimated by Economic Value add. The Review of the literature depicts that the normal commitments to this investigation to the administration field is to help leaders focus harder on the significant exercises that apply potential and solid effect on their financial exhibition. The normal commitment of this investigation to the scholastic documented is to give a far reaching three models to assessing banking execution and to fill a significant hole in writing; for example consequences of this investigation will fill in as a beginning stage for additional future examinations. The performance analyses can be implemented for any sector of the companies in financial management hence there is a need to analyse the performance of the road transportation company.

23. S.M. Tariq Zafar, Sep. (2012) <sup>37</sup>The author made study to explored the truth that the ratios are calculated from the financial statements' which are prepared as desired by the management and policies adopted on depreciation and stock values and thus produce only a collection of facts expressed in monetary term and cannot produce complete and authentic picture of the business and also may not highlight other factors which affects performance. They found that to control manager's management often overuse ratio and concentrate more on improving the ratios and also known fact that ratio is simple comparison of numerator and a denominator and in comparing ratios it become difficult to adjudicate whether differences are due to change in the numerator or denominator or in both. It is also found that ratios are interconnected but are often treated by management in isolation and also found that analysis of ratios lack authenticity as data used in calculation are not accurate but manipulated presentation by the promoter

 $<sup>^{37}</sup>$  S.M. Tariq Zafar, S. K. ( Sep. 2012). A comparative evaluation of financial performance and market value of maruti and tata company . Bookman International Journal of Accounts, Economics & Business Management, Vol. 1 No. 1, 7-16

24. Santosh Koner (2013)<sup>38</sup>in his investigation analysed the exhibition of disinvested public area undertakings in India concerning benefit, liquidity and working proficiency and furthermore to pass judgment on their presentation or not because of disinvestment. Optional information from different issues of public endeavour overview distributed by division of public undertakings and administration of India, yearly monetary reports and asset reports were depended for the direct of the examination. Various proportions have been utilized for contrasting the exhibition of chose endeavours. Judgment examining technique was turn for choosing test for the examination.. From the examination made it was tracked down that the chose organizations couldn't enlarge its benefits or improve its liquidity position or progress in its tasks even after disinvestment measure.

25. Dr. Srinivasa Rao Chilumuri(2013)<sup>39</sup> The target of this exploration paper is to survey the monetary execution assessment of (APSRTC) The Andhra Pradesh State Road Transport Corporation and to recognize the issues closed with ideas. In light of the auxiliary information which is to be gathered from the APSRTC Head office and RTC site this work was surveyed. It is proposed to lessen the typical devaluation store and spent something similar to decrease advances and current liabilities and it is exhorted that, as a piece of computing administrations astute benefit, company needs to distinguish the misfortune acquiring employed transports and they should stop or their course should be updated for getting benefits. The productive employed transports can be proceeded. This Research

<sup>&</sup>lt;sup>38</sup> Performance of Select Disinvested Public Sector Enterprises in India during the Period 2000-2010 (Ph. D) University of Burdwan West Bengal.

<sup>&</sup>lt;sup>39</sup> Financial Performance Evaluation of APSRTC: IJMBS Vol. 3, Issue 1, Jan - March 2013 ISSN: 2230-9519 (Online) | ISSN: 2231-2463 (Print)

paper reviews five years financial performance statements but our study needs to verify the objectives of BMTC in Bangalore which changes from place to place.

26. Vivek Singla, (2013)<sup>40</sup> analysed the financial performance of selected firms. It includes analysis of profitability and working capital. Financial performance is a yardstick to measure financial and operational efficiency of the firm. Strategic and operational of thinking mainly depends on analysis of financial performance. The consistency and routine efforts made to improve financial condition. This will result on increasing effectiveness and efficiency of the firm and increase the interest on investment

27. Muhammad Taqi.(2013)<sup>41</sup> Monetary Appraisal and Investigation of Minerals and Metals Trading Corporation (MMTC). In his examination, he has measure the monetary exhibition with the assistance of liquidity proportions, benefit proportions and movement proportions. The ordinariness of the information has been checked through engaging insights. Then again the one example t test has been applied to check the critical contrast in different monetary proportions of MMTC with the assistance of SPSS 20. Furthermore, development in different proportions is decided through one example t test at 95% level of huge. The review of the literature focuses only on Minerals and Metals Trading corporation.

**28. Dr. V.P.T. Dhevika, Dr. O.T.V Latasri & H. Gayathri** (2013)<sup>42</sup> This Research Paper carried out monetary execution examination of CITY UNION BANK utilizing proportion investigation procedure. They estimated the margins

<sup>&</sup>lt;sup>40</sup> Vivek Singla. 2013. "A Comparative Study of Financial Performance of SAIL and TATA Steel Ltd". International Journal Reviews, Surveys and Research, 2.

<sup>&</sup>lt;sup>41</sup> Financial Appraisal and Analysis of Minerals and Metals Trading Corporation (MMTC). Journal of Management and Social Sciences Vol.9, No.1 (Spring 2013)

<sup>&</sup>lt;sup>42</sup> A Study on Financial Performance Analysis at City Union Bank. International Journal of Advanced Research in Management and Social Sciences – Vol.2, No. 7, 2278-6236.

like liquidity, dissolvability, productivity and borrowings of the bank for a time of five years. The paper inferred that the bank has had the option to develop its piece of the overall industry and has had the option to meet its higher working capital necessities and expanded volume of its tasks. There is a requirement to study the analysis based on various ratios in Transportation Company which plays an important role for a public in a place like Bengaluru

29. Mohammed Alipour, M. (2013)<sup>43</sup> in his examination found that privatization didn't decidedly affect benefit of the organizations recorded on the Tehran Stock Exchange; rather the impact has been negative. The examination further uncovered that privatization had no impact on their business, adequacy and productivity, rather the obligations and dangers of these organizations has expanded. It was called attention to that privatization should be joined by other financial changes, for example, change of capital market and the public financial framework just as definition of corporate principles and guidelines.

**30. Rohani, M.M, Wijeyesekera, D.C, and Karim, A.T.B.,**(2013)<sup>44</sup> The paper explored the sort of transport administrations, nature of administration in the transport activity that impacts the traveler choice and furthermore the part of transport supplier and transport driver. Also, they say that an improved comprehension of the transport activity is significant for very much overseen transport administrations. Keeping a high typical of value in commission and execution is of overwhelming significance to urge people to make transport their

<sup>&</sup>lt;sup>43</sup> Has privatization of State-Owned Enterprises in Iran led to improved performance? International Journal of Commerce and Management, 23(4), 281-305. http://dx.doi.org/10.1108/ijcoma-03-2012-0019

<sup>&</sup>lt;sup>44</sup> Bus Operation, Quality Service and The Role of Bus Provider and Driver. Procedia Engineering 53: 167 – 178

most popular choice. They reasoned that the presentation of public transport administration will be influenced to a great extent by the nature of administration. In regions in which public vehicle particularly transports are profoundly available, activity execution enhancements might be needed by improving elements that impact public transport ridership, for example, transport administration dependability, security, solace, and neatness. Improving such a factor will assist with urging individuals to move from private to public vehicle

31. Dr. Thomas, K. V. and Anju Baby (2014)<sup>45</sup> In this research paper researcher have orated that turn around procedures can be an operative tool in order for the revival of large number of sick or loss incurring public sector units. The major triggers which have led to the turnaround strategies in the public sector were identified as new or changed top level leadership, the economic crisis, industrial recession and overall the privatization threats. It was proven with the help of factor analysis that 'Market-driven leadership change' is the significant trigger that can distinguish turnaround outcome. Companies perceiving a higher level of threat from the market, and leadership change occurring in tandem with this perception can increase the possibility of successful turn around the review of the literature reviews the difficulties face in the public sector company. The major emphasis of our study is to analyse the financial performance in public transport corporation specifically considered with road transportation in Bangalore.

**32. Dr. Ayad Shaker Sultan**(**2014**)<sup>46</sup> The paper used accounting ratios and financial report analysis, namely, profitability ratios, which might affect the

<sup>&</sup>lt;sup>45</sup> A Study among Select Public Sector Enterprises of Kerala. Asia Pacific Journal of Research, Vol: I(Issue XIV, February)

<sup>&</sup>lt;sup>46</sup>Financial Statements Analysis - Measurement of Performance and Profitability: Applied Study of Baghdad Soft-Drink Industry /Research Journal of Finance and Accounting www.iiste.org ISSN 2222-1697 (Paper) ISSN 2222-2847 (Online)

financial performance of the firm. Profit Margin (PM), Return on Assets (ROA), Return on Equity (ROE), Capital turnover ratio and Expense ratio In conclusion, ROE is the most comprehensive measure of profitability of a firm; it considers the operating and investing decisions made as well as the financing and tax related decisions. It has suggested that The foregoing analysis reveals that there were grey areas took place in June 2007 to June 2009, which resulted in decline of all the concerned profitability ratios and subsequently the performance of Baghdad Soft-Drinks Industry, during the two years. In conclusion, ROE is the most comprehensive measure of profitability of a firm; it considers the operating and investing decisions made as well as the financing and tax related decisions.

33. Puttana (2014) <sup>47</sup> the goal of this Paper was to break down the income before premium and expenses and profit per portion of ten Bombay stock trade organizations in IT area. It played out a similar investigation of EBIT-EPS examination profit from speculation. The investigation uncovered that all IT organizations have various examples of profit and obligation financing. The review of the literature depicts that to analyse the performance of the company the researcher has used EBIT –EPS analyse. But the major emphasis of our study is to analyse the performance of Bangalore Metropolitan Transport Corporation which is related to road transportation in Bangalore are yet be verified using various required ratios to analyze the performance.

34. Vishnu C.R and Regi Kumar  $V(2014)^{48}$  The exhibitions of Road Transport Corporations are thought about and a summed up procedure is detailed utilizing the strategy of Data Envelopment Analysis. Benchmarking is utilized as an

<sup>&</sup>lt;sup>47</sup> "Performance Analysis of Information Technology Sector in India." International Journal of Economic and Business Review, 2(3) pp. 1-7

<sup>&</sup>lt;sup>48</sup> Data envelopment based benchmarking for road transport corporations: a case study. International Journal of Scientific & Engineering Research 5:608-613

improvement strategy fundamental for the situation where comparative associations are working for fulfilling the clients in a productive manner yet conveying it with various effectiveness. With the end goal of investigation three Street Transport Corporation in South India were chosen. In which Kerala State Road Transport Corporation is routinely hitting the features with reports of immense monetary misfortune consistently..

34. Andika Priyadi Putra, Laura Lahindah, Bambang Rismadi (2014)<sup>49</sup> The purpose of this study is to contrast the financial performance on oil and gas sector before and after global crisis. On this research the financial performance will examine with three ratio perspectives, profitability ratio, liquidity ratio, and market ratio this research concerns study about three ratio measurements that include profitability ratio, liquidity ratio, and market ratio. Based on analysis for measuring profitability, return on asset and return on equity were significant difference during before and after global crisis. This result implied that oil and gas sector industry can't defend their capability to create profit. The major emphasis of our study is calculation of various ratios to analyse the financial performance of Bengaluru Metropolitan Transport Corporation

**35. R.Idhayajothi, Dr.O.T.V.Latasri, N. Manjula, A.Meharaj Banu and R. Malini (2014)**, <sup>50</sup> conducted a study on overall financial performance of Ashok Leyland Limited at Chennai. The paper involved calculation of various ratios namely, Liquidity ratios, Leverage ratios, Activity ratios and Profitability ratios. It was hence inferred that despite the price drops in various products, the company was able to maintain and grow its market share to make strong margins

<sup>&</sup>lt;sup>49</sup> Copyright 2014 Society of Interdisciplinary Business Research (www.sibresearch.org) ISSN: 2304-1013 (Online); 2304-1269 (CDROM)

<sup>&</sup>lt;sup>50</sup> A Study on Financial Performance of Ashok Leyland Limited at Chennai. IOSR Journal of Business and Management (IOSRJBM) – Vol.16, Issue 6. Ver. I, 83-89

in market, contributing to the strong financial position of the company. The company was able to balance its higher capital expenditures and working capital requirements with high volume of operations and operating cash flows. The review of the literature depicts that the performance was satiable but there it is limited to Ashoka Leyland Limited hence and the major emphasis of our study is to analyse the performance in Road Transportation In Bangalore many objectives of our study is yet to be verified

36. Dr. C. Balaji(2015)<sup>51</sup> The object of this research Paper is to study the analysis of financial performance of NEYCER, India. The financial analyses help to understand how management is efficient in procuring and utilizing the funds. An attempt is made in the study to analyze whether an entity is stable, solvent, liquid, or profitable enough to be invested in NEYCER INDIA limited is leading company in sanitary ware. The finding of the study helps the prospective investors in taking investment decision. The study also analysis the growth and working of the company for the financial periods with better understanding. Since the study was conducted for a period of 3 month, which is insufficient for complete study about the company financial performance. The availability of the information and data are limited by time factor. There are changes for errors while making calculation. The distance is too long from my residence. The research Cover most of the objectives in NEYCER hence it has to be verified in Transportation Company Bengaluru in India and the objective of analysing the various difficulties faced by Bengaluru Metropolitan Transportation Company.

<sup>&</sup>lt;sup>51</sup> A Study on Financial Performance Analysis at Neycer India Ltd., Vadalur

37. Asma Khan & Jyoti Singhal (2015). The Research Paper conducted Progression and Effectiveness Investigation of Particular IT Companies in terms of ratios over a period of five years. The paper inferred that performance of HCL Technologies was satisfactory except in Return on Net Worth and Return on Long Term Funds whereas in case of Tech Mahindra Return on Net Worth and Return on Long Term Funds was satisfactory and Wipro showed an average performance during the study period. Also, there was significant difference between the companies in Operating Profit Ratio and Return on Capital Employed Ratio and there was no significant difference between the companies in Net Profit Ratio, Gross Profit Ratio, and Return on Net Worth Ratio. Information on one of the objective namely evaluating the financial statement using ratios vary from ratios used for different companies since the study was conducted IT companies with limited ratios there is need to verify in Bengaluru transportation company.

**38. Dr. P. Megaladevi** (2015)<sup>53</sup> The Research Paper aims to identify the financial strengths and weaknesses of the Tamil Nadu Newsprint and Papers Limited (TNPL) by properly establishing relationships between the items of the balance sheet and profit and loss account. The study has been undertaken for the period of ten years from 2004-05 to 2013-14 and the necessary data have been obtained from CMIE database. The study exclusively depends on the public sector published financial data and it does not compare with private sector paper mills. This is a major limitation of the research. The study is of crucial importance to measure the firm's liquidity, solvency, profitability, stability and other indicators

Paper Titled "Growth and Profitability Analysis of Selected IT Companies". IRACST –
 International Journal of Commerce, Business and Management (IJCBM) - Vol. 4, No.3, 2319–2828
 A study on financial performance analysis of the select Paper Company with special reference to Tamil Nadu Newsprint and papers limited

that the business is conducted in a rational and normal way; ensuring enough returns to the shareholders to maintain at least its market value. Hence there is a requirement to analyse the financial analysis in various other public companies indifferent states as the performance difference from place to place in a Bengaluru transportation Company..

39. Manoj Kumara N, Abhilasha (2015)<sup>54</sup> This Research Paper examine the profitability position of automobile industry, analyse the liquidity, solvency position. And assess the efficiency of automobile companies. This research paper is an attempt to determine the financial performance of selected automobile companies in India by using financial performance parameters, It can be concluded that the anticipated inputs to this study to the firm is to assist strategic thinkers pay attention to the appropriate actions that apply latent and strong effect on their automobile performance. This research facilitates a comprehensive model for examining the financial performance of automobile performance and the major findings of this research will give a important parameters and helps to fill a similar gaps in the literature. This analytical strong fit model that R-square results 54% indicates variation of independent variable on dependent variable. Further research, need to focus on important parameters like Economic Value added and Refined Economic Value Added to Reveal & evaluate the overall organisational development performance

40. Abdul Rehman, Luan Jingdong, Yuneng Du, Rafia Khatoon, Sehran Khan Nisar, Liting Zhang, Toufeeq Shahzad(2015)<sup>55</sup> This paper forms and

<sup>&</sup>lt;sup>54</sup>Research Paper titled: A critical analysis of financial performance evaluation of an Indian automobile companies

<sup>&</sup>lt;sup>55</sup> Financial Performance, Ratio Analysis and Evaluation of Agricultural Bank of China: International Journal of Economic Behaviour and

researches the monetary exhibition, proportion investigation of Agricultural Bank of China banking area for the time frame 2010-2014. The investigation reasoned that monetary execution of any firm or bank can be determined with the assistance of monetary proportions. Monetary proportion assumes a significant part to check the state of any bank or organization either is in benefit or misfortune. Monetary execution of any firm or bank can be determined with the assistance of monetary proportions This study gives the insight of HPCL only and in the present study all the aspects of financial performance are not taken into account. It is recommended that organization should focus towards the administration of liquidity position too. The current and snappy proportions were not found with the guidelines standards of the liquidity proportion. The organization may either build its present resources or diminish current liabilities. To improve the benefit the administration should zero in on to control cost of deals and other immediate and roundabout costs. Also, to improve the working effectiveness of the organization the administration should zero in on turnover proportions. The major emphasis of our study covers the financial performance of road Transport Corporation hence the objective should be verified in Bangalore Metropolitan Transportation Corporation.

**41. Ms.M.Ganga, Mr.P.Kalaiselvan, Ms.R.Suriya** (2015) <sup>56</sup> The author objective was to analyse the overall performance of the company and also to analyse the existing relationship between the current assets and current liabilities which helps in ascertaining the strengths and weakness in the operation and

Organization/http://article.sciencepublishinggroup.com/html/10.11648.j.ijebo.20150305.11.htmlVolu me 3, Issue 5, October 2015, Pages: 69-73

<sup>&</sup>lt;sup>56</sup> Evaluation of Financial Performance/ International Journal of Scientific and Research Publications, Volume 5, Issue 4, April 2015 1 ISSN 2250-3153

financial position of an enterprise. Researcher has used various research techniques to find the evaluation of financial performance of the company. It would be helpful to the Equities Micro Finance Private Limited in Chennai." company to concentrate on gray area. That continue grow f or future period.it was suggested to maintain an optimum level of cash and bank balanced in the day to day activities. The review of the literature has verified objectives namely performance analysis ,financial health of the company and relationship between current assets and current liabilities but our research paper concentrates on performance analysis of Road Transportation Company in Bangalore .

42. S.Sathya, Dr.R.Umarani(2015)<sup>57</sup> The Research paper aims at to investigate the monetary presentation of the organization and the 5 organizations are Lakshmi Mills, Bannari Amman Spinning Mill, Sri Ramakrishna Spinning Mill, Kpr Spinning Mill and Super Spinning Mill are taken for study. The exploration plan of the investigation is graphic examination plan and auxiliary information was gathered from the distributed sites of association for the examination. The apparatuses utilized for investigation is relative proportion examination of the monetary record. Appropriate proportions were outlined and determined to know the monetary exhibition of the organization. The discoveries from the examination were talked about in detail and ideas for restorative activities like keep up great dissolvability to meet present moment and long haul commitments were given any place material and The Review of the literature depicts that Market capitalization details of company were not accessible for it to form basis for selecting the sample. And The textile mills can follow a fixed policy for

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<sup>&</sup>lt;sup>57</sup> "A Study On Financial Performance Analysis Of Spinning Mills Of Coimbatore City": International Journal of scientific research and management (IJSRM) ||Volume||3||Issue||9||Pages|| 3543-3548||2015|| Website: www.ijsrm.in ISSN (e): 2321-3418

debtors. The firm should maintain the share capital to pay dividend to the shareholders. And preferable it's better to take proper measure to maintain the earnings of the concern.

43. **Artta Bandhu Jena** (2015)<sup>58</sup> The research paper entitled, "Profitability Analysis: A Study of Hindustan Petroleum Corporation Limited". In his examination, he has zeroed in on to investigation of the productivity position, monetary framework, net revenue and costs proportion. He has tracked down that the general productivity position is acceptable and proposed that HPCL is required acceptable procedures for keeping up the benefit in future. In explicit, the analyst has covered the Petroleum Industry of India in related with the monetary exhibition of the petrol business. The major emphasis of our study is to analyze the performance of road transportation in Bangalore. The review of the literature focuses only on Hindustan Petroleum Corporation Limited" hence there is requirement to analyze the performance in different sector in different places.

44. N.Sivakumar, C.Raja(2015)<sup>59</sup> The point of this examination is distinguishing monetary execution of Indian inn enterprises in India. The examination uncovers that inns in India actually centre on the utilization of monetary measures when contrasted with non-monetary measures for estimating execution. The examination upholds the connection between inn execution and BSC estimates use. The extension of the travel industry definitely achieves the advancement of the lodging business. Inns should make successful serious methodologies for endurance and utilize a presentation estimation framework that

<sup>58</sup> ."Profitability Analysis: A Study of Hindustan Petroleum Corporation Limited" International Journal of Research and Development - A Management Review. 4(1), pp125-132.

<sup>&</sup>lt;sup>59</sup> Financial performance of selected BSE/NSE listed hotel industries in India: WWJMRD 2015; 1(3): 18-25 www.wwjmrd.com e-ISSN: 2454-6615/http://wwjmrd.com/upload/financial-performance-of-selected-bsense-listed-hotel-industries-in-india.pdf

meets the necessities of an evolving climate. A few investigations have been led to examine the rich vacationer capability of the state. Nonetheless, no exploration contemplates are accessible in regards to execution estimation rehearses embraced by accommodation supervisors in India for estimating the presentation of their foundations Findings recommend that monetary practices are received by elite player class lodging and these are likewise contributing in expanding business execution. The Review of the literature depicts that while registering the different information with the end goal of present investigation, the estimate of decimal spots prompts minor varieties in proportions just as rate examination and subsequently these will undoubtedly exist in the current investigation

45. Biswanath Sukul. (2016)<sup>60</sup> This research paper is attempted to assess the financial strengths and weaknesses of Indian steel industries with regard to two units - Tata and SAIL selected each from public and private sector. The analysis of Financial and Operational Performance of State Owned Industrial Enterprises in Kerala the two giant companies in terms of liquidity, solvency, profitability and overall management efficiency it was found that Tata Steel performed better than SAIL. The gross profit margin and net profits of SAIL was not satisfactory when compared with Tata Steel and the inventory and turnover ratios of SAIL also brings out the managerial inefficiency in collecting debts and inventory management. The major emphasis of our study is to analyse the performance of Transportation Company, hence there is a requirement to analyse public services provided to public which varies from private company to public company.

<sup>&</sup>lt;sup>60</sup> A Comparative Financial Analysis of TATA Steel Ltd. and SAIL, IOSR Journal of Economics and Finance (IOSR-JEF) EISSN: 2321-5933, P-ISSN: 2321-5925., Volume 7(Issue 6 Ver. IV (Nov. - Dec. 2016),). Retrieved from http://www.iosrjournals.org/iosrjef/papers/Vol7-Issue6/Version-4/A0706040105.pdf

**46.** Asif Pervez. (2016)<sup>61</sup> has taken an endeavour to dissect the monetary presentation of Steel Authority of India Limited (SAIL) for a time of ten years going from 2005-06 to 2014-15 Industry midpoints for various monetary proportions, were utilized as standard proportions and one sample, 't' test was applied to check whether a huge distinction exist between monetary proportions of test firm and industry normal for that proportion. The analyst depended on both customary just as cutting edge monetary measures for surveying the monetary exhibition. Ordinary execution estimates like profit from capital utilized, return on resources and current execution estimates, for example, monetary worth added (EVA) and market esteem added (MVA) were utilized for the investigations. Besides, various straight relapse method was utilized to discover the effect of liquidity, dissolvability and the board proficiency on customary proportions of execution just as advance execution measures. The discoveries uncovered that public area is confronting a declining stage and specifically SAIL has decayed its liquidity and productivity position. The investigation closed by expressing that in general monetary situation of SAIL was palatable during the underlying long stretches of the investigation however later on showed a sharp decay.

**47. Sanjay Hiran**(**2016**)<sup>62</sup> This original copy examined the effect of liquidity proportion for example current proportion, speedy proportion and stock turnover proportion on proportion of benefit for example working benefit proportion, net benefit proportion and return on total assets and furthermore examined the effect of influence proportion for example level of working influence, level of monetary

<sup>&</sup>lt;sup>61</sup> An Analysis of Financial Performance Of Steel Authority Of India Ltd., Since 2005 (Ph. D) Department of Commerce, Aligarh Muslim University, Aligarh (India).

<sup>&</sup>lt;sup>62</sup> Financial Performance Analysis of Indian Companies Belongs to Automobile Industry with Special Reference to Liquidity & Leverage: Int. J. of Multidisciplinary and Current research, Vol.4 (Jan/Feb 2016)/ http://ijmcr.com/wp-content/uploads/2016/01/Paper1039-51.pdf

influence and joined influence on such proportions of productivity of organizations under investigation. For such examination information for the time of five years it is seen that normal joined influence of the organizations under investigation is 1.3039 which shows that organizations under examination are not keeping up ideal degree of influence. A moderate monetary influence and low working influence is suggested for the organizations.

48. Marek Vochozka, Zuzana Rowland and Jaromír Vrbka(2016)<sup>63</sup> The objective of this outline is to present in no time the monetary examination, the highlights normal for transport organizations when all is said in done, and decide the monetary attributes of a normal vehicle organization in the Czech Republic. Monetary investigation is a compelling instrument for the assessment of big business monetary productivity. It can distinguish the qualities and shortcomings of a given endeavour. The objective has been satisfied. An Average organization has been decided and its investigation performed. The research depicts that concerning area and negligible significance of a few sorts of transportation organizations working in delivery transport won't be incorporated inside the assortment of organizations. The investigation requires a period arrangement of five progressive showcasing years. The review of the research gives an overview of five years data for calculating financial performance analysis hence the objective can be extended for more number of study period with using different ratios

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<sup>&</sup>lt;sup>63</sup> Financial Analysis of an Average Transport Company in the Czech Republic/DOI 10.17818/NM/2016/SI28 UDK 656.07:657.6 Review / Pregledni rad Paper accepted / Rukopis primljen: 31. 3. 2016.

49. Izhar Ahmad(2016)<sup>64</sup> The fundamental accentuation in this investigation has been given to assess the monetary execution of Hindustan Petroleum Corporation Limited as for measure the effect of liquidity, dissolvability and effectiveness proportion on return on capital utilized. In this examination, scientist investigation the effect of liquidity, dissolvability and effectiveness proportion on profit from venture. Besides, for testing the speculations of the investigation scientist run various relapse examination on SPSS.

50. Dr. M. Ravichandran M. Venkata Subramanian(2016)<sup>65</sup> The main problem in business that of making correct estimates for the future which cannot be done unless data representing changes over a period are systematically and scientifically analysed. Financial analysis is a powerful mechanism which helps in ascertain the strength and weakness in the operation and financial position of an enterprise. Financial analysis is the process of identifying the financial strength and weakness of the firm by properly establishing relationship between the items of the balance sheet and he profit and loss accounts.

51. Megha Kumar, Seema Singh, Akshima T. Ghate, Sarbojit Pal, Sangeetha Ann Wilson(2016)<sup>66</sup> meeting the mobility needs of the people. The paper also discusses commonly held perceptions of how these modes relate to safety and pollution. The paper highlights that these systems bridge a large transport supply gap and play an important role in Indian cities. The modes may follow some illegitimate practices, but they do it to become profitable, which in turn helps them provide the much-needed mobility services. The study also shows

<sup>&</sup>lt;sup>64</sup> Analysis of Financial Performance of Hindustan Petroleum Corporation Limited: International Journal of Research in Management, Economics and Commerce ISSN 2250-057X, Impact Factor: 6.384, Volume 6 Issue 04, April 2016

<sup>&</sup>lt;sup>65</sup> A Study on Financial Performance Analysis of Force Motors Limited

<sup>&</sup>lt;sup>66</sup> Research article: Informal public transport modes in India: A case study of five city regions

that these systems are not as unsafe and polluting as people often perceive them to be with government-provided public transport services failing to meet public demand, the informal public transport sector is playing a crucial role in providing mobility services to Indian cities, towns, and peri-urban areas. These systems, which emerge and evolve to meet local mobility needs, are highly flexible and customized to suit local conditions.

**52. Chashmi NA and Fadaee M** (2016)<sup>67</sup> In this analysis, it has not been perceived the connection between the pace of profit for value (ROE) as a proportion of monetary execution and Success or dissatisfaction; consequently, policymakers should take note of that the pace of profit for value (ROE) isn't proper models for deciding essential arrangement for Success or disappointment. What's more, it is prescribed that focus on the other monetary execution estimates, for example, financial worth added, held profit, incomes, etc. Likewise it has been seen that the organization's monetary exhibition dependent on the pace of profit for resources (ROA) and income per share (EPS) will influence Success or disappointment. As indicated by research discoveries additionally recommend that financial backers during settling on choices study budget summaries and revealing of organizations and furthermore consider factors, for example, firm size, monetary influence, and profit per offer and industry type. In this examination has likewise demonstrated that the size of recorded organizations in Tehran Stock Exchange no affects their Success or disappointment. Also, productivity fundamentally affects achievement or disappointment organization. The emphasis our study is to analyse the financial performance of

Bangalore metropolitan transport Corporation

<sup>&</sup>lt;sup>67</sup> A paper titled Impact of Financial Performance and Growth Opportunities on Success or Failure of Companies: Evidence from Tehran Stock Exchange DOI: 10.4172/2168-9601.1000166

- 53. Pritesh C.Panchal, Mukesh B.Tagariya(2016)<sup>68</sup> The present study has thrown major concentration in ratio analysis from the 5 years balance sheet and profit and loss a/c. An objective of the study includes the profitability, cost of goods sold and overall financial performance of the company. Based on the five years balance sheet and profit and loss a/c suitable suggestion were given by the researcher for a better soundness and cost effectiveness of company. Hence the company is suggested to improve the financial position for the growth of the company by driving more efforts. This research paper cover limited ratios to analyze the financial performance, hence our paper can study more number of ratios to analyze the performance with 8 years of secondary data
- **54. Al Shahrani Saad M, Tu Zhengge**(2016)<sup>69</sup> The paper has shown the significance of monetary execution as far as ROE and ROA for organization's improvement, and growth. The elements supportive for higher firm execution should to be exactly tried on monetary execution factors. A future report may utilize comparable estimating procedure as earlier examinations, which utilized scales also, recipes of higher acceptability and dependability. The major emphasis of our study is to use different ratios which are suitable for the analysis of financial performance of Transport Company which is more significance for public in the place like Bangalore.
- 55. Gowsalya r s, Mohammed Hasan  $m(2017)^{70}$  The study entitled the financial performance analysis an Company. The goal of this investigation is to

<sup>&</sup>lt;sup>68</sup> A Study on Financial Performance Using Ratio Analysis of Hindalco Aluminium Company Ltd/International Journal For Innovative Research In Multidisciplinary Field ISSN – 2455-0620 Volume - 2, Issue - 12, Dec - 2016

<sup>&</sup>lt;sup>69</sup> The Impact of Organizational Factors on Financial Performance: Building a Theoretical Model/ International Journal of Management Science and Business Administration Volume 2, Issue 7, June 2016, Pages 51-56

<sup>&</sup>lt;sup>70</sup> FINANCIAL PERFORMANCE ANALYSIS/© 2017 IJRTI | Volume 2, Issue 6 | ISSN: 2456-3315

contrast the current monetary exhibition and most recent five years and to consider the current monetary situation of Company. The information utilized in this examination is optional information through yearly report. The information that utilized in this investigation, similar monetary record, regular size accounting report, relative monetary record examination ,that the current liabilities is higher than the current resource in consistently and it is to be propose that the organization can focus on their expanding the level of the current resource. So the organization improves this monetary position. The investigation of monetary execution on The Company has uncovered the extraordinary arrangement of their different monetary viewpoints for a very long time. The relative examination opens the general exhibition approach. Monetary execution investigation empowers the financial backers and banks assess past and current execution and monetary position, and to foresee future execution. Financial statement is used to judge the profitability and financial soundness of a firm. The review of the literature provides the information of five years since the study was conducted in banks there is a need to verify in Transportation Company in Bengaluru.

56. Gowsalya r s, Mohammed Hasan m (2017)<sup>71</sup> The study entitled the financial performance analysis an Company. The goal of this examination is to contrast the current monetary exhibition and most recent five years and to contemplate the current monetary situation of Company. The information utilized in this examination is auxiliary information through yearly report. The information that utilized in this examination, near accounting report, basic size monetary record, relative accounting report investigation ,that the current liabilities is higher than the current resource in consistently and it is to be propose

<sup>&</sup>lt;sup>71</sup> Financial Performance Analysis/© 2017 Ijrti | Volume 2, Issue 6 | ISSN: 2456-3315

that the organization can focus on their expanding the level of the current resource. So the organization improves this monetary position. The investigation of monetary execution on The Company has uncovered the incredible arrangement of their different monetary viewpoints for a very long time. The near investigation opens the general exhibition approach. Monetary execution examination empowers the financial backers and loan bosses assess past and current execution and monetary position, and to anticipate future execution. Fiscal report is utilized to pass judgment on the benefit and monetary sufficiency of a firm.

- 57. **Augustin Mudakemwa**(2017)<sup>72</sup> The Paper covers with an objective to assess the indicators of financial analysis in Inyongera SACCO/Cyuve, to analyze the determinants of the financial performance in Inyongera SACCO/Cyuve, and also to measure the relationship between financial analysis indicators and the financial performance determinants in Inyongera SACCO/Cyuve. The data composed with the help of both primary and secondary sources using ratios the researcher have depicted the relationship with the help of financial statements. The major emphasis of our study is to analyze the performance of Transportation Company in Bangalore using ratio analysis.
- **58. Seema Jain, Pawan Kumar Dhiman** (2017) <sup>73</sup> This paper intends to contemplate the job of Road Transport in monetary turn of events. What's more, examine the issues emerges because of expanded vehicle populace it likewise Suggested to Increase the quantity of public vehicle including quality, security,

<sup>73</sup> Road Transport In Economic Development/International Journal of Management and Applied Science, ISSN: 2394-7926 Volume-3, Issue-9, Sep.-2017 http://iraj.in

<sup>&</sup>lt;sup>72</sup> The Role of Financial Analysis on the Financial Performance of Microfinance Institutions in Rwanda.

A Case Study of Inyongera SACCO/Cyuve from 2011 to 2015/https://www.grin.com/document/584227

simple openness, advantageous factor to make a deduction to depend on open vehicle through it can diminish gridlock and contamination additionally to Replacement of existing old foundation assets. Controlling vehicle utilization gets significant as vehicle possession controls through movement request the executives with the goal that more attractive vehicle destinations can be accomplished and negative externalities of movement can be decreased. The review of the literature verifies the objective of profitability and replacement of assets the major emphasis of our research being to assess the effectiveness of performance analysis in Road Transportation at Bangalore Metropolitan Transport Corporation.

**59. S.Saigeetha and Dr.S.T.Surulivel**(**2017**)<sup>74</sup> This paper discuss with an objective To identify the cash fluctuations of profitability, liquidity position in the BHEL. • To identify the financial performance and distribution of BHEL. • To do the feasibility examination of present system for the purpose of managing working capital turnover ratios in BHEL company. To do the performance examination and the operational efficiency examination of BHEL and also to test the solvency position and liquidity of BHEL. And To do the profitability analyzation and overall financial performance analyzation of BHEL. Which was concluded

**60. Sinha Mintibahen Bijendra & Dr. Deepika Singhvi (2017)**. The Author conducted a study which aimed at analysing profitability position of the Indian pharmaceutical sector of time period for 7 years. They conducted profitability of

A study on financial performance using ratio analysis of bhel, trichy/International Journal of Innovative Research in Management Studies (IJIRMS) Volume 2, Issue 3, April 2017. pp.31-39
 Research Paper on Liquidity & Profitability Analysis of the Pharmaceutical Companies of India. International Journal of Scientific Research and Management (IJSRM)- Vol.5, Issue08, 6717-6724

pharma companies having two main distinguishes facets which is a defensive sector and it involves very high cost of Research & Development, which does not guarantee any assured returns. It was hence concluded that any firm with focus on Research & Development, Operating Profit and Gross Profit matters more, as their efforts Research & Development will generate returns after longer time period. The major emphasis of our study is to analyze the performance of Transportation Company for the period of eight years using various ratios. The profitability and the analysis differs from one company to other from place to place.

61. J.Pavithra, 2K.P.Thooyamani (2017)<sup>76</sup> The first main aim of the study is to evaluate the financial performance of Jeppiaar Cements Private Ltd. Secondary objectives: o To trace the history and profile of the Jeppiaar, Cements Private Ltd. o To analyse the consumption of numerous assets during the period. o To know the overall profitability position of Jeppiaar Cements Pvt Ltd. o To compare the balance sheet and income statements of the company. To find out the trend of financial analysis of past five year using trend analysis. To offer the suggestions to improve the company's performance. The management of the firm must be made more vigilant to maintain or improve the present situation because if there is any further fall in the current ratio. It may be a serious problems for the firm. A strict credit policy should be maintained. Proper inventory control measures should be taken to reduce the unnecessary stock and to maintain appropriate lead time. Company should adopt suitable policies and measures to sell the scrap and by products obtained during the production process so that it will generate additional source of revenues. Adequate sales promotion efforts can be adopted

<sup>&</sup>lt;sup>76</sup> Research paper titled: A study on the analysis of financial performance with reference to Jeppiaar cements pvt ltd

to increase sales. The result of the study cannot be generalized for other organization and we cannot predict future financial position of the company based on the study Change in the book keeping procedures by a firm may often mislead the financial analysis. The changes in the price level is not considered.

- 62. Sunita Ramesh and Dr. Rajnalkar Lax man (2017)<sup>77</sup> this research paper examines the financial position, cost per kilometer and earnings per kilometer for its study period and also based of reviewed papers author as suggested to implement the cost cut down policy strictly and to convert financial crises to breakeven point to avoid the failure it is suggested to make use of the optimum utilization of available resources and to maintain BE. Earning per kilometre and Cost per kilometre will differ from place to place and maintenance of Breakeven point will not be the same private transportation and public transportation revenue and preference may vary, Compensation, reward and recognition play a key role to improve the performance of the organization
- 63. K.P.Venugopala Rao and Farha Ibrahim (2017) <sup>78</sup> This Research aims in conducted financial performance analysis of IDBI bank. The said analysis was done by ratios and for the period from the year 2011-2012 to 2015-2016. They found out that employment of assets and solvency of bank was in tune with the industry average. It also concluded that bank should improve upon its performance in deposits that provide cheaper funds. The review of the literature depicts that IDBI bank performance analysis but out study is on verifying the objective of Bangalore Metropolitan Transportation Corporation in Bangalore Specifically concentrates on analysing the performance in Road Transportation

<sup>&</sup>lt;sup>77</sup> Paper Titled: financial performance evaluation of state road transport corporations – a study with a focus on NEKRTC

<sup>&</sup>lt;sup>78</sup> Financial Performance Analysis of Banks – A Study of IDBI Bank. International Journal of Research in IT and Management (IJRIM)- Vol.7, Issue 1, 64-72

using Various Ratios which is a major requirement for the public in a place like Bangalore

64.Dhanisha Negi and Sunil Kumar Gupta (2017)<sup>79</sup> The objective of Research paper is to study the financial performance analysis of one of the largest division that is Shimla division of Himachal Road Transport Corporation Ltd. (HRTC) by using ratio analysis technique. The obligation value proportion has not achieved the standard of 2:1 during the investigation time frame, due to the higher extents of obligation and correspondingly the shortfall of capital commitments from the taking an interest governments. And the current proportion and fast proportion of the HRTC fluctuating constantly these proportions are not exactly the norm standards. This fluctuating pattern in the concerned proportions mirrors an unacceptable monetary position. The literature review studies the objective of financial performance of Himachal Pradesh but our objective is to analyze the performance analysis in Bangalore Metropolitan Transportation Corporation hence the objectives need to be verified.

65. Dr. Roopa T N, Prof. Chaya Devi H B (2017)<sup>80</sup> This research paper analyze the financial performance of selected companies in terms of liquidity, solvency, activity and profitability positions. The liquidity position of the multitude of three classes is acceptable with current proportion high and money proportion minimal more than industry standard. Dissolvability position of each of the three classifications is acceptable with high incentive for speculation which is appeared in book worth and stores. Dominant part of the IT organizations are not utilizing

<sup>&</sup>lt;sup>79</sup> Financial Performance Review Of "Himachal Road Transport Corporation Ltd" With Special Reference To Shimla Division/Article DOI:10.21474/IJAR01/4410 DOI URL: http://dx.doi.org/10.21474/IJAR01/4410

A Study on Financial Performance of Select IT and ITeS Companies listed in NSE, India: International Journal of Latest Engineering and Management Research (IJLEMR) ISSN: 2455-4847 www.ijlemr.com || Volume 02 - Issue 11 || November 2017 || PP. 38-47

obligation. Obligation value proportion is a lot lesser than industry standard. Movement proportion is fine in indebted individuals and fixed resource, yet its low in capital turnover. Huge organizations have high action proportions. The significant part of cost in IT area is worker cost the explanation is, this is the area chiefly determined by human. Net overall revenue is high on the whole three classes, working benefit made by medium organizations is high, with better normal in enormous organization and medium organizations take lead in making net benefit is both high worth and normal worth. Return for money invested, EPS and profit paid by huge organizations is more as far as high and normal qualities.. The Review of the literature depicts that the study is limited only to 5 years with minimum ratios hence there are certain objectives which has to be verified the major emphasis of our study is on financial performance analysis of a transportation corporation in Bangalore.

66. Kavitha B.D and Seema S.V (2017)<sup>81</sup> The investigation depends on optional information gathered from auxiliary sources and the Study gives a concise Picture about the Karnataka State Road Transport Corporation in Karnataka. From this investigation they found that Karnataka State Road Transport Corporation doing Inter State Services, Long Distance and Night Services, Express and Constant Services City/Suburban Services, Advance Booking and Reservation offices, Luggage and package Transport, Special Services of Jathras/Fairs, Quality Services and It stands fifth among State Transport Unions in the Nation by size. Karnataka can possibly build Public Transport to make the Karnataka economy and Service. The major emphasis of

<sup>&</sup>lt;sup>81</sup> Karnataka State Road Transport Corporation in Karnataka. IOSR Journal of Economics and Finance (IOSR-JEF) 8: 19-21

our study is to analyze the BMTC financial statements hence the objective is to verify as the performance difference from year to year.

67. Vini, M.S and Sreekrishnan, P (2017)<sup>82</sup>. The examination is absolutely hypothetical work which relies upon auxiliary information and it is kept to five monetary years from 2012 to 2016. This investigation tracked down that the timetables of the KSRTC show a positive slant when contrasted with the quantity of transports for the examination time frame. Indeed, even the quantity of transports is expanding; the pace of increment is less when contrasted with various timetables workedThe slight variety in the profit can be the after-effect of expanded working expenses. The discoveries of the investigation are additionally pointing towards that the working of this worry isn't so agreeable. The quantity of timetables and transports isn't associated with its profit limit. What's more, they inferred that the operational effectiveness ought to be upgraded in order to strong the general execution of the Kerala SRTC

68. Maj Syed Mohd Mustafa1 , Dr. Mohd Taqi(2017)<sup>83</sup> The monetary exhibition of a bank can be estimated as the accomplishment of the bank regarding productivity position, administration quality, consumer loyalty and other significant viewpoints. The productivity of a bank means the proficiency with which a bank sends its absolute assets to streamline its net benefits and accordingly fill in as a file to the level of resource use and administrative adequacy. As of now, the Indian financial framework faces various troublesome difficulties. In such a situation, the current examination is an endeavor to quantify

<sup>&</sup>lt;sup>82</sup> An evaluation of the performance of Kerala state road Transport Corporation: A case study. International Journal of Applied Research 3(8), 293-294.

<sup>&</sup>lt;sup>83</sup> A Study on the Financial Performance Evaluation of Punjab National Bank: International Journal of Business and Management Invention ISSN (Online): 2319 – 8028, ISSN (Print): 2319 – 801X www.ijbmi.org

the monetary presentation of the second biggest public area bank of India for example Punjab National Bank. This investigation is altogether founded on optional information and various proportions have been applied to assess the monetary exhibition of the bank alongside relapse examination with the assistance of SPSS 20.0. The examination presumed that the chose bank has performed well on the wellsprings of development rate and monetary productivity yet benefit position has been discovered poor during the investigation time frame. The present study is limited to only one public sector bank of India. Hence, the results are not applied to the entire banking sector

69. Dr.S.Vijayalakshmi and Sowndharya.K(2017) <sup>84</sup> The principle objective of this investigation is to know the present moment and long haul monetary situation of the organization and to realize the benefit level of the organization. The review of the literature depicts that Due to the increase in operating profit the Earnings /share value and dividend pay-out ratio has increased. But our study covers the performance analyses of Road Transportation which is very important for public specifically it concentrates on Bangalore Transportation sector. From the study, it is found that the management must improve the current ratio by lowering the current liabilities. The net profit ratio indicates to leave a margin of reasonable compensation to the owners for providing their capital at risk. The debtor's turnover ratio is not satisfactory. Over the past five years the ratio has declined. The low ratio indicates how slowly money is collected from the debtors. Therefore, BHEL should improve the ratio by collecting deferred dues well in time by satisfying the customer in terms of performance of the sets supplied by

<sup>&</sup>lt;sup>84</sup> A Study on Financial Performance Analysis of Bharti Airtel Limited: International Journal of Business Marketing and Management (IJBMM) Volume 2 Issue 3 March 2017, P.P.27-32 ISSN: 2456-4559 www.ijbmm.com: http://www.ijbmm.com/paper/Mar2017/364253783.pdf

BHEL.. The reflection of the impact inflation is not properly indicated in the numbers. The approach may differ on treating certain items and in the interpretation of the ratios. The time given for the study is very less so the gathering of entire information is not possible.

**70.** Iqbal Thonse Hawaldar, Lokesha, K. Abhaya Kumar, Prakash Pinto, Sheila M. Sison(2017)<sup>85</sup> This paper analyzes the presentation of business retail banks (ordinary and Islamic) in Bahrain and monetary proportions were utilized for the time of 15 years 2001-2015 on boundaries like benefit, liquidity, working effectiveness, capital ampleness and influence. The observational outcomes uncovered that customary retail banks, with the exception of Bahrain advancement bank, have reliable execution consequently on resources and return on value while among the Islamic retail banks, the presentation of Kuwait money house is acceptable regarding productivity.

71. Titis Pusptitaningrum Dewi Kartika(2018)<sup>86</sup> This examination is a quantitative exploration which means to decide the impact of Current proportion, Return on Assets and Sales Growth on Financial Distress. The investigation in this examination utilizes calculated relapse technique. Calculated relapse is one of the measurable examination strategies used to break down the relationship of free factors to the needy variable with ostensible/ordinal information. Theory test results demonstrate that the factors that impact the organization's monetary trouble are the Current proportion and Return on resources.. Theory test results demonstrate that the factors that impact the organization's monetary trouble are Sales development and Return on resources while the factors that don't influence

<sup>&</sup>lt;sup>85</sup> Performance Analysis of Commercial Banks in the Kingdom of Bahrain: International Journal of Economics and Financial Issues ISSN: 2146-4138 available at http: www.econjournals.com

<sup>&</sup>lt;sup>86</sup> Impact Of Financial Ratio On Financial Distress In Indonesia Manufacturing Companies: Issn: 234-5197 Impact Factor: 3.765/DOI: 10.5281/Zenodo.1462026

the organization's monetary misery are Current proportions Besides, future examination can add autonomous variable that are viewed as equipped for foreseeing corporate monetary pain and furthermore utilize other factual investigation strategies that empower all the more precisely anticipate corporate monetary trouble.

72. CS Arvinder Kaur (2018)<sup>87</sup> The Research paper analyse the monetary position and execution of chose Indian IT for a time span of 10 years (2007-08 to 2016-17) organizations and set up a direct connection between liquidity, influence, effectiveness and productivity.. From the investigation it was tracked down that the presentation of TCS is generally acceptable regarding Gross Profit and Net Profit Proportion. This investigation would be useful in upgrading the information on financial backers in regards to the monetary position and development of IT organizations for improving speculations. The major emphasis of our study is to analyse the performance of road Transportation Corporation.

**Pasumarti** (2018)<sup>88</sup> The point of the investigation is to uncover the monetary exhibition of Indian Public Area Undertakings (PSU). To track down the monetary execution, the investigation employments the Altman Z Score Model. The examination fuses different monetary proportions of the organizations, which are under Maharatna and Navrana classifications. The examination assists with finding the organizations, which the monetary exhibitions are "great" or "poor". It shows that these organizations monetary execution are poor. In this examination,

<sup>&</sup>lt;sup>87</sup> Financial Performance Analysis of Selected Indian IT Companies : A Comparative study: Volume 8, Issue IV, APRIL/2018 ISSN NO : 2319-9725 http://ijirs.in/

<sup>&</sup>lt;sup>88</sup> The Study of Financial Performance of Indian Public Sector Undertakings: Global Journal of Finance and Management. ISSN 0975-6477 Volume 10, Number 1 (2018), pp. 21-43/http://www.ripublication.com

we tracked down a significant tracking down that, those organizations having great monetary position yet their additionally having less market capitalization. The review of the literature states that poor execution as per the review, but there is a variation in the performance when it is compared from place to place so there is a requirement to analyze the financial performance in road transportation in Bangalore.

74. Sumi. KV (2018)<sup>89</sup> The main Objective of this paper is To study the impact of profitability on liquidity and solvency of the companies. By identifying the factors influencing the financial performance and. To evaluate the overall financial performance of selected software companies at Techno parkThe danger and return relationship examination shows enormous organizations give exceptional yield to direct danger, medium organizations have okay and low return yet little organizations are more questionable with high danger and moderate return. Through positioning it was tracked down that huge organizations are better entertainers and medium organizations are steady entertainers

**75.** Madhulatha Karri, Sheeba.V.Thomas, Omkar Venkata Chinnam Naidu Murru(2018)<sup>90</sup> This paper gives a monetary outline of BHEL, Visakhapatnam through monetary proportions. BHEL is India's biggest designing and assembling organization of its sort occupied with the plan, designing, fabricate, development, testing, appointing and overhauling of a wide scope of items and administrations

Print: 2347-3940 and ISSN Online: 2347-3959

<sup>&</sup>lt;sup>89</sup>Financial Performance Analysis Of Software Companies With Special Reference To Kerala, Journal of Management (JOM) Volume 5, Issue 3, May – June 2018, pp. 36–44, Article ID: JOM\_05\_03\_006 Available online at http://www.iaeme.com/JOM/issues.asp?JType=JOM&VType=5&IType=3 ISSN

<sup>&</sup>lt;sup>90</sup> Financial Performance of BHEL (Visakhapatnam) using Financial Ratios: International Journal of Engineering Technology Science and Research IJETSR www.ijetsr.com ISSN 2394 – 3386 Volume 5, Issue 3 March 2018

for the canter areas of the economy, viz. Force, Transmission, Industry, Transportation, Renewable Energy, Oil and Gas and Defence. Proportion investigation is one of strategy used to quantify the monetary situation of the organization in the four fundamental perspectives liquidity, dissolvability, turnover and productivity. The fundamental target of this paper is to decipher the monetary presentation of BHEL, The productivity position of L&T is agreeable. So the generally monetary execution of can be founded on the benefits of the organization so we can comprehended that l&t is performing great

76. Rajasekhara Mouly Potluri, Satagopam Padma Tejaswi(2018)<sup>91</sup> The objective of this research paper is to explore the various contests faced by the customer as well transport providers through the selected modes of transportation. Traffic congestion coupled with parking is the major problem in case of roadways while Safety and cleanliness in railways are the first amongst the problems to reckon with. High fares and lack of trained employees are the biggest challenges faced by aviation industry. The research is concentrated only in the states of Andhra Pradesh and Telangana in India with most widely used three modes of transportation viz., Road, Rail and Airways. This research paper is first of its kind which has collected the opinions of both customers as well transport providers on the problems faced. This research submits information about the challenges faced by the customers which there will be an enormous possibility to review their strategies and plans. The success or failure of any service organisation from every part of the globe completely depends on how effectively frontline staff delivers the required services based on the customization. The

<sup>&</sup>lt;sup>91</sup> Research Paper titled: Challenges of Transport Sector in India: A Dyadic Perspective Journal of Asian Finance, Economics and Business Vol 5 No 3 (2018) 95-102 95

limitations of the study is that the research is concentrated only in the states of Andhra Pradesh and Telangana in India

77. J.Pavithra, Dilip Guru Krishnan (2018)<sup>92</sup> The principle Objective of the investigation To distinguish the different resources of BSNL regarding Annual Reports of the BSNL. The research also provides the suggestions for the problem there should be increase in investment of BSNL. So that could be earned more profit. Because, if investment will be high than profit will be earned high. If coordination will have good in Departments, than there will not has to face any problem in proper work. The research depicts the problems of BSNL along with proper suggestions for the betterment of the organization. Our research also provides required solutions for the problems identified in the transportation company. Monetary investigation is an amazing component of deciding monetary qualities and shortcomings of a firm at the same time, the investigation depends on the data accessible in the budget summaries. We has additionally cautious about the effect of value level possibilities, windows-dressing of budget summaries, changes in bookkeeping approaches of BSNL, bookkeeping ideas and shows, and individual decisions and so forth

**78. Dr. Ashvin R. Dave, Ms. Devanshi R. Shah**(**2018**)<sup>93</sup> This exploration paper examines the exhibition of five organizations from the Information Technology Area of India. The organizations were chosen based on market capitalization. The factors viz Sales, Profit After Tax, Long Term Debt To Equity, Interest Coverage, Working Capital, Indebted individuals Turnover and Cash property of the

<sup>&</sup>lt;sup>92</sup> "A Study On Financial Analysis Of Bsnl" ISSN: 1314-3395 (On-Line Version) Url: Http://Www.Ijpam.Eu Special Issue/ International Journal Of Pure And Applied Mathematics <sup>93</sup> Paper Titled: "Financial Performance Analysis of Indian Companies In Information Technology Sector" International Journal of Management Studies ISSN(Print) 2249-0302 ISSN (Online)2231-2528 http://www.researchersworld.com/ijms/

organizations were analysed over a time of 10 years. The investigation uncovered that every one of these organizations have performed well as far as Sales and Profit after Assessment. Likewise every one of the organizations are value driven and don't deal with any issue to meet with interest commitment. Execution on the façade of working capital has additionally been discovered agreeable. It helps the administrators in adjusting to the new business measures, and furthermore for foreseeing the potential effects of more current innovations. IT is utilized to keep security of customer's cash sent or got through online buy. IT has opened the new time of internet business of web based selling and purchasing. Enhancements in IT have took into account extraordinary change in medical care. The reviewed literature verifies the objectives relating to few ratios and five companies but many other objectives are yet to be verified hence this study is proposed and the factors influencing Information Technology vary from place to place since the study is conducted in North India there is a need to verify it in Bengaluru.

79. A.K DAS, Deepmala,R.Jana(2019)<sup>94</sup> This paper consider a class of transportation problems which arises in sample surveys and other areas of statistics. The associated cost matrices of these transportation problems are of special structure. We observe that the optimality of North West corner solution holds for the problem where cost component is replaced by a convex function. We revisit assignment problem and present a weighted version of K "onig-Egerv'ary theorem. Finally we propose weighted Hungarian method to solve transportation problem. At the outset this paper considers some structured transportation problems which arise in sample surveys and other areas of statistics. We show that optimal solution can be obtained by applying the North

Paper Titled: Some aspects on solving transportation problem :https://www.researchgate.net/publication/336246511

West corner rule for these transportation problems. Subsequently we consider a weighted version of K "onigEgerv 'ary theorem and the corresponding version of Hungarian method. We A. K. Das, et al. / Some Aspects on Solving 11 propose the weighted Hungarian method to find the solution of transportation problem. The advantage of the proposed method is to find optimal solution of the transportation problem in a single phase.

80. Dr. Seema Thakur(2019)<sup>95</sup> This paper examines the study with an objective of analysing the financial performance of Dabur India Limited for ten year secondary data which is examined using balance sheet and company income and expenditure information they also covered profitability solvency of the company in this study which is required but The main objective of the present study is to identify the individual ratios which are affecting the profitability of the industry and to categorize the financial ratios into a small number of latent variable to represent a compact view of financial performance for a specified time period. The study is done with help of secondary data obtained from the annual reports of the organization.so our research covers more number of ratios comparing to Dabur India limited which brings us more clarification of the performance analysis

81. Dr.R.Malini, Dr.A.meharaj Banu (2019)<sup>96</sup> "Ratio" refers to relationship between the two numerical variables in quantitative term. It simply means expressing one item in relation to another in numerical term To know the financial position of the Indian Tobacco Corporation Limited; To assess the

<sup>&</sup>lt;sup>95</sup> A Study on Financial Performance Analysis of Dabur India Limited/International Journal of Scientific & Engineering Research Volume 10, Issue 9, September-2019 217 ISSN 2229-5518: https://www.ijser.org/onlineResearchPaperViewer.aspx?A-Study-on-Financial-Performance-Analysis-of-Dabur-India-Limited.pdf

<sup>&</sup>lt;sup>96</sup> A study on financial performance analysis of Indian tobacco corporation limited

overall financial performance; To and out the efficiency of financial operations; To analyse the profitability position; a The information that are mainly derived from profit and loss account and balance sheet and it refers to a treatment of the information contained in the ratio analysis as to afford diagnosis of the profitability and financial soundness of the company. In all the years the debt equity is less, when compared with borrowings. Hence the company is not maintaining its debt position. In all the years the owner's contribution to the total assets was not appropriate and they do not maintain their share in the company's assets, reveals that the financial performance is better. However, it needs to minimize the operating expenses to get high net pro□t. Sales turnover can be improved further by checking expenses that influences the sales. The equity position has to be improved. The major thrust of our research is to assess the effectiveness

**82.** Hasanaj & Beke Kuqi (2019)<sup>97</sup> This Research Paper analyses the reason for this examination is to decide, conjecture and assess the most amazing aspect monetary conditions and friends' presentation later on. The other reason for this examination is to investigate the budget summary and afterward give data for monetary administrators to settle on through choices about their business. The examination is finished utilizing proportions for three monetary years. From the investigation of budget reports, we can determine its monetary condition and how it has worked during the time frames for which the examination is led and what are future patterns in that undertaking. These reports are additionally used to offer data to investors on how sensible are speculations made in the organization since

Paper titled "Analysis of Financial Statements: The Importance of Financial Indicators in Enterprise" ISSN 2576-3024 E-ISSN 2576-3032 https://doi.org/10.30560/hssr.v2n2p17

they are keen on making benefit from ventures made. The paper emphasis on calculation of ratios but our thesis focuses on eight years of financial statements with required ratios.

83. Santosh Kandel (2019) <sup>98</sup> This paper means to break down the exhibition of the business banks utilizing CAMEL system and break down their exhibition on normal premise with chosen tests. The monetary areas have consistently been the financial drive of Nepal holding huge offer market of the country. The components that were chosen for this examination paper may have negligible impact yet different components of the administration may have direct effect on execution of the banks. The review of the paper covers the capital adequacy, assets quality, management quality, earning capability and liquidity position of commercial banks. The research covers most of the objectives but this research has been conducted in Nepal hence it has to be verified in Bengaluru in India

84. Mr. R. Ramachandran, Mr. P. Kandhakumar and Dr. P. Kannadas (2019)<sup>99</sup> The author of this Research paper "Financial Performance Evaluation of Alangulam Primary Agriculture Co-Operative Credit Society the Researcher has discussed the Liquidity, Profitability, Efficiency and Leverage of both the companies to arrive at any conclusion The study of analysis is on financial performance of Primary Agriculture Cooperative Credit Society (PACCS) was under taken on the bases of last 5 years annual report data. The study is mainly carried out based on the secondary data provided in the financial statement. The review indicates that the study is based on the past five year financial statement.

<sup>&</sup>lt;sup>98</sup> Analysis Of Financial Performance Of Commercial Banks Of Nepal Using Camel Approach/Ieee-Sem, Volume 10, Issue 6, June-2019 ISSN 2320-9151

<sup>&</sup>lt;sup>99</sup> Paper Titled "A Study On Financial Performance Analysis Of Alangulam Primary Agriculture Co-Operative Credit Society, Alangulam, Tirunelveli District/ Journal of Interdisciplinary Cycle Research Volume XI, Issue XII, December/2019 ISSN NO: 0022-1945

The major emphasis of our research is on Road Transportation Company using Suitable Ratios to analyse the performance of specific Organisation in Bengaluru, many objectives are yet be verified.

85. Leejiya Jose, Jisha Akkara (2019)<sup>100</sup> This research paper assesses the operational and monetary presentation of KSRTC and To think about the exhibition of different terminals in KSRTC in India, in this Paper an endeavour has been made to quantify the specialized and scale proficiency of the warehouses of Kerala State Road Transport Corporation utilizing DEA. One information and two yield DEA model has been created with armada size as data sources and travellers and assortment as yield. From the investigation Trivandrum City and Trivandrum Central are the terminals which are working productively in consistently and have most extreme level of effectiveness in consistently. The review of the paper covers the data analysis of Kerala Road Transport Corporation but the emphasis of our research is to verify many more objectives in Bangalore Road Transport Corporation hence the study needs to be conducted.

86. Dr.R.Saminathan and Hemalatha.P(2019)<sup>101</sup> The Research study has tossed significant focus Financial proclamation investigation, from the asset report and benefit and misfortune a/c. A goal of the examination incorporates dissecting the benefit, perceiving the frail operational regions and friends' by and large monetary exhibition with appropriate idea for a superior adequacy and to defeat from the powerless zones broke down in the organization. Transport is viewed as the existence line of the economy of the country. Fiscal summary

<sup>&</sup>lt;sup>100</sup> Performance Evaluation of Kerala State Road Transport Corporation/International Journal of Engineering Research & Technology (IJERT) http://www.ijert.org ISSN: 2278-0181 IJERTV8IS060188,: www.ijert.org Vol. 8 Issue 06, June-2019

<sup>&</sup>lt;sup>101</sup> A Study On The Measurement Of Financial Efficiency Of The Transport Sector With Special Reference To BMTC: Volume VIII, Issue II, February/2019/ International Journal of Research Volume VIII, Issue II, February/2019 ISSN NO:2236-6124

investigation is a procedure to examine the monetary record and break down the monetary execution of an association. Which help in dynamic and in monetary estimating and arranging, it helps in correspondence and furthermore helps in coordination and to have better authority over the association. It is of massive utility to investors, financial backers, banks, workers. Furthermore, serves charge review necessities. Consequently budget summary investigation is considered has an instrument to examine the exhibition of BMTC. From the above investigation it is obvious that the association needs to improve its liquidity position so it can improve its credit value. The further examination shows that the association has better dissolvability and profit from speculation which gives an uplifting standpoint of the association.

87. Ashok Panigrahi(2019)<sup>102</sup> The monetary exhibition investigation distinguishes the monetary qualities and shortcomings of the firm by appropriately building up connections between the things of the asset report and benefit and misfortune account. In this paper an endeavor has been made to break down the productivity position of five driving drug organizations of India with the assistance of mean, standard deviation, co-effective of variety, numerous relapse, and examination of change. The outcomes match with the previous investigations and the set up hypothesis of account that the expansion in benefit won't just yield more noteworthy proficiency yet in addition improve monetary execution in future. The examination is bound to five years information just, I. e. from 2011–2012 to 2015-2016, hence, a definite examination covering a long period, which may give marginally various outcomes has not been made. The major emphasis of our study is to analyse the performance of road transportation

<sup>&</sup>lt;sup>102</sup> Analysis of Financial Performance: A Study of Selected Pharmaceutical Companies: Global Management Horizon, Annual Referred Journal 2019, Volume - VIII, Page - 47-56

in Bangalore which is to be verified in Bangalore Metropolitan Transport Corporation.

88. Candraditia Daryantoa, Wiwiek Mardawiyah Daryantob(2019)<sup>103</sup> This examination expects to investigate and assess the monetary medical issue of two drug SOEs; Kimia Farma; Bio Farma; and two privately owned businesses; Kalbe Farma; Darya Varia. The consequences of researching the monetary proportions: return on value (ROE), profit from venture (ROI), money proportion, flow proportion (CR), assortment period (CP), stock turnover (ITO), complete resource turnover (TATO), all out value to complete resource (TETA), are then approved by the announcement to close the monetary ailment of them. The information is gathered from Audited Financial Reports for the time of 2010-2017. The potential benefit created from providing conventional items is promising and it will be useful for an organization to get more openness in homegrown market.. In any case, it was demonstrated that the four organizations upheld the JKN program of creating phenomenal help in the drug business.

89.Eva Putri Priari ,Ani Wulandari(2019)<sup>104</sup> This exploration plans to examine the monetary presentation of PT. Indosat Tbk. Is inspected eateries from the monetary proportion investigation The strategies utilized are the information investigation utilizing unmistakable subjective estimations liquidity proportion, dissolvability, benefit, and movement. The outcomes Showed that the monetary presentation of PT. Indosat Tbk. In view of the general liquidity proportion of the

<sup>&</sup>lt;sup>103</sup> Financial Performance Analysis and Evaluation of Pharmaceutical Companies in Indonesia: International Journal of Innovation, Creativity and Change. www.ijicc.net Volume 6, Issue 3, 2019 <sup>104</sup> Ratio Analysis to Measuring Financial Performance of PT. Indosat Tbk. Listed in IDX(Period 2015-2018)

<sup>(</sup>International Journal of Integrated Education, Engineering and Business: Volume 2 Number 2 September 2019/https://jurnal.narotama.ac.id/index.php/ijieeb/article/view/958/621

organization in a decent condition (fluid). The general dissolvability proportion of the organization is supposed to be resolvable or in great condition to ensure its obligations.. The review of the literature depicts that In view of the proportion of exercises seen from the normal absolute resources turnover of PT. Indosat TBK. For a very long time (year 2015 – year 2018) can in any case be said well since it shows an expansion from one year to another. However, the normal of PT. Indosat is supposed to be less proficient on the grounds that it is beneath the business normal of the monetary proportions. In its movement, the organization is in a position less great. The present circumstance can be fixed by expanding the level of its action particularly at the turnover of resources with the goal that the utilization of resources yearly is more powerful and effective

90. Mrs.K.Bhagyalakshmi, Dr.S.Saraswathi(2019)<sup>105</sup> The motivation behind research is to consider the presentation assessment utilizing DuPont examination in chose car organizations through estimating Return on Common Stockholder's Equity (ROE). The present investigation assesses how well an organization is working and how benefit is procured comparative with deals, The current investigation was broke down utilizing value multiplier, net overall revenue, resource turnover proportion to figure return on value. ROE, ROA, ROCE is the most extensive proportion of benefit of a firm. Connection and relapse examination is done to know if the relationship among the above factors exists and to know the effect of ROA and EM on ROE. Results uncovered that there is a positive relationship among every one of the factors aside from EM and there is importance distinction exists in the monetary execution of chose organizations

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A Study On Financial Performance Evaluation Using Dupont Analysis In Select Automobile Companies: Volume IX, Issue I, JANUARY/2019/International Journal of Management, Technology And Engineering Volume IX, Issue I, JANUARY/2019 ISSN NO: 2249-7455

concerning Return on value and Return on Assets. Asset turnover proportion and value multiplier and broke down that there is importance distinction exists in the monetary execution of chose organizations regarding Return on value and Return on Assets.

91. Dr. D. Padma & Mr K. Prabhakaran (2019)<sup>106</sup> This examination investigated the monetary execution of chose Indian food items organizations from 1991 to 2016. The business greatest mean worth was found in the interest inclusion proportion at 1810.25 with a variety of 99.21, which infers that the business' capacity to respect its obligation instalment was good. Every one of the proportions revealed positive mean worth in the Indian concrete industry during the post reform period. There are nine proportions development rate was found to have negative and most elevated being return on the capital utilized proportion at - 3.27 percent in the Indian food items industry during the time frame under survey.

92. Cahyo Pramono, Teguh Wahyono, Merry Agnes, Uchi Lilla Qadri (2020)<sup>107</sup> The paper investigations monetary execution correlations in retail organizations recorded on the Indonesia Stock Exchange when the coming of web based business. The information utilized is optional information gotten from the authority site of the Indonesia Stock Exchange. The outcomes showed that the presence of web based business pulled in buyers to make buys by means of distant or on the web, however the presence of web based business up to this point actually doesn't hurt the retail organizations that actually remain Maintain

<sup>&</sup>lt;sup>106</sup> Financial Performance Of Selected Indian Food Products Industry During Post-Reform Period: [VOLUME 6 I ISSUE 2 I APRIL—JUNE 2019] E ISSN 2348–1269, PRINT ISSN 2349-5138 <sup>107</sup> Analysis of Financial Performance Comparison before and after the Emergence of E-Commerce in Indonesian Retail Company: International Journal of Research and Review Vol.7; Issue: 1; January 2020 Website: www.ijrrjournal.com / E-ISSN: 2349-9788; P-ISSN: 2454-2237

the traditional method of shopping. This internet business just gives reasonableness that the shopper doesn't trouble and tried to go to the area, yet the customary method of shopping has an assortment of benefits that are not possessed by the way web based business shopping. The review of the literature verifies that the performance analysis is restricted only in Indonesia but our research covers objectives which is yet to be analysed in Bangalore Road Transport Corporation.

93. Endri Endri , Adi Sumarno , Herbin Saragi (2020)<sup>108</sup> This research was conducted to regulate the company's financial performance in the food and beverage sub-sector which was assessed based on financial ratio analysis. The focus of this research is financial performance which can be measured by four types of financial ratio analysis, the results showed that the average company performance in the food and beverage sub-sector was quite good, although it was strongly influenced by the scale and size of the company. Companies in the food and beverage sub-sector are categorized as liquid companies because they are able to pay off all obligation. The review of the literature depicts that the financial performance analysis in food and beverage but the major emphasis of our research is to assess the effectiveness of financial performance in Road Transportation services.

**94. Dr. R. Saminathan, Hemalatha .P (2020)**<sup>109</sup> The reason for this examination is to know the exhibition of public vehicle administration and to dissect the monetary soundness in the presentation of pay and use of BMTC by

<sup>&</sup>lt;sup>108</sup> Analysis of Financial Performance: Evidence from Food and Beverage Companies in Indonesia/ International Journal of Advanced Science and Technology Vol. 29, No. 5, (2020), pp. 4199 - 4208

<sup>&</sup>lt;sup>109</sup> A Study Of Financial Stability In The Performance Of Bmtc, Bengaluru: ISSN: 0971-2143 Vol-31-Issue-18-April-2020/ (UGC Care Journal)

applying basic normal computation technique. Regarding looking at its presentation and effectiveness for a very long time. It analyses the data found inside an organization's benefit and misfortune account. The examination depended on optional information from records, reports and profile of the Bangalore metropolitan vehicle partnership. Straightforward normal technique is a strategy which can be acquired by the normal pace of wages and consumption things in the budget report and can be determined by duplicating the all out of the units basically by the quantity of getting factors. A target of the investigation incorporates dissecting the benefit, examining the monetary strength, perceiving the feeble operational territories and friends' generally monetary exhibition with reasonable idea for a superior sufficiency and to defeat from the frail regions broke down in the organization. The review of the literature shows the comparison of financial statements of three years but our research is for recent eight years which is yet be verified

95. Dr.R.Saminathan and Hemalatha.P (2020)<sup>110</sup> The motivation behind this investigation is to know the exhibition of public vehicle administration and to break down the pay and use of BMTC by applying basic normal computation technique. Regarding looking at its exhibition and productivity for 3years. it looks at the data found inside an organization's benefit and misfortune account. The examination depended on optional information from records, reports and profile of the Bangalore metropolitan vehicle partnership. basic normal strategy is a technique which can be gotten by the normal pace of earnings and consumption things in the budget summary and can be determined by duplicating the complete of the units essentially by the quantity of getting factors. A target of the

Public Transport Service : Financial Analysis Of Income And Expenditure At Bmtc,Bengaluru: ISSN: 2249-6661 (UGC Care Journal) Vol-43, No.-03 (VII) July-September (2020)

examination incorporates breaking down the productivity, perceiving the feeble operational zones and friends' in general monetary presentation with appropriate idea for a superior adequacy and to defeat from the frail zones dissected in the organization. it is seen that there is expansion in pay of BMTC which is the consequence of expansion in transport charges presentation of Volvo transports which supports better help with higher admission. Along these lines if the drivers and staffs are given acceptable preparing office to improve the development BMTC can draw out its presentation productively. The major emphasis of our study is to analyse the performance of eight years which is required to be verified in Bangalore Metropolitan Transport Corporation

96. Dr Sugandha Chhibber(2020)<sup>111</sup> Businesses are giving perhaps the most essential requirements of individuals to keep up supported development for improving norm of life. It has a special situation as a confident industry, from the creation of crude materials to the conveyance of completed items, with significant worth expansion at each phase of cycle. It is a significant commitment to the nation's economy. The current investigation plans to dissect the monetary exhibition of chose materials organizations which has been named as top central members in this fragment based on deals at BSE as on Mar, 2019. This chose is been accomplished for the explanation that this area contributes seven percent to the GDP of India and utilizes in excess of 45 million individuals in 2018-19 and just as trading exceptionally 30% of material for example clothing and knitwear from India. The examination is utilized to know and comprehend whether the organizations has arranged the monetary prerequisite appropriately, to know whether the business having sufficient current resource and own assets to take

A Study On Financial Performance Analysis Of Selected Textile Companies In India: ISSN NO: 2347-3150/Volume IX, Issue VI, JUNE/2020

care of its liabilities, to realize the productivity position of the organizations. The major emphasis of our study is the financial performance analyses of Road Transport Corporation in Bangalore.

97.Rimsha Majeed, Dr. Mohammad Fayaz (2020)<sup>112</sup> This investigation intends to discover the impact of liquidity, dissolvability and the board productivity on monetary execution of BHEL. To accomplish this, the scientist has utilized Ordinary Least Square strategy. To gauge the monetary presentation, return on capital utilized Return on capital employed is the clarified subordinate variable, DuPont Analysis is additionally used to assess the monetary exhibition. It is apparent from OLS relapse results that monetary exhibition of Bharat Heavy Electricals Limited was sensible in early years yet from that point it declined. Liquidity and dissolvability were discovered to be huge factors influencing the monetary exhibition of Bharat Heavy Electricals Limited.

98. Bangaru Pushpalatha (2020) <sup>113</sup> the objective of this research paper is to analyse the financial performance of SBI bank, it is one of the largest commercial Bank. The most popular tool/technique for analysing the Financial Statement of Bank is Ratio Analysis. Ratio analysis enables the management of banks to identify the causes of the changes in their advances, income, deposits, expenditure, profits and profitability over the period of time and thus helps in pinpointing the direction of action required for increasing the deposits, income, advances and reducing the expenditure and for altering the profitability prospects of the banks in future it is found that the results don't seem to be applicable to the entire banking sector The Review of this literature cover the Financial

<sup>&</sup>lt;sup>112</sup> ZENITH International Journal of Multidisciplinary Research \_\_\_\_\_\_ ISSN 2231-5780 Vol.10 (1), January (2020), pp. 1-10 Online available at zenithresearch.org.in

<sup>&</sup>lt;sup>113</sup> Financial Performance Analysis Of Sbi An Emperical Study/JETIR February 2020, Volume 7, Issue 2 www.jetir.org (ISSN-2349-5162)

performance analysis of State Bank of India using suitable ratios but the major emphasis of our research is Road Transportation Company in Bengaluru hence many of the objectives of our study are yet to be verified.

## **Chapter - III**

#### **COMPANY PROFILE**

#### 3.1 BANGALORE METROPOLITAN TRANSPORT CORPORATION

Karnataka, the sixth position among all states and union territories located in south India has a well-developed transportation system. Karnataka has well connected air, railways, and water and road transportations focusing on road transportation the public bus transport in Karnataka is managed by Karnataka State Road Transport Corporation (KSRTC).

KSRTC was started in 1961 with the purpose of providing sufficient, well organized, economic and systematically coordinated road transport service. It functions 5100 schedules using 5400 vehicles covering 1.95 million kilometre on an average of 2.2 million passengers daily. For superior management, KSRTC was divided into three.

Bengaluru Metropolitan Transport Corporation<sup>114</sup> is unique of the three subsidiary of Karnataka State Road Corporation, in the context of city's expansion in the year 1997, Bangalore Transport Service (BTS) was formed. In the Overdue time Bangalore Transport Service became Bengaluru Metropolitan Transport Corporation. The BMTC is the only public bus transport provider for Bengaluru providing services for Bengaluru's urban, sub-urban and rural areas.

BMTC is accomplished to provide quality, safe, well founded, hygiene and worthy travel. The authentication of its achievement lies in accumulative passenger trips every day by a wide range of customer base.

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<sup>114</sup> https://mybmtc.karnataka.gov.in/info-1/History/en

With the lot of modernization everywhere, BMTC has put in efforts in providing its services for passenger comfort, it focuses to tackle and strengthen information systems and enhance process through adaption of dignified technology solution. BMTC increase its ability through infrastructure development, user friendly swapping of facilities, fleet up gradation and supplements apart from its main activities which includes pricing structure root networking outlook and surveillance. BMTC out stretch for and wide, in every nook and corner of the city making public transport eye catching travel option for all

## 3.2 VISION OF BMTC<sup>115</sup>

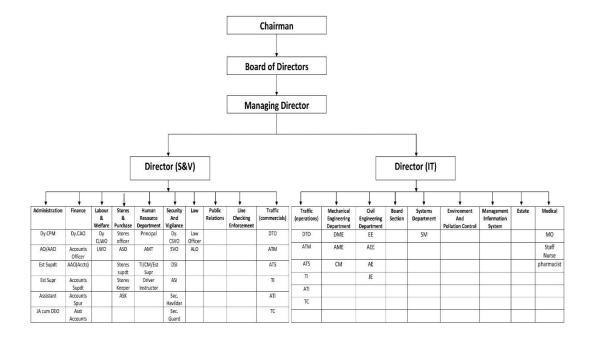
The BMTC is the solitary communal bus conveyance provider for Bengaluru, helping urban, sub-urban and rustic areas. BMTC is dedicated to deliver harmless, consistent, hygienic and reasonable travel. The superiority, authentication of its attainment lies in growing traveller tours everyday by a wide range of customer base. The struggle to streamline its amenities for commuter comfort, BMTC strives to strengthen information systems and improve processes through introduction of intelligent technology solution, make capacity enhancement through groundwork expansion, accessible substitution amenities, fleet up gradation and augmentation, apart from its core activities, which includes fare structuring, route network optimization, planning and monitoring. It spreads distant and comprehensive, in each nook and corner of the city, making public transport an attractive travel choice for everyone. BMTC's headlock in the extent of public transport in Bengaluru is a testimony to its adoption of sound Management, HR, Quality and Environmental policies and strong support from the Government of Karnataka and esteemed passengers.

<sup>115</sup> https://mybmtc.karnataka.gov.in/info-1/Vision+and+Mission/en

## 3.2.1 Mission of BMTC

- 1. (quality, efficient, integrated and safe) services
- 2. Commuter responsive service planning and promotion
- 3. Optimize resources and build capacity
- 4. Adopt environment-friendly and sustainable practices
- 5. Strengthen commuter feedback mechanism
- 6. Modernize and maintain zero breakdown fleet
- 7. Progress operative instrument to display service performance
- 8. Deportment well-being preparation, performance audits and awareness for stakeholders
- 9. Growth in saleable income over monetizing land, buildings & buses
- 10. Increase efficiency in operations and administration
- 11. Ensure inter-agency coordination and multi-modal integration
- 12. Articulate and administer forces measures for sustainability of the service provision
- 13. Appliance of Intellectual Passage System to improve the quality of service
- 14. Prolong travel allowance to the frailer sections of the society
- 15. Action as an mediator for traditional blend and national integration
- 16. Promote research on urban transport

# 3.2 Organization Structure

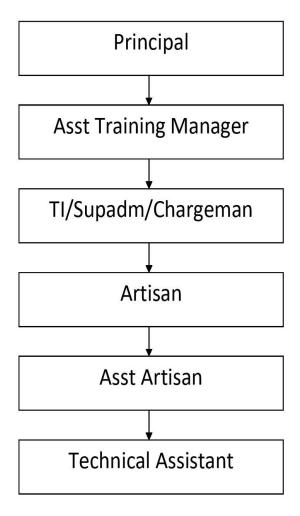


- Dy.CPM- Directory of chief project manager
- AD/AAO- Administrative Officer/ Assistant Administrative Officer
- Est.Supdt- Establishment Superintendent
- Est. Supr- Established Supervisor
- JA cum DEO-Junior Assistant cum Data entry Operator
- Dy.CAO-Chief Account Officer
- Dy. CLWO-Directory of Chief law officer
- LWO- Labour and welfare Officer
- ASO- Assistant Store Office
- Dy. CSVO-Chief security and vigilance officer
- SVO- Security and vigilance officer
- DSI-Divisional Security Inspector
- ASI- Assistant Security Inspector

- ALO- Assistant Law Officer
- DTO- Divisional Traffic Officer
- ATM- Assistant Traffic Manager
- ATS-Assistant Traffic Superintendent
- TI-Traffic Inspector
- ATI-Assistant Traffic Inspector
- TC-Traffic Controller
- DME-Divisional Mechanical Engineer
- AME- Assistant mechanical engineer
- AEE- Assistant Executive Engineer
- EE- Executive engineer
- AE- Assistant engineer

## 3.3 CHART SHOWING ORGANISATION CHART

# Organization Structure of Driving Training Centre



BMTC <sup>116</sup> is the first State Road Transport Undertakings of India to operate airconditioned city buses for urban commuting. Buses functioned by BMTC are an essential and trustworthy means of unrestricted passage available in the city.

**3.4 Diversity of Bus Facilities:** BMTC has stayed provided that extensive range of buses and amenities along with air-conditioned buses, special airport services, and free service from the central bus station to the railway station, deduction in

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<sup>116</sup> www.mybmtc.karnataka.gov.in/

fares, daily and monthly bus passes for regular passengers, specially customized buses during covid-19 pandemic etc.

**Clear buses**: the buses belong to a new batch of ordinaries that have arrived in the city with Euro IV emission norms, the majority of them having inflamed and roughly with a graceful navy colour.

**Suvarna**: silver coloured with a red lining. Capacious Suvarna buses are currently being re-painted into the white and blue colour or converted into Big Circle/Small Circle buses/Metro Feeder services.

**BIG 10**: buses branded in green and bottle green on 12 foremost corridors coming in from surrounding sub-urbs in the city. The service terminates on different points on the radius of the city core, to avoid congesting the city centre. These buses are numbered with prefix 'G'.

**BIG Circle:** These buses work on ring roads involving various parts of the city. Approximate of these buses are run with prefix 'C' and with prefix 'K' (small circle on Inner Ring road).

**Pushpak:** Launched in the late '90s. Single door bus with/without conductors. Motorist deeds as instrumentalist when there is no conductor (Janapriya Vahini). These are chocolate coloured buses with tabs analogous to Suvarna, generally provided on contract to IT companies and schools.

**Vajra:** Mechanised buses with LED terminus panels running on routes serving the IT companies' locations and various residential routes as well. Higher fares - about 1.5 to 3 times that of ordinary ones depending on the route.

**Vayu Vajra:** deluxe buses to the airport operated on 12 routes. Open Wi-Fi admittance is delivered to commuters in these buses.

**Atal Sarige:** Less-cost buses with lone seats laterally the openings and an LED Display. Have a tri-colour outside. 1<sup>st</sup> June 2009, to rejoice their initially centenary, the government of Karnataka and the Bangalore Metropolitan Transport Corporation sold off a pro-poor bus service called the Atal Sarige.

**Other Air Conditioned and Regular Buses:** Operate on routes where luxury buses aren't popular and their fare is 1.5 times higher than ordinary buses. Besides, regular buses are a part of BMTC fleet.

Metro Feeder: Introduced in 2011 after the launch of the 1st line of metro train, these buses have exterior paint similar to the colour of the Metro train and run on 10 routes as feeder to the Metro stations. With the globalization and increase in industries, usage of transportation etc. There is an emerging problem of global warming. Global warming is the increase of earth's average temperature, in order to prevent this, the concept of "Go Green" has come into existence. The concept of Go Green is planned to be adapted by BMTC.

BMTC <sup>117</sup>has propagated to introduce solar-powered buses. Several researchers and developmental activities are in formal talks and discussions among the officials. This concept is in preceding talks with national and international firms. Few Indian and foreign firms are assisting BMTC in planning and implementing the concept of Go-Green in large scale. This implementation is a long run process but will be established soon.

At present diesel- powered electricity is used in buses and the plan of Go-Green is to replace it with solar energy to charge batteries of Short run buses. Solar powered buses are focused in the regions where there are over 8 hours of daily

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 $<sup>^{117}</sup>$  https://timesofindia.indiatimes.com/city/bengaluru/bmtc-will-tap-solar-energy-for-its-buses/articleshow/12959087.cms

power cut, especially in places like Huballi, Darwad, Puttur, Mangalore and Gulbarga

## 3.5 BMTC Bus Fare

Public transportation by the government is been provided with the intention of economic travel to the passengers. The fares of BMTC is observed to be comparatively highest in the country but it assures on several offers, concessions and subsidized travel passes for the daily commuters. It also sees to it that information technology system usage is maximized by facilitating Electronic Ticketing Machines

Monthly Pass<sup>118</sup>

BMTC ordinary monthly pass – this pass enables passenger to travel unlimited trips on all black board that is route No 1 to 199 this pass is not applicable to travel on Pushpak C, D, G, K etc.

BMTC non-Ac Monthly pass- This pass is purchased for month which enables the users to travel unlimited trips on all Non Ac buses including black board , Red board , Pushpak , C, D, G, K , MBS etc.

BMTC AC (VOLVO Monthly pass)-This pass is utilized by Volvo bus commuters and it is also applicable to all other types of buses including non-ac buses. This pass is not applicable to green airport bound – BIA Volvo services, validity of the pass is one calendar month.

BMTC Vayu Vajra Gold Pass: This pass is available with Volvo bus conductor which enables that travellers with unlimited trips on the day it is purchased on all

<sup>118</sup> https://vadakkus.com/bmtc-passes-rates-fares/

variety of buses run by BMTC including all regular Volvo services and all types of non-ac services except VIA Vayu Vajra airport services

Senior Concessional Monthly Commuter Passes: BMTC has additional deductions up to 25% of ticket value in all types of services including Black Board, Red Board, Pushpak, Suvarna, Big-10 and Discounted passes for the old aged Citizens who have completed 65 years.

Student Pass: in order to make the travel economic for the students BMTC Provides various students' concessions based passes which includes:

- Free passes for primary and secondary level students
- Additional deduction of 25% on ticket value for higher secondary level for girl students
- One time Issue of 10 months /12 Months students concessional passes to Plus two, degree, Post-graduation, professional, technical and medical students

Construction Worker's Bus Pass<sup>119</sup>

The Capital city of Karnataka is employing more than 7 lakh employees in garments and construction sector. The transport utility based on the appeal from political circles, has drafted separate scheme with the objective of making public Transportation affordable to these two sector of employees with the help of worker's welfare fund, The Bengaluru Metropolitan Transport Construction (BMTC) has presented bus passes to construction workers at concessional price. This had few obligations with labour union.

<sup>119</sup> https://economictimes.indiatimes.com/news/politics-and-nation/cheap-bus-passes-await-garmentbuilding-workers/articleshow/61749045.cms?from=mdr

The BMTC is anticipating financial assistance from the Department of Women and Child Welfare and labour department. It is also expecting funds that the government has gathered as cess from builders for the welfare of construction workers which was nearly Rupees 5000 crore and the Karnataka building and other Construction Worker's Welfare Board has utilized only 3 percentage of the fund. The discussions and formalities on implementing financial assistance for subsidized bus passes is in the last stages and will be finalized once the Building and Other Construction Worker's Welfare Cess Act , 1996 is amended .

This scheme is experiencing New oppositions from labour union and as per the words of MP Swamy, President of Karnataka State Construction Worker's Central Union, said the cess is charged to provide Social Security for Construction Employee's and not to Subsidize Public Transport He added that construction employees are usually provided with pick and drop facility by their employers and redirecting the funds in large sum is likely to be misused and it is also in opposition to rules. Sequently Swamy suggested the Government to use the fund by providing health care and education assistance to the families of construction workers. Initially there was oppositions done when the Government had decided to give mobile phones and LPG Connections which was called has Populist Schemes. The opposition was because the labour union just wanted the social security and they expected the government to modify and increase pension given senior workers instead of such populist In the meantime Vinay Sreenivasa of BMTC Bus Commuters Forum urged the government to get concessions in bus fares for all sections of the society. This is because focusing only a particular section of society will reduce Welfare

Programs of a particular sector. Instead, the Government should subsidize BMTC and bring down bus fares by half.

### 3.5.1 BMTC Smart Card<sup>120</sup>

BMTC in collaboration with has introduced BMTC Smart Card which offers single wallet for multiple purposes. This avails exciting BMTC Smart Card program offers. BMTC Smart Card is India's 1sr All-In- One Smart Card which can be used in BMTC buses as well as for outside transaction like shop or dine at RuPay enabled outlets across the country.

BMTC Smart Card can be availed from BMTC Issuance counters by just providing minimum details like name, address and mobile number. This is contact less card which processes the transaction in tap and pay mode.

#### 3.5.2 Infrastructure Creation:

Bangalore has also accomplished milestones in Infrastructure up gradation for public transport in recent years. Traffic Transit Management Centre (TTMC's) have been created in several areas as an example of innovation in modern transport terminal which are a mix of transit hub as well as commercial activity. The department of civil engineering undertakes the developments of civil infrastructure for the corporation. This includes construction of bus stations, bus depots, conducting workshops, administrative offices, training centres etc. the chief civil engineer will the head of the department.

<sup>&</sup>lt;sup>120</sup> https://www.axisbank.com/retail/cards/transit-cards-home/transit-cards/bmtc-smart-card/features-benefits

<sup>121</sup> https://mybmtc.karnataka.gov.in/info-1/Departments/en

BMTC<sup>122</sup> has all together 34 bus stations in Bengaluru, Majestic bus station being a major bus station and hub of all the buses connecting different areas which is located at central Bengaluru, opposite to the Bengaluru city railway station it's also known by the name Kempegowda Bus Station (KBS). All the Bus stations of BMTC facilitates with bus bays, platforms seating and lightings, ATMs, park and ride facilities, basic necessity outlets, water recycling plants to reduce waste water runoff, Commissioning of Solar Roof Top etc.

BMTC has total of 45 bus depots and many more are under planning process. The number of bus deports needs to be increased in order to overcome the demand and surge in schedules of buses). Deport should constitute the integral components of entrance / exit, internal bus parking external private vehicle parking, fuelling, cleaning or washing and maintenance of buses, storage and administrative facility. Every depots should also include the facilities like rest rooms, changing rooms, and all the necessary facilities necessary for depot crew (drivers, conductors, officers and workshop staff

### 3.5.3 Milestone Achievements

- For the first time in India, BMTC has introduced 14.5m long multiaxle luxury bus for local passengers, which can accommodate 55% more passengers compared to normal buses
- BMTC is one of the Association of State road transport undertakings which is continuously making profit for more than a decade
- Buses under BMTC are achieving great fuel efficiency and it is one of the youngest fleet when compared to any other transit agencies

<sup>&</sup>lt;sup>122</sup> https://mybmtc.karnataka.gov.in/info-1/Bus+Stations/en

 BMTC is the first to bring Zero emission electric buses in India, It is one of the longest circular route of the countries which is 117 kilometres for a complete round trip

In order to attract and increase the public transport usage, BMTC celebrates 'Bus Day' on every 4<sup>th</sup> of the month.

### 3.5.4 Services of BMTC

Suburban main buses- BMTC with its 6500 fleet connects every suburban areas to nook and corner of Bengaluru

Ring road services- Assistance is provided by BMTC in reducing traffic volumes by providing bus facilities in ring roads which connects roads encircling towns and cities

Night Services- For comforting the travelling the workers to various neighbourhood in late night and early morning duration ,BMTC provides night and early morning services which administers in one hour recurrence.

Metro Bus Services-BMTC introduced two pilot metro bus services from Hebbal to JP Nagar 6<sup>th</sup> stage and from Jeevanbhimanagar to Annapurneshwari Nagar

### 3.6 SWOT ANALYSIS OF BMTC

SWOT analysis is technique used to regulate and understand the strengths weakness, opportunities and threats, swot analysis helps the organizations to determine their position and forecast their future growth. It enables the organizations in planning process and set a standard to be reached in subsequent days

### **Strengths**

 BMTC has a set of well trained and efficiently skilled labourers who assist in reinforcing the infrastructure and needs of transport services

- BMTC furnishes standard quality materials to yield quality output
- The working network of BMTC labour force is lively
- It has a culture to recognize and honour the employees for their upstanding performance in work

#### Weakness

- BMTC sometimes come across disputes and strikes from the workers side.
- There is lack of side drivers who can manage being a driver as well as conductor
- Adapting technology is more a necessity then a luxury this days and it's an
  upstackle for BMTC in this case as whole of labour force are not so dynamic
- Various nationalized schemes by the government has tried to bring in amendments to allow operations of services by private operators.
- Road accidents made by the drivers is also down fall for BMTC which is uncertain and unavoidable sometimes

### **Opportunities**

- Digitalization and computerizing the whole functions for the upgraded services by the entire department
- Setting up new Bus stations and depots at different places
- Increasing services as per increase in demand
- Introducing solar power buses to hold up eco- friendly services
- Evolved better services for the passengers

#### **Threats**

- Increasing prices of fuels and lubricants
- Non adaptability of Modern technology immediately
- Metro services hampers profit level of BMTC

### 3.6.1 Future Plans of BMTC

This enterprise has come up with certain programs which moderately helps in its development along with meeting the targets that comes under urban transport facilities being a part of central procedures. Following are the future plans of BMTC

BMTC has made certain agreements with BDA and other neighbourhood designers to have accessible location for the workers of the company

A frame work has been conversant with a labour force children on the promise of explanatory capability for providing remarkable positions.

Plans are been made on visions documents to come up with comprehensive mobility plan which would enable BMTC to increase their fleet size and operational efficiency enabling them to overcome the loses

Plans are under process to have bus lanes which enables BMTC to provide faster service and circumvent traffic issues

Recommendations<sup>123</sup> are been taken by ABIDE to increase the number of bus and deliberations are made to increase the efficiency of the existing fleet by effective time management and organize schedules to cope up the increasing demand

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<sup>123</sup> http://praja.in/en/book/export/html/1733

The Traffic Engineering Cell of BBMP has initiated to construct 140 bus bays for smooth movement of buses comforting the passenger in pick and drop.

Fleet crew compensation models are been strategized for efficient operation of buses and meet expected arrival timing.

Rationale behind Orange, Blue and Green coloured BMTC<sup>124</sup>

BMTC has transformed its fleet outlook with different colour coding's with the objective of easy identification of buses for a specific regions .the colour coding's used are orange, green and blue where green depicts city's gardens, Orange has spirit of joy and happiness and blue by the sky. This colours have replaced the grey, Yellow, orange and various other colour coding's which were quiet confusing for the passengers. The present colour coding are been implemented to bring in uniformity and recognize the bus which provides services for specific lines.

This idea is been grasped from South Korean bus services which had four colour coding's representing the area coverage. They also had centralized system for easy identification of bus routes, designated bus lanes and redrew roads to complement their sub ways and hence the bus commuters increased by 30 to 40 percent

BMTC has imprinted the Korean strategy of colour coding for fleets. The green lines of buses are providing services connecting central city which consist of ordinary, big trunk and big circle services, Blue line is for air conditioned buses, Vayu Vajra and Vajra buses facilitating airport services and orange for feeder

<sup>&</sup>lt;sup>124</sup>https://www.newindianexpress.com/cities/bengaluru/2016/sep/21/BMTC-wants-to-be-a-friendlier-seoul-1521974.html

services from sub-urban areas and metro stations with this bus identification has become much easier for the commuters .Another intention behind this strategy is to make public transport much more popular. This change in livery to the new colour coding scheme is been done on all fleets when the vehicle goes for annual servicing without incurring any extra cost.

### 3.6.2 BMTC Role in Women Safety and Empowerment <sup>125</sup>

Women Empowerment is an operation that creates power in Women to lead an Independent, happy and respective life in the society. Various governmental schemes and programs are been introduced to contribute towards Women Empowerment which has brought drastic changes in standard of living of Women in present era. As such BMTC too has contributed its maximum in terms of women empowerment programs one of which is planned to drive women drivers. In the rolling out plan to train women drivers in the year 2019, BMTC had enrolled 115 women's to train them in driving heavy passengers and light motor vehicles. This program was been funded under Nirbhaya Fund which laid aside rupees 7.3 crores to train up to 1000 Women. BMTC has taken all the imitativeness and ensured the safety of women during the phase of training. The training totally costed 30 lakhs to train 500 women. This resulted in successful output of women drivers.

In addition, BMTC has concentrated on providing better work environment for women employees at their enterprise .Amid male drivers and conductors who come in direct contact with passenger and women employees have been given gender sensitization training. The male staffs have also received training on

https://www.newindianexpress.com/cities/bengaluru/2019/oct/04/bmtc-rolling-out-plan-to-train-womendrivers-2043009.html

behavioural aspect which gave them awareness on how to speak and behave with women passenger and employees and also well versed themselves I handling women passengers in distress.

Measures are taken for overall safety of women commuters and therefore CCTV installation programs are implemented inside BMTC buses. This includes three CCTV cameras installation in each bus to monitor the commuters and the driver from front and rear. The same measures are been taken at all the bus stations and depots governed under BMTC. This emerged in reduced cases of unsafe journey of women commuters.

BMTC not only organizes program contributing women empowerment but also practices the same by recruiting women candidates in various designations and they manifested the same by appointing Dr. Ekroop Caur has managing Director of BMTC in the year 2017.

## 3.6.3 Traffic Transit Management Centres in Bangalore 126

Bangalore Metropolitan Transport Corporation has been contributory in executing a number of technology assisted initiatives to ease challenges such as traffic congestion, pollution, women safety etc. The TTMC are well furnished and designed with sufficient parking lots, reliable bus services, rest lounges, inter connected city and Intra city services, safe walkway, IPT stands, taxi drop-off facilities, etc. Intelligent Transport System attains to achieve traffic efficiency by reducing traffic difficulties it targets to shrink time of travellers as well as develops their safety and comfort. It is not only confined to traffic congestion

<sup>&</sup>lt;sup>126</sup> https://egov.eletsonline.com/2020/02/bmtc-implementing-international-transit-hub-through-ttmc-c-shikha/

control and information, but also for road safety and efficient infrastructure usage.

#### Advantages of Intelligent Transportation System

- Lessening in number of stops and interruptions at crossings
- Speeds control and improvement
- Travel time enhancement
- Volume management
- Accident management

The Koramanagala Traffic and Transit Management Centre (TTMC)<sup>127</sup> demonstrates all that is incorrect with the design of a TTMC for marketable use. Plugged through its induction in February 2011 as the city's leading TTMC, the eight-floor structure now wears a deserted look. Even though positioned close to the 100 ft. Road in Koramanagala VI Block, the complex catches no takers, with only one company that has come frontward to rent out space. It is easy to see why the TTMC has abortive to fascinate commercial concern. For one , the commercial spaces above the bus bays do not have an exclusive entrance; instead people having to use mutual lifts in the centre of the bay to reach their office.

Secondly, parking would be a difficult. A basement allows parking for a few vehicles and this would not suffice if all eight floors were occupied.

There were strategies to permit parking at the depot behind the TTMC.

However, a depot manager said that this could be done only after the depot itself were shifted elsewhere. "Around 150 buses come here for maintenance, refueling, and halt for the night. So until the depot is shifted elsewhere, the TTMC operations – both commercial operations and as a bus bay- cannot start, "he said.

 $<sup>^{127}\</sup> https://www.thehindu.com/news/cities/bangalore/this-ttmc-has-no-takers/article 2770988.ece$ 

Currently. Buses do not enter the TTMC; instead, the bus bay is used as a twowheeler parking lot. Most buses pass through in front of the bus stop, with only a few passengers alighting at the point. Workers at the depot questioned the need for the TTMC in Koramanagala" Route numbers 171 and 201 are run so frequently that you will find hardly anyone waiting for a bus here," said a depot worker. Moreover, he said, the point of a TTMC was to allow commuters to change buses here. "But very few buses start from the TTMC itself, making the TTMC almost like an expensive bus stop, "he said Shantinagar and Yeshwanthpur TTMCs, however, portray a different table. Both have ample parking spaces (Shantinagar has parking on six floors; while Yeshwanthpur has eight floors) and the approach into the building for the office-goer doesn't involve tackling traffic at the bus bay. Shantinggar has exclusive entrances and parking for the offices, while those at the Yeshwanthpur TTMC have entrances through the vehicle parking building or elevators from the basement. Additionally, high footfalls in the bus stands make it commercially viable; for instance, the retail joint Big Bazaar in the Shanthinagar TTMC, However, problems that dog other TTMCs can see in these structures too.

BMTC has Intelligent Transport Systems (ITS) in place, which has three components:

- (a) Vehicle Tracking Unit: It is the System that allows tracking and controlling of vehicles via on online computer, smart phones, tablet, etc. on a 24/7 basis
- Total Fleet Management System through VTU
- Real time tracking of 6,400 buses

Electronic Ticketing Machine through Passenger Information System and mobile
 app

- The Vehicle Tracking Unit gives alerts on over speeding, stop skipping, route deviation, stopping at non designated location.
- Two-way communication for emergency purposes
- Incident management
  - (b) Electronic Ticketing Machine (ETM): The ticket machines is also known has Ticket Vending Machine that generates paper or electronic tickets or recharges smart cards meant for tickets.
- GPRS-General Packet Radio Services enabled ETM-Electronic Ticketing Machine
- Real time data transfer
- Mobile ticketing.
- Dynamic scheduling by analysing ticketing data
  - (c)Passenger Information System (PIS): A Passenger Information System or Passenger Information Display Systems is a mechanized system for providing users of public transport with information about the nature and state of public transport service through optical, voice or other media.
- The Installation of Passenger Information System will be done at all major bus stations and Kempegowda International Airport.
- The Expected time of Arrival of buses at bus stops / stand in five to 30 minutes
  would be displayed with the help of Passenger Information Systems which is
  expected by the passengers in a bus stop especially during long journey.

 Installation of 399 such PIS displays at 128 localities have been taken up which is under Preliminary stage.

### **3.7 MY BMTC APP**<sup>128</sup>

Initially for the first time BMTC app was launched in 2016 which functioned on GPS fitted on its 6400 odd buses was penetrated with technical problem. Later, The Bengaluru Metropolitan Transport Corporation initiated its mobile app MyBMTC. This app was developed by 15 years old boy Nihar Thakkar. It gives real time information on the utility's buses and operations prior to official launch of My BMTC app, Thakkar has developed his own app to get information on bus operations.BMTC has provided this young boy enabling him to launch this app officially to BMTC.after the app became official, BMTC has occlude his access to the data's. Behind time after 6 months, and after repeated newspaper coverage and on Nihar Thakkar's father's request, Nihar Thakkar is been now provided the access to maintain the official MyBMTC app.

Further updated Beta version of the app was launched by corporation Chairman NS.Nandiesha Reddy and managing director C Shikha at the utility headquarters at Shanthi Nagar

### 3.7.1 Features of My BMTC app

- App contains informations of all the buses based on departure and arrival areas.
- It includes details on estimated time of arrival of buses at various stops
- The app provides information on the nearby stop options
- Commuters have the option to search the buses based on mentioned routes

<sup>128</sup> https://timesofindia.indiatimes.com/city/bengaluru/bmtc-finally-launches-app-with-real-time-info-on-buses/articleshow/72971757.cms

 It facilitates passengers to plan their trips as journey from origin and destination is completely available in My BMTC app

- Commuters can repeatedly search for buses based on the favorite areas marked by them in the app
- Any passenger unfamiliar with the areas can easily search the bus stations,
   connectivity to the destination with the help of this app

The MyBMTC app, enables the citizen of Bangalore to track the city buses in real time and the number of users have now around 65000 on android phones and the number is increasing day by day. BMTC have now come up with iOS version of the app for the iPhone users to enjoy the benefits of local Transit application .This app is available in Apple store and google play store which is also linked to Google Maps which facilitates Traffic based information and gives real time details on what time bus may reach the destination

### **3.7.2** General services Fares<sup>129</sup>

#### BANGALORE METROPOLITAN TRANSPORT CORPORATIONK.H.ROAD , SHANTHINAGAR , BANGALORE Non AC SERVICE FARE REVISED With effect from 15.04.2017 **Revised Fare Revised Fare** Chargeab Chargea **Existi** Existi le le Senio Senio ble stages ng Chil Adu Chil Adu stages (2 ng r (2 kms) **Fare** d lt d lt kms) Citize Citize

<sup>129</sup> https://mybmtc.karnataka.gov.in/page/Services/General+Services/en

				n					n
1	5.00	5.00	3.00	4.00	34	33.00	33.0	17.0	25.00
2	12.00	10.0	5.00	8.00	35	34.00	34.0	17.0	26.00
3	14.00	15.0	8.00	11.00	36	34.00	34.0	17.0	26.00
4	17.00	17.0	9.00	13.00	37	34.00	34.0	17.0	26.00
5	19.00	19.0	10.0	14.00	38	35.00	35.0	18.0	26.00
6	19.00	20.0	10.0	14.00	39	35.00	35.0	18.0	26.00
7	20.00	20.0	10.0	15.00	40	35.00	35.0	18.0	26.00
8	21.00	22.0	11.0	17.00	41	36.00	36.0	18.0	27.00
9	22.00	22.0	11.0	17.00	42	36.00	36.0	18.0	27.00
10	23.00	23.0	12.0	17.00	43	36.00	36.0	18.0	27.00
11	23.00	23.0	12.0	17.00	44	37.00	37.0	19.0	28.00
12	24.00	24.0	12.0	18.00	45	37.00	37.0	19.0	28.00
13	24.00	24.0	12.0	18.00	46	37.00	37.0	19.0	28.00
14	25.00	25.0	13.0	19.00	47	38.00	38.0	19.0	29.00
15	25.00	25.0	13.0	19.00	48	38.00	38.0	19.0	29.00
16	25.00	25.0	13.0	19.00	49	38.00	38.0	19.0	29.00
17	25.00	25.0	13.0	19.00	50	39.00	39.0	20.0	29.00

18	25.00	25.0	13.0	19.00	51	39.00	39.0	20.0	29.00
19	26.00	26.0	13.0	20.00	52	39.00	39.0	20.0	29.00
20	27.00	27.0	14.0	20.00	53	40.00	40.0	20.0	30.00
21	27.00	27.0	14.0	20.00	54	40.00	40.0	20.0	30.00
22	29.00	29.0	15.0	22.00	55	40.00	40.0	20.0	30.00
23	29.00	29.0	15.0	22.00	56	41.00	41.0	21.0	31.00
24	30.00	30.0	15.0	23.00	57	41.00	41.0	21.0	31.00
25	30.00	30.0	15.0	23.00	58	41.00	41.0	21.0	31.00
26	31.00	31.0	16.0	23.00	59	42.00	42.0	21.0	32.00
27	31.00	31.0	16.0	23.00	60	42.00	42.0	21.0	32.00
28	31.00	31.0	16.0	23.00	61	42.00	42.0	21.0	32.00
29	32.00	32.0	16.0	24.00	62	43.00	43.0	22.0	32.00
30	32.00	32.0	16.0	24.00	63	43.00	43.0	22.0	32.00
31	32.00	32.0	16.0	24.00	64	43.00	43.0	22.0	32.00
32	33.00	33.0	17.0	25.00	65	44.00	44.0	22.0	33.00
33	33.00	33.0	17.0	25.00	66	44.00	44.0	22.0	33.00

## 3.7.3 NIGHT SERVICE FARE REVISED With effect from 15.04.2017

Chargeable	Distance in Kms	Existing	REVISED			
stages 2kms			Adult	Child	Senior Citizen	
1	2.0	8.00	8.00	4.00	6.00	
2	4.0	18.00	15.00	8.00	11.00	
3	6.0	21.00	23.00	12.00	17.00	
4	8.0	26.00	26.00	13.00	20.00	
5	10.0	29.00	29.00	15.00	22.00	
6	12.0	29.00	30.00	15.00	23.00	
7	14.0	30.00	30.00	15.00	23.00	
8	16.0	32.00	33.00	17.00	25.00	
9	18.0	34.00	34.00	17.00	26.00	
10	20.0	35.00	35.00	18.00	26.00	
11	22.0	35.00	35.00	18.00	26.00	
12	24.0	36.00	36.00	18.00	27.00	
13	26.0	36.00	36.00	18.00	27.00	
14	28.0	38.00	38.00	19.00	29.00	
15	30.0	38.00	38.00	19.00	29.00	

16	32.0	38.00	38.00	19.00	29.00
17	34.0	38.00	38.00	19.00	29.00
18	36.0	38.00	38.00	19.00	29.00
19	38.0	40.00	40.00	20.00	30.00
20	40.0	41.00	41.00	21.00	31.00
21	42.0	41.00	41.00	21.00	31.00
22	44.0	44.00	44.00	22.00	33.00
23	46.0	44.00	44.00	22.00	33.00
24	48.0	45.00	45.00	23.00	34.00
25	50.0	45.00	45.00	23.00	34.00

As per board Resolution No.1239 dated 3-08-2010, the Corporation transitioned from a two-tier system to a three-tier system by establishing five divisions: North, South, East, and West, as well as the already existing Volvo Division, which began operations on October 21, 2009, as per board Resolution No. 1161 dated 26-08-2009.

B MTC had a three-tier administrative structure, including Depots, Divisions, and the Corporate Office. The three-tier approach allowed Depot Managers to seek advice from jurisdictional Divisional Controllers, while policy choices were made at the corporate level. Furthermore, the Jurisdictional Divisional Controllers were able to monitor, in collaboration with the corporate headquarters.

The Indian Audit and Accounts Department's senior resident audit officer had made an audit inquiry and proposed that the utility of the three-tier system be evaluated, as well as a cost-benefit analysis. As a result, a committee was constituted, chaired by the Director, and comprised of all HODs, to do the cost-benefit analysis. As per the committee decision, CISTUP was requested to conduct a study of the cost benefit analysis.

The results also indicated that the performance of some depots in other divisions appears to be marginal, and that some depots do not appear to have benefited from it, implying that overall efficiency has stayed roughly same.

Following a thorough investigation, CISTUP produced a report indicating that the performance of some depots in one division has improved marginally, while the performance of some depots in another division has deteriorated. The findings also revealed that the performance of some depots in another division had decreased

On July 13, 2016, a meeting convened by the Managing Director and attended by all HODs as well as divisional controllers recommended the establishment of a two –tier system with some modifications

### 3.8 Labour Welfare measures

- 1) Educational credit: under the plan, instructive advance up to Rs.50,000/ is authorized towards instalment of educational expense in regard of workers' youngsters who seek after proficient courses viz., BE, MBBS,BDS,BAMS and so forth
- 2) Grant of money grant for merit understudies: Under the plan, the representative's kids getting 70 and more level of imprints in SSLC, second PUC

just as over 60% imprints in degree last assessments are conceded cash grants going from Rs.2000 to Rs 5000. During the year 1173 understudies were allowed cash grants to the tune of Rs 38, 57,500

- 3) De-dependence program: A 40 slept with de-enslavement treatment focus is set up at KSRTC Hospital, Jayanagar, and Bengaluru. The Corporation spends about Rs 8000 to each dependent worker towards the private/In House treatment.
- 4) Preventive Medicine and Healthy Life Style Clinic: Dispensary office is accommodated the advantage of workers at Shantinagar. Privileged Medical Officers Facility is additionally given at significant transport stands. Essential focuses are given at KBS and Yeshwanthpur transport stands
- 5) Employees Family Welfare Scheme: Under the workers family government assistance plot, the ward of the ailing representative, are qualified for get a pay of Rs 3.00 lakhs. The month to month premium of the plan is Rs 70/ from the worker and Rs. 30/ from the company. Complete 85 workers have lapsed in this period and a measure of 2, 35, and 86,265 is paid to their wards/chosen people under this plan

## 3.8.1 BMTC Employees Provident Fund 130

Each month 3.67 percentage of the employee's salary has Provident Fund deductions. An RTI Investigation has released that Bengaluru Metropolitan Transport Corporation Owes its employees rupees 269.40 crores towards provident fund for the financial year 2018-19. The corporation has to make an

towards-employees-provident-fund-2023961.html

<sup>130</sup> https://www.newindianexpress.com/cities/bengaluru/2019/aug/25/bmtc-owes-rs-269-crore-

equal contribution as that of amount deducted from employee's salaries but this was been delayed due to lack of fund available with Bengaluru Metropolitan Transport Corporation.

The drivers and conductors claim that the Provident Fund deducted from salary has to be submitted every month which they can save and utilize it during their post retirement days or for their children's higher education, house loans etc. The employees also added that they would find it difficult to get the Provident Fund on time at their hard times of getting injured in any accidents, illness or loss of life etc. due to this even though there is financial crisis being faced by BMTC, it has forecasted to take loan from bank or borrow money from state government to set off decisions.

### 3.9 BMTC during COVID period

The Coronavirus diseases 2019(COVID-19) was first reported on 30<sup>th</sup> January 2020 in India which was originated from China. According to Ministry of Statistics, India's growth in fourth quarter of physical year 2020 went down to 3.1%. COVID-19 has impacted a lot on Indian Business, Job market and has caused a remarkable collapse in economic activities.

To cope up the COVID situation<sup>131</sup> The Bangalore Metropolitan Transportation Corporation had issued guidelines for suspension of bus services as a measure to stop the commute of disease and supporting the lockdowns. The service was limitedly provided in-between 7AM to 7PM during lockdowns only for the officials involved in equipping essential services to combat COVID. The restricted service was extended to students attending examinations provided they

 $^{131}\ https://www.karnataka.com/govt/covid-19\text{-}bus\text{-}safety\text{-}bmtc/$ 

-

had required proofs supporting their need. After the lockdown times Bus operations had restarted on high-density routes in Bangalore city's non-containment zones. In-between 7AM to 7PM.

### **3.10 BMTC** to operate buses for essential services <sup>132</sup>

In Bangalore Metropolitan Transportation Corporation had decided to ply 180 special buses with the maximum capacity of twenty personnel's providing essential services. This service can be availed only on producing a valid ID. The police department will be issuing curfew pass for the essential service personnel.

With regards to this, the BMTC listed the following has essential services

- Government employees of Central or State or employees of Public Sector Units like BESCOM, BWSSB,BMTC etc.,
- 2. Government or private doctors, nurses, ward boys, pharmacy employees etc.,
- 3. Security guards
- 4. Bank officials
- 5. Blood donors

Crew Responsibility

- 1. Buses had to stopped only at specific bus stops
- 2. Crew had to inform the depot manager regarding large number of passengers being noticed at any bus stop.
- 3. Buses had to be cleaned, sanitised and disinfected before starting.
- 4. The drivers, conductors and all other bus crew had to compulsorily wear masks, use sanitizers.

 $<sup>^{132}\</sup> https://www.newskarnataka.com/bangalore/bmtc-to-ply-buses-for-essential-services-personnel-from-march-26$ 

5. Crew were allowed on duty only after their body temperature was checked and had normal temperature

### 3.10.1 Precautions to be taken by passengers boarding BMTC

- Face mask and sanitization were made compulsory for all the passengers boarding BMTC buses.
- 2. Passengers had to enter through rear door and exit through the front door.
- 3. Queue system was made compulsory for the passengers waiting for bus.
- 4. Passengers had to maintain social distancing when boarding and deboarding bus.
- 5. Travel by standing was avoided and passengers were advised to wait for next bus in case all the seats were occupied
- 6. Passengers with COVID symptoms were not allowed
- 7. Children below 10 Years of age, pregnant women and senior citizens were not allowed to travel.

The BMTC had stepped up for city bus operation in a systemized manner after the closure for nationwide lockdown was announced. The BMTC had done numerous preparations to function post lockdown. As per the precautionary measures the BMTC staff had to compulsorily undergo health check-up during the time of reporting back to duty. This condition was to potentially control infections and quarantined measures.

Post COVID, the preference of the majority people shifted from public transport to private vehicles with the fear of corona virus being infected with the use of public transport. The increasing shift over private vehicles as witnessed in increased traffic problems and pollution. Though there is a shift, there were

passengers opting for BMTC and BMTC had to follow certain protocols in their trips.

BMTC prior to lockdown with a fleet of 6161 buses had a daily ridership of 36, 00,000. Post COVID-19 there were restrictions on these numbers and only thirty passengers were allowed per bus at a time as a social distancing norm, due to this the capital city of Karnataka required at least 7000 additional buses than the prior data. Immediate purchase of these many buses was not an easy task and hence hiring the same would be an easy and immediate solution. Ultimately as per the words of managing director C.Shikha, BMTC had planned to purchase 2143 buses and lease 390 buses, the ridership at that time were in and around six lakh as the schools remained closed, the labourers had returned to their natives and many of the techies have an option of work from home.

### 3.10.2 COVID effect on bus fare <sup>133</sup>

Post COVID, The Bangalore Metropolitan Transportation Corporation has increased the bus fares by 5-18% by introducing flat-fare system with the tickets rate being multiples of rupees five when compared to fares before COVID-19. For example - eight kilometres bus fare which was rupees seventeen had been increased to rupees twenty, similarly fare of rupees twenty two for sixteen kilometres had raised to rupees twenty five. Prior to COVID-19 BMTC had an approximate revenue of Rupees five Crore every day. In the gap of nearly two months where services were stopped due to lockdown, BMTC has incurred immense loss of nearly rupees three hundred crores. Two weeks after BMTC restarted the service and in order to overcome the losses incurred, the corporation decided to hike the fares. BMTC accounted that, this decision of new flat fare

<sup>&</sup>lt;sup>133</sup> https://thefederal.com/states/south/karnataka/lockdown-losses-bengaluru-commuters-to-pay-more-for-bus-rides/

system would reduce the contact between people on buses and maintaining social distance would be feasible.

The hike in fares has disappointed the passengers and various commuters and civic groups have urged the government to reduce the fares complaining that the public transport has become unaffordable and costlier then the private mode of transportation. The Bus Prayanikara Vedike, a forum for bus travellers also appealed Karnataka Government to immediately make the service charges affordable for the commuters.

## 3.10.3 BMTC 'Only Pass' Policy 134

After BMTC resumed bus services for the first time after lockdown, it came up with the policy of 'Only Pass'. This decision was taken with the hope and intention of reducing cash exchange which would stop the spread of novel coronavirus through currency exchange if any, under this policy the corporation issued daily, weekly and monthly passes instead of journey tickets to travel. The intention behind this policy also included to reduce the burden of repeated transactions daily. This policy instead of benefiting the passengers and BMTC, faced lot of critics as majority of the commuters belong to labour class and only pass policy was not convenient for them and only limited passes were provided on regular basis.in addition to this another drawback was if a commuter had to travel shortest distance say like half a kilometre, he or she had to buy pass which costed rupees seventy whereas as per ticketing system it would cost only rupees five This hampered the revenue for BMTC because commuters started reducing due to this problematic policy.

<sup>134</sup> https://www.thenewsminute.com/article/bengaluru-s-bmtc-rethink-only-pass-policy-125013

BMTC MD C. Shikha defended the policy allowing only pass users to travel propagating COVID-19 related precautions but due to several request for revoke of decision, the corporation started examining the data to rethink on the decision taken in framing policy. Due to continuous outrage faced by public, BMTC decided to restart ticketing system but tickets were sold stage wise. Bangalore Metropolitan Transportation Corporation comprehensively provides effectual services with wide range of variety buses and numerous schemes covering Bangalore Urban and Bangalore Rural areas making the service affordable to all the commuters irrespective of making profit out of the service rendered. It also embraces the change in passengers requirements, technology up gradation and makes relevant changes as for as possible to satisfy the users of BMTC. BMTC has always provided interrupted services and benefits all its stake holders that is not only the commuters but also its staff and government.

### Chapter -4

#### DATA ANALYSIS AND INTERPRETATION

#### 4.0 INTRODUCTION

This chapter analyses the secondary data of BMTC. The data is sourced from the audited financial statements of the company. The researcher understood that finance is the spinal cord of any Industry hence great care is taken to analyse the financial performance of the company. The financial performance of Limited is studied using various tools such as percentage analysis, ratio analysis and statistical tools such as Pearson's coefficient of correlation and regression. The total income, expenditure, operating income, operating expenses, Fixed assets, profit before tax, profit after tax, current assets, excise duty, Secured loans and Earning per share (EPS) are some of the crucial variables to ascertain the financial performance of Limited. The following percentage analysis of various elements are established below for a period of 8 years from 2011 – 2012 to 2018–2019.

#### 4.1 INTRODUCTION

An analysis of financial statement with the help of ratio may be termed as ratio analyses. It implies the process of computing, determining and presenting the relationship of items on group of items of financial statements, it also involves the comparison and interpretation of these ratios and uses of them for future projections.

### 4.1.a Meaning of Accounting Ratios

A ratio is a mathematical relationship between two related items expressed in quantitative from when this definition of ratio is explained with reference to the items shows in financial statements, then it is called 'accounting ratio'. Hence, an accounting ratio is defined as quantitative relationship between two or more items of the financial statements connected with each other

#### 4.1.b Importance of Ratios

- 1. Managerial uses of Ratio analysis
- a. Helps in decision making
- b. Helps in financial forecasting and planning
- c. Helps in communication
- d. Helps in co-ordination and have a better control and also for other uses.
- 2. Utility to shareholders and investors
- 3. Utility to creditors
- 4. Utility to employees
- 5. Utility to the government
- 6. Tax Audit Requirements

### 4.1.c Nature of Ratio Analysis

Ratio analysis is a technique of analysis and interpretation of financial statements, which help in making decisions.

- selection of relevant data from the financial statements depending upon the objective of the analysis
- 2. calculation of appropriate ratios from the data
- 3. Comparison of the calculated ratios with the ratios of the same firm in the past or the ratios development from projected financial statement or the ratios of some other firm or the comparison with the ratios of the industry to which the firm belongs
- 4. Interpretation of the ratios.

### 4.1.d Limitation of Ratio Analysis

- 1. When the ratios of two concerns are being compared it should be remembered that different concerns may follow different accounting policies.
- 2. Reliability of Ratios depends upon the correctness of data
- 3. An individual ratio may itself be meaningless
- 4. Accounting ratios and terms used to calculated such ratios have no standard & precise definition as yet

### 4.1.e. Classification of Ratios

To know the financial position of the firm for different purpose, different parties are introduced in various ratios. There are many ratios which can be calculated from the information given in the financial statements. The various classifications of ratios are shown in the following chart

# 4.1.eClassification of Ratios

Liquidity Ratio	Long Tern Solvency Ratios	Activity Ratios	Profitability Ratios
Current Ratio	Debt Equity	Stock Turnover	Gross Profit
Carrent natio	Ratio	Ratio	Ratio
Quick Ratio	Debt to Total	Debtors Turnover	Net Profit
Quien nacio	Capitalization	ratio	Ratio
Absolute	Interest	Fixed assets	Operating
Liquidity Ratio	Coverage Ratio	Turnover Ratio	Ratio
. ,	Capital Gearing	Total Assets	Expenses
	Ratio	Turnover Ratio	Ratio
		Working capital	Return on
		Turnover Ratio	Investment
		Payable Turnover	Return on
		Ratio	Capital
		Capital Employed	Return on
		Turnover ratio	Equity
		<b>+</b>	capital
		Debt Equity ratio	Return on
			Total Capital
		Creditors	Earnings Per
		Turnover Ratio	share
		Stock Turnover	Price-Equity
		Ratio	Ratio

#### **Current Ratio**

The current Ratio focuses on financial backers and investigators how an organization can expand the current resources on its asset report to fulfil its present obligation and different payables. It is regarded as a test of liquidity for a company

Table No 4.1.1

Current Ratio					
Year	Current Ratio	Increase/Decrease			
2012-13	0.67	100			
2013-14	0.39	57.48			
2014-15	0.50	75.05			
2015-16	0.71	106.50			
2016-17	0.51	75.97			
2017-18	0.56	82.75			
2018-19	0.38	57.04			
2019-20	0.28	42.06			

Source: Data Collected from Annual Reports and Accounts from

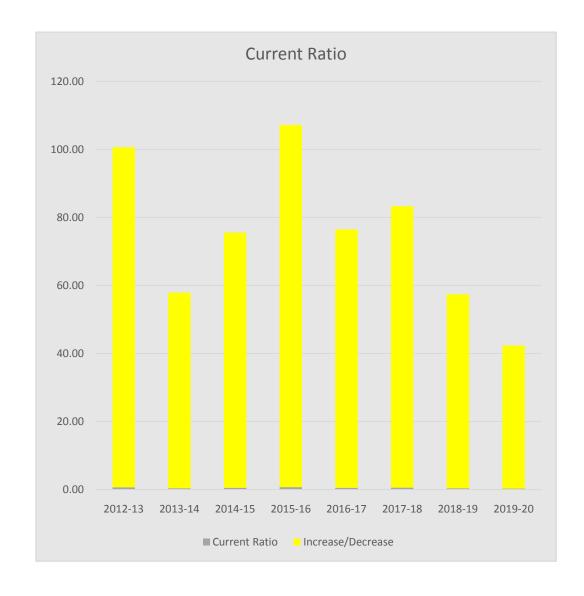
### 2012-2013 to 2019-2020

Table No.4.1.1 and Chart 4.1.1 shows the Current ratio of Bangalore Metropolitan Transport Corporation. Analysis of Current Ratio during study period shows the following outcome: The current ratio of BMTC in the year 2012-13 shows 67 percent and declined to 38 percent in the year 2013-14 and the current ratio of BMTC was highest in the year 2015-16, the value of the ratio in this year was 71.44 percent in which the current assets were to the extent of

32635.79 supported BMTC .and further declined to 50 percent and The lowest value of the ratio was in the year 2019-20 i.e. - 28.21 percent. From the year 2012-13 the current ratio of is fluctuating comparing year to year and from 2017-18 onwards ratio is declining trend. In the year 2019-20 there is a drastic decline in the current Ratio comparing to previous years in BMTC. The average value of the Current ratio of BMTC is -49 percent. The reduction in the current assets in BMTC is due to increase in the current liability. A decline in this ratio can be attributable to an increase in short-term debt and the decrease in current assets or in the combination of both and change in the availability of the cash and fluctuations in the current assets and current liabilities will create the variations in the working capital of the company. During the whole study period the current ratios is not been represented in negative trend. Hence it is supportive to BMTC but not satisfactory to the extent .This examination supports Investors and creditors in understanding the liquidity of a company and how a company will be able to pay off its current liabilities, which can be expressed in terms of current assets and current liabilities. It can sell any capital assets that are not generating a return to the business and re-amortization of loan can be done to improve the current ratio in the organization .Thus it helps us to measure the financial performance of the organization and to take right decisions by the investors of the company.

**Chart No: 4.1.1** 

### Current Ratio in BMTC from 2012-2013 to 2019 to 2020



Quick Ratio

The quick Ratio measures a company's capacity to pay its current liabilities without needing to sell its inventory or obtain additional financing. The higher the ratio result, the better a company's liquidity and financial health; the lower the ratio, the more likely the company will struggle with paying debts

Table No: 4.1.2

Quick Ratio in BMTC from 2012-2013 to 2019 to 2020

QUICK RATIO				
Year	Quick Ratio	Increase/Decrease		
2012-13	0.56	100		
2013-14	0.321	57.63		
2014-15	0.449	80.61		
2015-16	0.646	115.98		
2016-17	0.46	82.59		
2017-18	0.505	90.66		
2018-19	0.346	62.12		
2019-20	0.251	45.06		

Source: Data Collected from Annual Reports and Accounts from

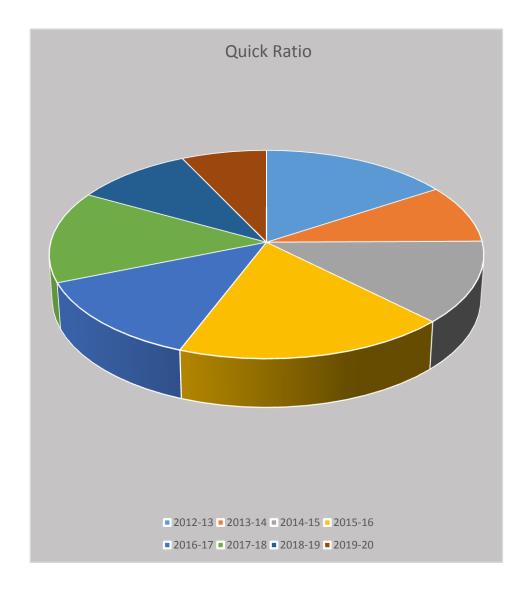
2012-2013 to 2019-2020

From The Table 4.1.2 and Chart 4.1.2 it is noted that in the year 2012 – 2013 the quick ratio is 0.557 further in the year 2014 to 2015 the ratio is been declined again it has increased by 0.449 there is a fluctuation in the quick ratio from year

to year but current liabilities are in excess comparing to current assets in the quick ratio there is a continuous decline in the ratios from the year 2017 - 18 and till the year 2020. The highest ratio is in the year 2015 – 2016. Which means more assets can be quickly converted into cash if necessary usually if a company has a quick ratio higher than 1, this means that it owns more quick assets than current liabilities. In Bangalore Metropolitan Transportation Corporation the Quick ratio is not satisfactory during the study period and current liability is in excess comparing to current assets in all the year in the study period. The lowest quick ratio in the study period is during the year 2019 – 2020 which shows 0.251. The current liabilities exceed current assets, it also impacts the financial analysis of a company poorly which indicates that the company is facing liquidity problems and is short of cash for its day-to-day activities, which affected the growth of all the industrial performance also lead to the decline in the performance of the BMTC thus it can be concluded that the quick ratios is not satisfactory overall has it is not more than 1 in the study period. The higher the ratio results the better a company's liquidity and financial health; the lower the ratio, the more likely the company will struggle with paying debts. A quick ratio of one -to- one or higher indicates that a company can meet its current obligations without selling fixed assets or inventory. Hence Bangalore Metropolitan Transportation Corporation have to concentrate on improving the Inventory turnover which lead to faster conversion of inventory into debtors and cash, the quick assets would rise resulting in the quick ratio and also they can concentrate on the collection period which will directly impact on the quick ratio.

**Chart No: 4.1.2** 

## Quick Ratio in BMTC from 2012-2013 to 2019 to 2020 $\,$



#### Absolute Ratio:

Absolute Ratio measures the total liquidity available to the company. This ratio only considers marketable securities and cash available to the company. It considers marketable securities and cash available to the company. It only tests short-term liquidity in terms of cash marketable securities and current investment. ADXZ

**Table No: 4.1.3** 

## Absolute Ratio in BMTC from 2012-2013 to 2019 to 2020

Absolute Ratio		
Year	Absolute Liquid ratio	Increase/Decrease
2012-13	0.12	100
2013-14	1.08	887.41
2014-15	0.15	124.91
2015-16	0.31	251.61
2016-17	0.16	128.79
2017-18	0.21	174.33
2018-19	0.14	113.89
2019-20	0.10	81.30

Source: Data collected from Annual Reports and Accounts from

2012-13 to 2019-2020

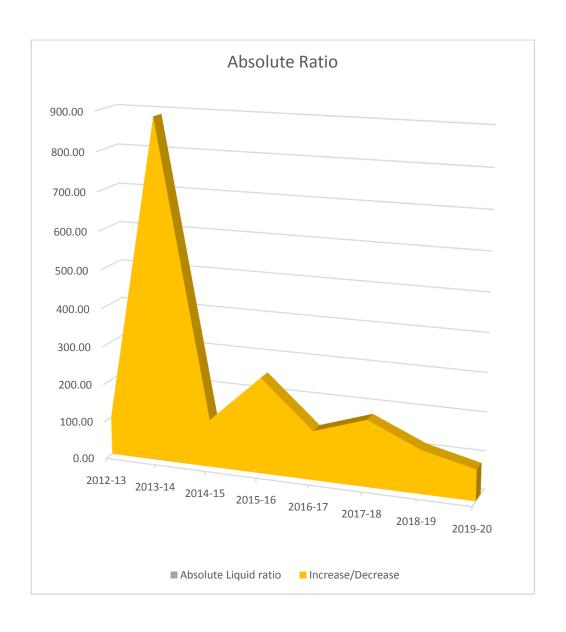
From the above Table 4.1.3 and the chart no 4.1.3 depicts the absolute ratio of BMTC and the fluctuation of the ratios during the study period

In the year 2012-2013 the cash and bank balance was less comparing to Current liability which resulted to 0.122 of the ratio which is gradually decreased in the year 2013 t 2014 and further increased in the year 2014 -2015 which resulted to 0.152 .an upward trend is been observed even in the year 2015- 2020 . the highest absolute ratio during the period is been observed in the year 2013-2014 , its cash and bank balance was 43418.97 and its current liability shows 40037.4 and the absolute ratio which is around 1.084 there was a good cash and bank balance which was maintained by BMTC . The acceptable norm for this ratio is 50% or 0.5:1 or 1:2 Re.1 worth absolute ratio during this year is satisfactory to the organization but further it could not reach to this position in the study period.

The lowest ratio is been recognized as 0.099,in which the cash and bank balance was 14325.55 and its current liability was144190.6 if the ratio is comparatively less than one, it represents the company's day-to-day cash management in a very poor light in BMTC which is not satisfactory position to the organization. During the year 2017-18 the cash and bank balance was 15854.67 and its liquidity amounts to 74420.12 .Hence the overall position is satisfactory till the year 2018-2019 but the fluctuation is comparatively high in the year 2020 to overcome this position companies can increase their liquidity position in a few different ways

**Chart No: 4.1.3** 

## Current Ratio in BMTC from 2012-2013 to 2019 to 2020



#### Debtors Turnover ratio

The debtor's turnover ratio measures the efficiency with which a company collects on its receivables or the credit it extends to customers. It is also called receivables turnover ratio

#### Debtors Turnover Ratio in BMTC from 2012-2013 to 2019 to 2020

**Table No: 4.1.4** 

Debtors turnover ratio		
Year	Debtors turnover ratio	Increase/Decrease
2012-13	61.91	100
2013-14	77.14	124.61
2014-15	47.65	76.97
2015-16	80.10	129.39
2016-17	59.66	96.37
2017-18	26.76	43.23
2018-19	34.13	55.13
2019-20	37.49	60.57

Source: Data collected from Annual Reports and Accounts from

2012-13 to 2019-2020

The above table 4.1.4 and chart 4.1.4 shows the data related to debtors turnover ratio which is important to measure the efficiency of the company during the

study period it was observed that in the year 2012-2013 the net sales was 61.905 which as 151600.16 net sales and 2448.91 of average trade debtors.

During the period 2013-2014 the debtors turnover ratio is been showing an increasing trend comparing to 2012-2013 which indicates a good sign of accounts receivable further it was reduced to 47.649 from 77.141 debtors turnover ratio .

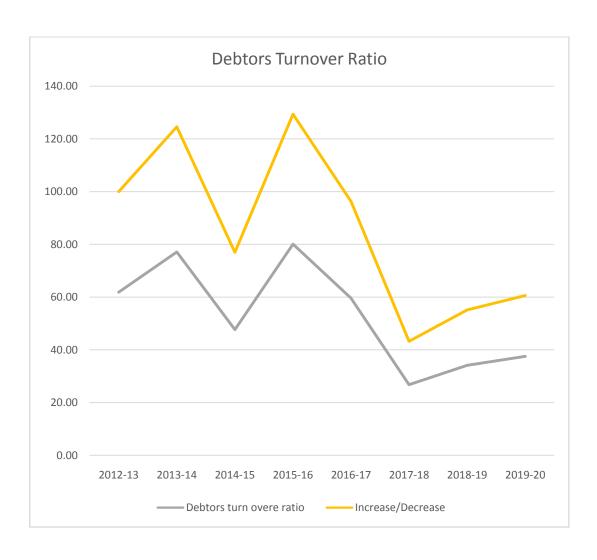
The highest debtors turnover ratio during the study period was in the year 2015-2016 the net sales was 191802.62 and the average trade debtors was 2394.49 and its debtors turnover ratio sounded towards upward i.e., 80.101 which indicates the faster business in collecting its receivables which operates on a cash basis.

And the lowest debtors turnover ratio during the study period was in the year 2016-2017 as it shows 26.761 which means a company is seeing more delinquent clients and further it may be treated has doubtful accounts which affects the performance of the organization

From the year 2016 -17 to 2019-2020 it is in the declining state during the study period hence they concentrate on regular follow of the receivables and building strong client relationship which helps them to overcome from the decline of debtors turnover ratio.

**Chart No: 4.1.4** 

## Debtors Turnover Ratio in BMTC from 2012-2013 to 2019 to 2020



## **Working Capital Turnover Ratio**

Working capital turnover helps in measuring the effectiveness of a business in generating the sales of every rupee of working capital put to use. A higher working capital turnover ratio is better, and indicates that a company is able to generate a larger amount of sakes

Table No: 4.1.5

Working Capital Turnover Ratio in BMTC from 2012-2013 to 2019 to 2020

working capital turnover ratio		
Year	working capital turnover	Increase/Decrease
2012-13	-17.18	100
2013-14	-7.18	41.78
2014-15	-8.18	47.61
2015-16	-14.71	85.62
2016-17	-6.18	35.99
2017-18	-5.33	31.03
2018-19	-2.96	17.25
2019-20	-1.75	10.16

Source: Data collected from Annual Reports and Accounts from

2012-13 to 2019-2020

The Working capital Ratio is been calculated in the above Table 4.1.5 and chart 4.1.5 to analyse the calculated data in Bangalore Metropolitan Transport

Corporation. Using Cost of sales and average working capital from the annual reports during the study period

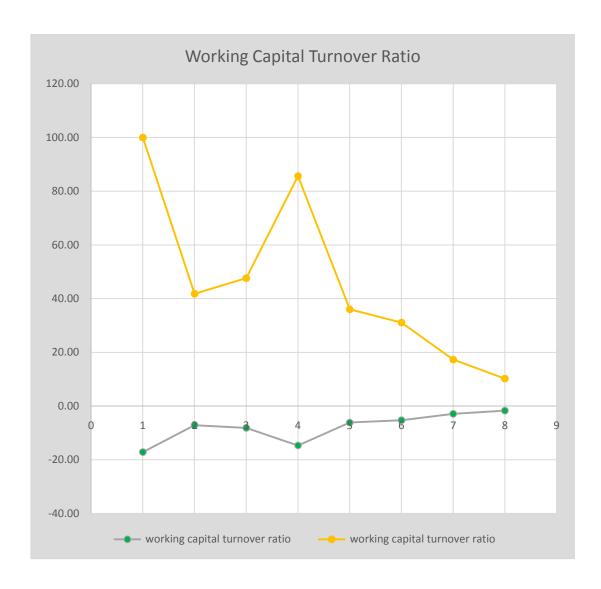
Since the current liabilities are greater than current assets. Negative working capital can come about in cases where a large cash payment decreases current assets or a large amount of credit is extended in the form of accounts payable

The Negative working capital turnover ratio in the year 2012-2013 which shows - 17.178 negative, its cost of sales was 151600.16 and its average working capital was -8825.24 which resulted in negative performance in working capital. During the study period 2012 to 2020 there is no positive working capital which should maintained in the organization. In the year 2015-2016 its working capital turnover ratio showed to – 14.706. In which the cost of sales is 191802.62 and average working capital is-13041.6.

It can concluded that in Bangalore Metropolitan Transport Corporation the working capital turnover ratio is very poor. It is suggested to manage and improve its working capital by examining interest payments of the BMTC and managing inventory. Regular monitoring of net working capital ratio is required, managing expenses better to improve cash flow. Efforts should be increased to maintain the current assets comparing to current liabilities

**Chart No: 4.1.5** 

# Working Capital Turnover Ratio in BMTC from 2012-2013 to 2019 to 2020



**Debt Equity Ratio** 

The Debt Equity Ratio relates a company's total liabilities to its shareholder equity and can be used to evaluate the leverages a company is using .A good debt to equity ratio is around 1 to 1.5 and the ideal debt to equity ratio will vary depending on the industry

Debt Equity Ratio in BMTC from 2012-2013 to 2019 to 2020

**Table No: 4.1.6** 

Debt equity ratio		
Year	Debt equity ratio	Increase/Decrease
2012-13	0.48	100
2013-14	0.64	134.77
2014-15	0.51	106.27
2015-16	0.44	91.56
2016-17	0.31	66.09
2017-18	0.61	128.42
2018-19	0.39	82.27
2019-20	0.33	69.35

Source: Data collected from Annual Reports and Accounts from

2012-13 to 2019-2020

Debt Equity Ratio is calculated from the above Table 4.1.6 and the Chart 4.1.6 The Debt equity Ratio is been increased in the year 2013-2014 up to 0.641 using Long term debts amounts to Rs. 66914.22 and shareholder fund amounts to Rs. 104341.49which indicates a business uses debt to finance its growth. Companies that invest large amounts of money in assets and operations often have a higher debt to equity ratio.

During the year 2014-15 it was sloping down with the ratio of 0.505 which was reduced by 0.135 difference comparing to the previous year and further it was in the declining continuous up to 2017.

The debt equity ratio in the year 2017-2018 was increased comparing to the previous year by 0.297 compared to the previous year. a good debt equity ratio should be from 1 to 1.5 as high debt to equity ratio indicates a business uses debt to finance its growth.

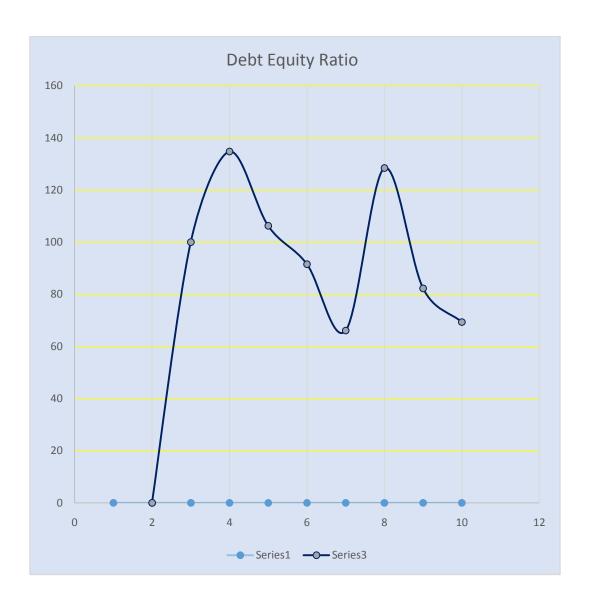
The lowest debt equity ratio was in the year 2016-17 with 47280.99 long term debts and 150344.77 shareholders fund the ratio was very poor as it went down to 0.314 which indicates lower amount of financing by debt through lenders, when compared from funding through equity shareholders

During the year 2017-18 BMTC as improved its D/E ratio from 0.314 to 0.611 which proves its positive indication with long term debts 90539.71 and shareholder fund 148159.

It can be concluded that the debt equity ratio during the study period was fluctuating from 2012 to 2020 which cannot be considered as satisfactory for the Bangalore Metropolitan Transportation Corporation.

**Table No: 4.1.6** 

# Debt Equity Ratio in BMTC from 2012-2013 to 2019 to 2020



## **Funded Debt to Total Capitalization**

This ratio is a solvency measure that shows the proportion of debt a company uses to finance its assets, relative to the amount of equity used for the same purpose. a higher ratio result means that a company is more highly leveraged which carries a higher risk of insolvency.

**Table No: 4.1.7** 

# Funded debt to Total Capitalization Ratio in BMTC from 2012-2013 to 2019 to 2020

Funded debt to Total Capitalization Ratio		
	Funded debt to capital	
Year	section ratio	Increase/Decrease
2012-13	32.23	100
2013-14	38.93	120.78
2014-15	33.58	104.18
2015-16	30.35	94.14
2016-17	22.30	69.19
2017-18	36.12	112.04
2018-19	27.11	84.09
2019-20	24.18	75.03

Source: Data collected from Annual Reports and Accounts from

2012-13 to 2019-2020

The funded Debt to Total Capitalization ratio is calculated using the funded debt and the total capitalization from the above Table 4.1.7 and Chart 4.1.7

It helps to measure the financial leverage of a company by comparing its total liabilities to total capital. The highest funded debt to capital ratio in during the year 2013-14 showing the ratio of 38.932 with 66914.22 funded debt and 171872.39 total capitalization which indicates risk of the company because higher the debt to capital ratio the more the company is funded by debt than equity, which means a higher liability to repay the debt and a greater risk of forfeiture on the loan if the debt cannot be paid timely

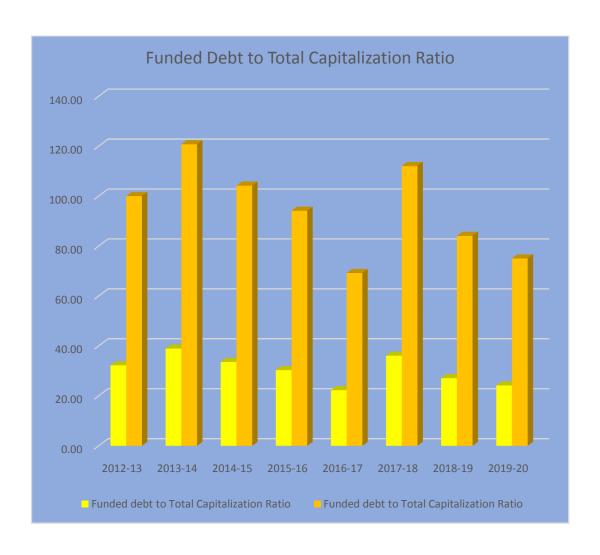
During the year 2014-15 its ratio is declined to 33.58 from 38.93 in the previous year which indicates a good sign but preferably the funded debt to total capitalization ratio should lie between 0.5 to 1 .In 2015-17 again it as decreased to 30.34, 22.30 consequently but during the year 2017-2018 it increased to 36.11 and stands as the second highest ratio during the study period.

The lowest funded debt to total capitalization ratio was in the year 2019-2020 which decreased to 24.18 comparing to the previous years of the study period,

Hence it can be concluded that in BMTC the funded debt to total capitalization ratio is not satisfactory as it is not maintained less than 0.5 to 1 so it is suggested to decrease the funded debt to capital ratio by concentrating on its revenues and profits which can be achieved by increasing the sales and reducing the cost in Bangalore Metropolitan Transportation Corporation.

**Table No: 4.1.7** 

# Funded Debt to Total Capitalization Ratio in BMTC from 2012-2013 to 2019 to 2020



### **Equity Ratio**

Equity Ratio shows how much of a company's assets are funded by issuing stock rather than borrowing money. The closer a firm's ratio result is to 100%, the more assets it has financed with stock rather than debt which indicates how financially stable the company in the long run.

**Equity Ratio in BMTC from 2012-2013 to 2019 to 2020** 

**Table No: 4.1.8** 

Equity Ratio		
Year	<b>Equity Ratio</b>	Increase/Decrease
2012-13	42.32	100
2013-14	41.11	97.15
2014-15	45.42	107.33
2015-16	48.85	115.42
2016-17	53.61	126.68
2017-18	44.93	106.17
2018-19	49.55	117.08
2019-20	48.43	114.45

Source: Data collected from Annual Reports and Accounts from

2012-13 to 2019-2020

The Equity Ratio is calculated using shareholders fund and total assets from the above Table 4.1.8 and chart 4.1.8 it can be drafted that during the year 2012-13

the company's equity ratio is 42.32 with shareholders fund of Rs.94729.54 and its Total assets amounts to 223819.7.

During the year 2013 -14 the equity ratio is reduced to 41.11 which indicates a good sign comparing to the previous year and which further increased to 45.42 in the year 2014-2015 with 122257.46 of shareholders fund and 269159.97 Total assets .

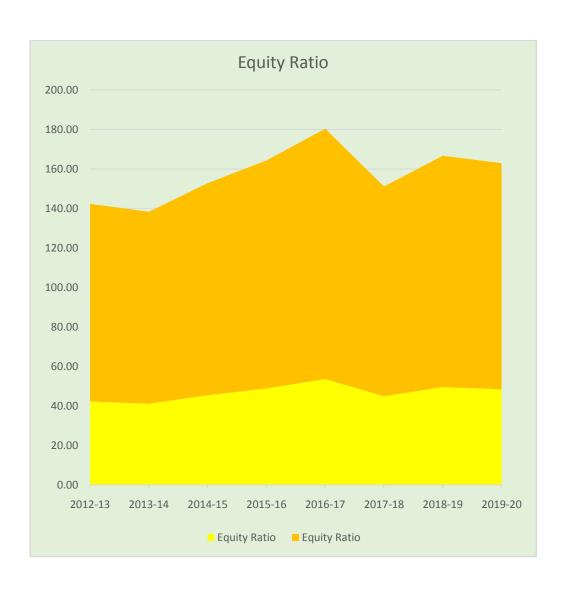
The highest Equity ratio during the study period is 53.611 in the year 2016-2017 which indicates a higher contribution of shareholders to the capital indicates a company's better long-term solvency position

The lowest equity ratio is in the year 2013-2014 resulted to 41.11 which indicates higher risk to the creditors as the company primarily used debt to acquire assets, which is widely viewed as an indictors of greater financial risk. During the year 2017-2018 the equity ratio is 44.93, Shareholders fund 148159.79 and total assets amounts to 329750.75, further in the year 2018-2019 it is increased to 49.54 indicating a good trend to the company comparing to the previous year .in the year 2019-2020 the shareholders fund was 211005.35 and total assets was 435646.96 therefore the equity ratio is 48.43.

It can be concluded that there is fluctuation in the equity ratio comparing from one year to other and the overall equity ratio is satisfactory in Bangalore Metropolitan Transport Corporation.

**Table No: 4.1.7** 

# Funded Debt to Total Capitalization Ratio in BMTC from 2012-2013 to 2019 to 2020



## **Solvency Ratio**

Solvency Ratio is used to measure an initiative's capability to meet its long term debt commitments and is used often by prospective business lenders. Which indicates whether a company's cash flow is sufficient to meet its long term liabilities and thus is a measure of its financial health.

#### Solvency Ratio in BMTC from 2012-2013 to 2019 to 2020

**Table No: 4.1.9** 

Solvency Ratio		
Year	Solvency Ratio	Increase/Decrease
2012-13	58	100
2013-14	59	101.72
2014-15	55	94.83
2015-16	51	87.93
2016-17	46	79.31
2017-18	55	94.83
2018-19	50	86.21
2019-20	52	89.66

Source: Data collected from Annual Reports and Accounts from

#### 2012-13 to 2019-2020

From the above Table 4.1.9 and Chart 4.1.9 shows the calculation of solvency ratio using equity ratio during the study period from 2012-2103 to 2019-2020. In

the year 2012-13 the solvency ratio is 58 which indicates its ability to meet long term obligations.

During the year 2013-2014 the companies solvency ratio is increased to 59 comparing to the previous year of the study period from 58 in the previous year, further in the year 2014-2015 the solvency ratio is declined to 55 with the differentiation of 4 from 59 in the previous year.

The highest solvency ratio during the study period was 2013-2014 which showed to 59 it proves the ability of the organization in meeting its obligation

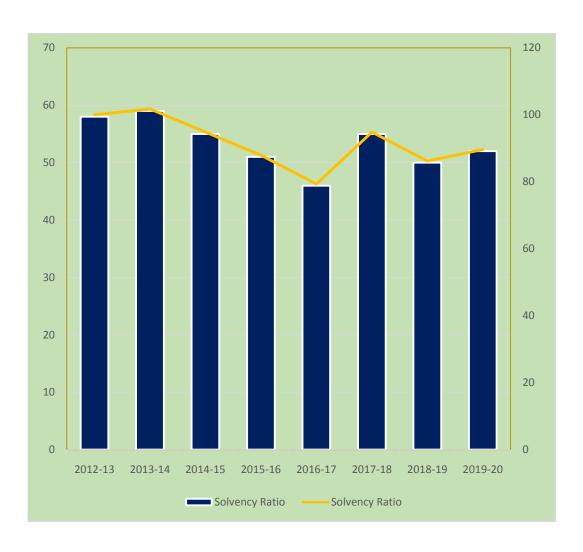
The lowest solvency ratio was observed as 46 in the year 2016-2017 which indicates debt burden on the business it can suggested to improve the solvency ratio by increasing sales from medium to long term and increase in owner equity which helps to increase the profitability of the organization.

In the year 2017-18 the solvency was increased from 46 to 55 comparing to the previous year in BMTC which is a good trend with a difference of 9, further it was declined in the year 2018-2019 to 50 from 55 in the previous year and its equity ratio was showing 50 which shows a balance between equity ratio and solvency ratio in the specific year.

During the year 2019-2020 the company's solvency ratio was 52 with the equity ratio of 48 and an increase in solvency comparing to the previous year from 50 to 52. Hence it can be concluded that BMTC solvency ratio is in satisfactory condition during the study period.

**Chart No: 4.1.9** 

# Solvency Ratio in BMTC from 2012-2013 to 2019 to 2020 $\,$



#### **Fixed Assets to Net worth Ratio**

This ratio helps in measuring the solvency of a company and indicates the extent to which the owner's cash is frozen in the form of fixed assets. If the investment assets is 50% of the net worth as we grow older the proportion should be higher so that we can retire comfortably.

Table No: 4.1.10

Fixed Assets to Net worth Ratio in BMTC from

2012-2013 to 2019 to 2020

Fixed Assets to Net worth Ratio		
Year	Fixed Assets to Net worth	Increase/Decrease
2012 12	Ratio	100
2012-13	2.21	100
2013-14	2.28	103.36
2014-15	2.00	90.47
2015-16	1.81	81.82
2016-17	1.67	75.45
2017-18	1.84	83.15
2018-19	1.53	69.13
2019-20	1.37	61.95

Source: Data collected from Annual Reports and Accounts from

2012-13 to 2019-2020

The fixed assets to net worth ratio is been calculated in the Table 4.1.10 and Chart 4.1.10 calculated using Fixed assets and shareholders fund during the study period

In the year 2012-13 the fixed assets amounts to 209302.51 and shareholders fund was 94720.54 and its fixed assets to net worth ratio was 2.209 and in the year 2013-14 it was increased to 2.283 which is undesirable, as it indicates that the firm is vulnerable to unexpected events and changes in the business climate.

During the year 2014-15 the fixed assets to net worth ratio was decreased to 1.999 from 2.283, lower the ratio it indicates the better position of the company and higher the ratio lesser the amount available for company's other operations and working capital. In 2015-16 it was in a declining stage till 2016-2017 which was 1.66 indicates the downward.

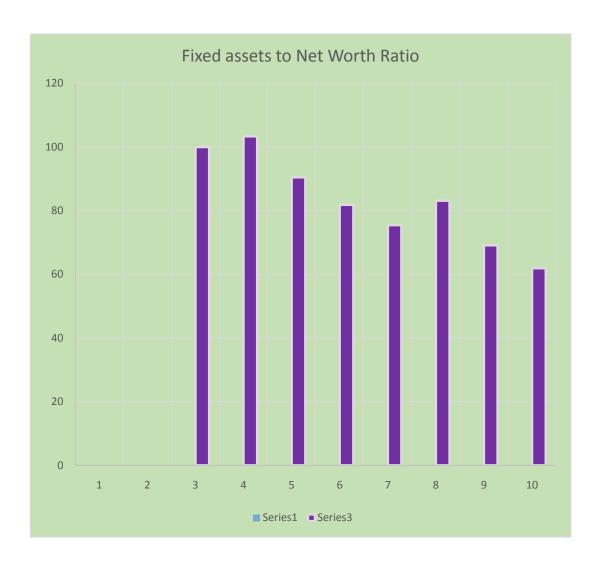
During the year 2017-2018 it was increased to 1.837 from 1.667 and its fixed assets amounted to 272217.84, its shareholders fund was 148159.79. Further in the year 2018-19 the ratio was declined till the year 2019-2020.

The lowest fixed assets to net worth ratio was in the year 2019-2020 which resulted to 1.368 comparing to the previous year of the study period in Bangalore Metro Politian Transportation Corporation.

Hence it can be concluded that fixed assets to net worth ratio is in the range from 1.36 to 2.28 is not satisfactory as the general expected ratio is 0.50 or lower than that but comparing to this its high ratio in the study period. Therefore the company as to concentrate on reducing the fixed assets to Net worth ratio which helps in maintaining the liquidity of cash in the organization.

**Chart No: 4.1.10** 

# Fixed Assets to Net worth Ratio in BMTC from 2012-2013 to 2019 to 2020



## **Fixed Assets to Total Long term funds Ratio**

The fixed assets to long term funds ratio establishes the relationship between fixed assets and long-term funds and is calculated by dividing fixed assets by long term funds. This shows the number of times the earnings of the firms are able to cover the fixed interest liability of the firm.

Table No: 4.1.11

Fixed Assets to total long term funds Ratio in BMTC

From 2012-2013 to 2019-2020

Fixed assets to Total Long term funds ratio		
Year	Fixed assets to total long term funds	Increase/Decrease
2012-13	4.64	100
2013-14	3.56	76.69
2014-15	3.95	85.13
2015-16	4.15	89.36
2016-17	5.30	114.16
2017-18	3.01	64.75
2018-19	3.90	84.03
2019-	4.15	89.33

Source: Data collected from Annual Reports and Accounts from

2012-13 to 2019-2020

The fixed assets to total Long term funds is been calculated using fixed assets and shareholders fund in above Table 4.1.11 and Chart 4.1.11 during the study period .

In the year 2012-2013 it shows 4.64 percent of fixed assets to total long term funds with a fixed assets of 209303.51 and 45071.74 long term loans. It indicates the extent to which long-term liabilities can be covered with company's tangible fixed assets.

During the year 2013-2014 the fixed assets to total long term funds got reduced to 3.56 from 4.64 comparing to the previous year which indicates decreased debt capacity during the study period. Further it was increased to 3.95 in the year 2014-2015.

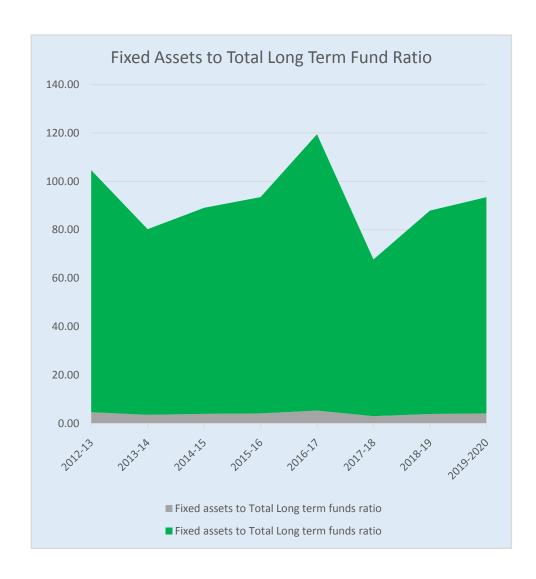
The highest fixed assets to total long term funds during the study period was in the year 2012-2013 which shows ratio to 4.64 which is a positive trend and increases the debt capacity during the study period

In the year 2017-2018 it was 3.00 which is considered as the lowest fixed assets to total long term ratio in the study period which faces problem in liquidate assets. Further it was increased to 3.90 in the year 2018-2019 with an fixed assets 0f 279032.46 and 71508.6 long term loans.

It can be concluded that the fixed assets to total long term funds is satisfactory in BMTC in the study period which proves the debt capability of the organization.

**Chart No: 4.1.12** 

# Fixed Assets to Long Term Ratio in BMTC from 2012-2013 to 2019 to 2020



## Current assets to proprietors fund Ratio

Current assets to Proprietors fund ratio establishes the relationship between current assets and shareholders fund. It calculates the percentage of shareholders' funds invested in current assets. There is no rule of thumb for this ratio and depending upon the nature of the business there may be different ratios for different firms

Table No: 4.1.12

Current assets to Proprietors fund Ratio in BMTC from

2012-2013 to 2019 - 2020

Ratio of current assets to proprietors fund		
Year	Current assets to Proprietors Fund Ratio	Increase/Decrease
2012-13	0.19	100
2013-14	0.15	77.91
2014-15	0.20	106.49
2015-16	0.24	125.89
2016-17	0.20	104.24
2017-18	0.28	146.81
2018-19	0.21	110.89
2019-	0.19	101.51

Source: Data collected from Annual Reports and Accounts from 2012-2020

The total Current assets is been calculated using total current assets and shareholders fund in the above Table 4.1.12 and Chart 4.1.12 in BMTC during the study period.

The above table and chart analyses the calculation of current assets to proprietors fund in the year 2012-2013 was 0.189 with the total current assets amounted to Rs17990.32 and shareholders fund amounted to Rs 94720.54. which was decreased in the year 2013-14 with 15439.69 of total current assets and 104341.49 of shareholders fund, the proprietor fund can be invested on current assets but it should invested in long term funds for earning returns instead of short term investments

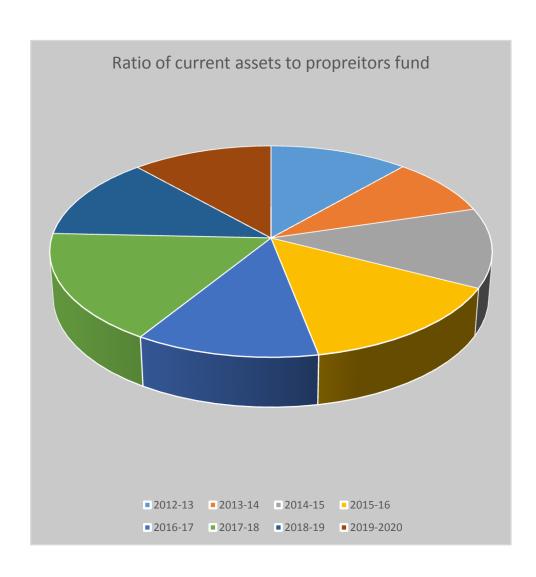
During the year 2014-2015and 2015-16 it is increased to 0.20, 0.23 subsequently which effects the performance of the organization .but in the year 2016-17 it is decreased to 0.19 comparing to the previous year . In the year 2017-18 the total current assets 41313.34, shareholders fund 148159.79 the current assets to proprietors fund 0.27 it was in increasing trend comparing to the previous year during the study period. Further in the year 2018-19 the ratio was reduced to 0.21 comparing to previous year.

The current assets to proprietors fund ratio in 2019-20 is declined from 0.21 to 0.19 this indicates that investment on current assets is been decreasing from 2017-18 to 2020 and the proprietors fund will be used to increase the performance of the organization.

Hence it can be concluded that the higher the ratio the investment will be more on current assets in the organization which indicates availability of cash is idle when it is maintained in the form of cash. if the ratio is getting decreased then the company is investing on the long term funds which gives us the returns to the organization.

**Chart No: 4.1.12** 

# Current assets to Proprietors Ratio in BMTC from 2012-2013 to 2019 to 2020



#### **Interest coverage**

The interest coverage ratio is used to measure how well a firm can pay the interest due on outstanding debt. This ratio is used by creditors and prospective lenders to access the risk of lending capital to a firm a higher ratio indicates a better financial health.

Table No: 4.1.13

Interest Coverage Ratio in BMTC from

2012-2013 to 2019 - 2020

Interest coverage Ratio		
Year	Interest Coverage Ratio	Increase/Decrease
2012-13	15.73	100
2013-14	5.98	38.00
2014-15	4.35	27.66
2015-16	5.96	37.87
2016-17	0.01	0.07
2017-18	-3.30	-20.95
2018-19	-18.96	-120.55
2019-20	-72.72	-462.30

Source: Data collected from Annual Reports and Accounts from

2012-13 to 2019-2020

The Interest coverage ratio is calculated using net profit and fixed interest charges in the Table 4.1.13 and Chart 4.1.13 in BMTC during the study period

It is noticed that in the year 2012-13 the interest coverage ratio is 15.72 with net profit of 51509.53 and fixed interest charges 3274.67 higher the interest coverage ratio indicates the capability of the company in meeting its interest obligations from operating earnings which ensures companies safety.

The ratio was further decreased by 9.75 in the year 2013-2014 from 15.72 to 5.97 which was a drastic decline in the study period in Bangalore Metropolitan Transportation Corporation. In the year 2014-2015 the ratio was decreased to 4.35 comparing to the previous year, from the year 2016-2017 to 2019-2020 there is drastic changes which shows the negative figure

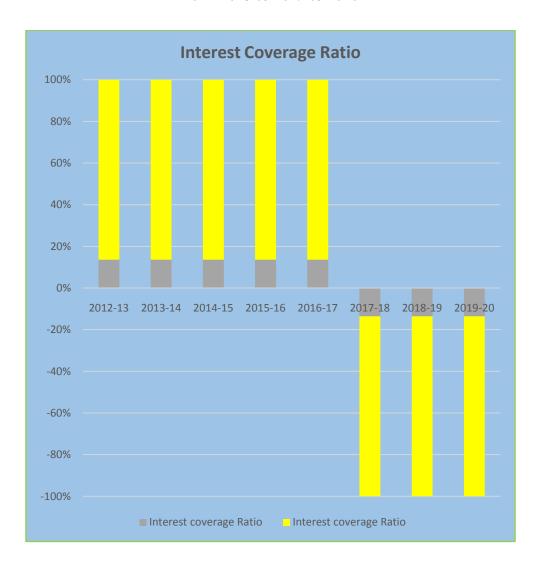
The highest Interest coverage ratio is been noticed in the year 2012-13 as it shows 15.72 it is treated as stronger financial health and proves that the company is more capable of meeting interest obligation further from 2017-2020 the interest coverage ratio is said be in negative which is very difficult for the organization and the lowest interest coverage ratio was in the year 2019-2020 which shows a negative ratio of (72.71) it indicates that lower the ratio the more the company is burdened by debt expense which results in low profitability in the study period, it can be concluded that in the recent years its result is poor and not satisfactory.

Hence it is advice able to maintain a stronger interest coverage to meet its debt obligation by improving its net operating income and decreasing in the operating expenses to meet a good interest coverage ratio

# **Chart No: 4.1.13**

# **Interest Coverage Ratio in BMTC from**

## 2012-2013 to 2019 to 2020



#### **Operating Ratio**

The operating ratio is used to measure the operational efficiency of the management. It shows whether or not the cost component in the sales figure is within the normal range. A low operating ratio means a high net profit ratio

Table No: 4.1.14

Operating Ratio in BMTC from 2012-2013 to 2019 – 2020

Operating Ratio		
Year	Operating Ratio	Increase/Decrease
2012-13	1.15	100
2013-14	1.17	101.36
2014-15	1.11	96.06
2015-16	1.09	94.75
2016-17	1.29	111.47
2017-18	1.34	115.70
2018-19	1.40	121.66
2019-20	1.43	123.69

Source: Data collected from Annual Reports and Accounts from

2012-13 to 2019-2020

From the above Table 4.1.14 and Chart 4.1.14 Operating Ratio is been calculated using Operating expenses and Net sales from the year 2012 to 2020

It is noticed that in the year 2012-13 the operating expenses was 175049.07 and Net sales 151600.16 with an Operating Ratio of 1.154 which further increased to

1.170 with operating expenses of 206641.07 and Net sales 176557 in the year 2013-2014 which indicates a negative sign which results in increasing expenses in the organization

During the year 2014-15 the operating ratio is decreased to 1.109 from 1.170 in the previous year with 221191.04 operating expenses and net sales of 199411.06, further in 2015-16 ton2019-2020 there is continuous increase in the ratio from 1.287 to 1.428

Decrease in the ratio indicates the less expenses in the organization and increase in the ratio indicates the more expenses in the organization

The highest Operating Ratio was noticed in the year 2019-2020 with 258089.45 operating expenses and net sales of Rs. 180700.09 indicating operating ratio to 1.428

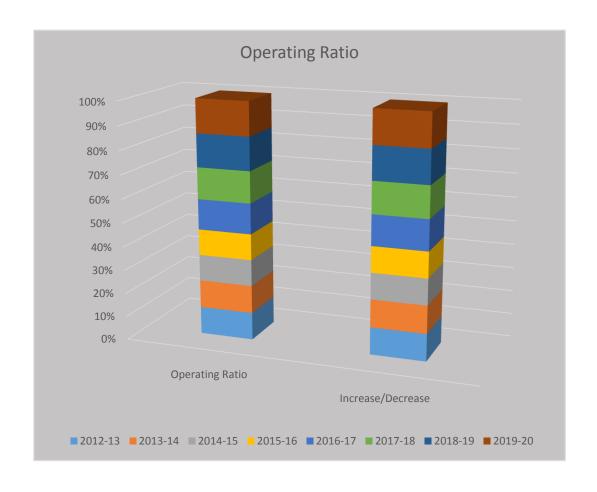
The operating ratio shows how efficient a company's management is at keeping costs low while generating revenue with total expenses. In BMTC the traditional 8 hours have shifts for conductors and drivers as a cost cutting measure, it has asked the bus crew to follow 12 hour shift with one break for a long as three to four hours.

During the 2015-2016 the operating ratio was showed 1.094 which represents the lowest operating ratio in the study period and noticed as the good sign of the organization as the reduction in the expenses can be achieved

It can be concluded that the operating ratio in BMTC is not satisfactory during the study period hence it can pay invoices early or on time to reduce the expenses and also investing money for technology purpose will help in operating income

**Chart No: 4.1.14** 

# Operating Ratio in BMTC from 2012-2013 to 2019 to 2020



**Employee Cost Ratio** 

It is a financial analysis tool that compares the amount of money a company spends on its employees to the amount of money it makes in net sales. This shows the relationship between labour cost and overall sales revenue as a percentage.

Table No: 4.1.15

Employee Cost Ratio in BMTC from 2012-2013 to 2019 – 2020

Employee cost Ratio		
Year	Employee cost ratio	Increase/Decrease
2012-13	38.04	100
2013-14	38.33	100.76
2014-15	37.77	99.30
2015-16	41.81	109.92
2016-17	51.82	136.22
2017-18	54.76	143.95
2018-19	55.74	146.53
2019-20	59.41	156.18

Source: Data collected from Annual Reports and Accounts from

2012-13 to 2019-2020

The employee cost ratio is calculated using employee cost and Net sales in the Table 4.1.15 and Chart 4.1.15 during the study period in Bangalore Metropolitan Transport Corporation

The employee cost ratio in 2012-2013 shows 38.03 with employee cost 57666.91 and 151600.16 of Net sales and increased to 38.328 a slight upward direction in the ratio comparing to the previous year which showed to 38.03

In the year 2014-2015 its was reduced to 37.77 with 75321.53 of employee cost and 199411.06 of Net Sales further it is raised to 41.812 to 59.407 in the year 2019-2020

The highest Employee cost ratio was noticed in the year 2019-2020 which shows to 59.407 with 107349.56 of employee cost and 180700.09 of Net Sales in the study period

The higher the employee cost indicates the investment on human resource in the organization for the purpose of work... Termination of employees also one of the reason for increase in employee cost ratio

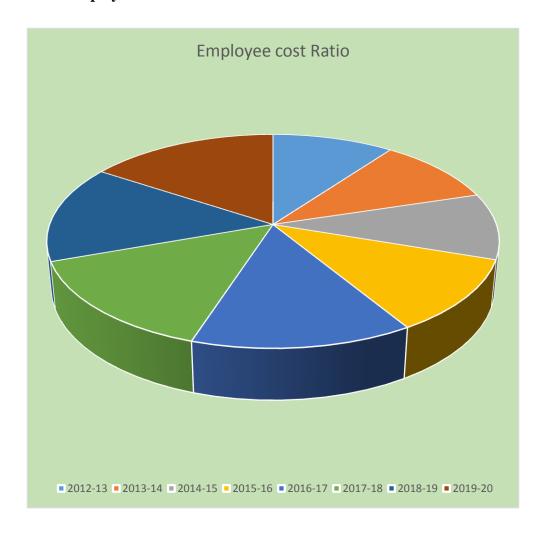
The lowest employee cost ratio was identified in the year 2014-2015 which is shown as 37.77 comparing to all years in the entire study period.

Higher the employee cost reduce employment and or the hours worked by individual employee. Laws that raise labour costs can either increase total employment or increase hours per worker, but they cannot do both.

Hence it can be concluded that in BMTC the employee cost traces in increasing trend from the year 2015-16 to 2019-2020.

**Chart No: 4.1.15** 

# Employee Cost Ratio in BMTC from 2012-2013 to 2019 to 2020



#### Other Cost Ratio

The Other Cost ratio indicates the additional costs that are incurred in increasing production. A relatively high ratio indicates a company is more likely to make a profit on relatively low sales because it had a relatively high contribution margin to apply towards its fixed costs.

Table No: 4.1.16

Operating Ratio in BMTC from 2012-2013 to 2019 – 2020

Other cost Ratio		
Year	Other cost ratio	Increase/Decrease
2012-13	0.82	100
2013-14	5.03	611.62
2014-15	0.63	76.20
2015-16	0.59	72.24
2016-17	0.60	73.07
2017-18	1.38	167.84
2018-19	1.71	207.83
2019-20	1.51	183.81

Source: Data collected from Annual Reports and Accounts from

2012-13 to 2019-2020

Other cost ratio is been calculated using other cost expenses and net sales in the above table 4.1.16 and Chart 4.1.16 in the study period at BMTC.

The highest Other cost ratio was identified in the year 2018-19 shows to 1.710 with 3145.83 of other cost expenses and 183884.05 of Net sales which indicates an increase in the company's profit on relatively low sales because it has a relatively high contribution margin to apply toward its fixed cost.

The lowest ratio is identified in the year 2015-2016 which shows to 0.594 with an expenses of 1140.61 and the Net sales during the year was 191802.62 comparing to entire years during the study period.

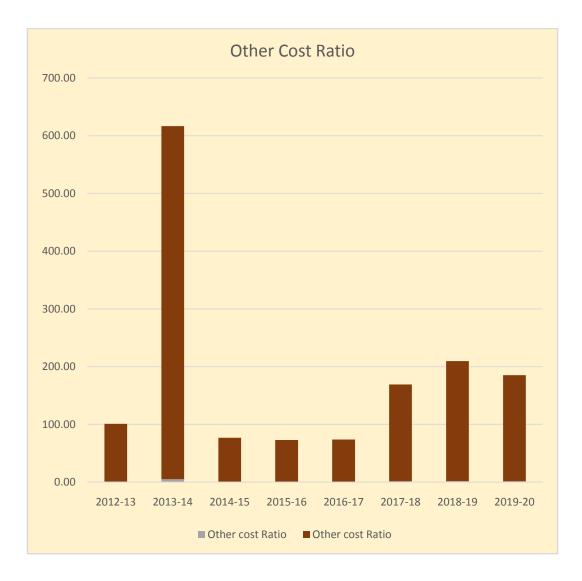
In the year 2012-2013 the ratio is 0.823 further it got increased to 5.034 with 8888.95 of expenses and 176557.36 net sales further was reduced drastically from 5.034 to 0.627 which was noticed to downward trend from 2014-15 to 2016-2017 further in the year 2017-18 an increase would be recognized as the ratio is considered as 1.381 with2438.02 expenses and 176470.6 net sales further increased to 1.710 from 1.381.

Increase in the cost always for the revenue motive is good but without revenue if the expenses are increasing it cannot be considered as the healthy position of the company.

Hence it can be concluded that the other cost ratio in BMTC is fluctuating every year in the study period so it is advised to maintain a health position with good profit and investment should be done for productive purpose.

## **Chart No: 4.1.16**

### Other Cost Ratio in BMTC from 2012-2013 to 2019 to 2020



## Repairs and Maintenance Ratio

It is an operating expenses spent to keep your equipment and other fixed-assets in a working condition with an objective of maintaining or restoring an asset in or to a state in which it can perform its required function at intended capacity and efficiency

Table No: 4.1.17

Repairs and Maintenance Ratio in BMTC from 2012-2013

To 2019 - 2020

Repairs and Maintenance ratio		
Year	Repairs and maintenance Ratio	Increase/Decrease
2012-13	12.58	100
2013-14	11.39	90.53
2014-15	10.78	85.67
2015-16	12.02	95.54
2016-17	13.73	109.13
2017-18	14.11	112.15
2018-19	13.87	110.22
2019-20	13.30	105.70

Source: Data collected from Annual Reports and Accounts from

2012-13 to 2019-2020

From the above Table 4.1.17 and Chart 4.1.17 shows the calculation of Repairs and Maintenance ratio analysis using Repairs and maintenance cost and Net sales of BMTC during the study period shows the following outcomes

The highest ratio during the study period is shown 14.114 during the year 2017-2018 comparing to the entire study period and the lowest ratio was considered as 10.781 in the year 2014-2015 which is a good trend by practicing a good technology and training for the employees will help the organization to maintain the expenses for repairs

The Repairs and maintenance ratio in the year 2012-13 shows 12.58 with 19078.78 cost and 151600.16 net sales which indicates an expenses incurred in working order as it go up the ratio gets higher which means the equipment is becoming more and more expensive to maintain further in the year 2013-2014 the ratio was reduced to 11.39 from the previous year which is a good sign with cost of 20115.04 and Net sales 176557.36 further it came down to 10.781 in the year 2014-2015.

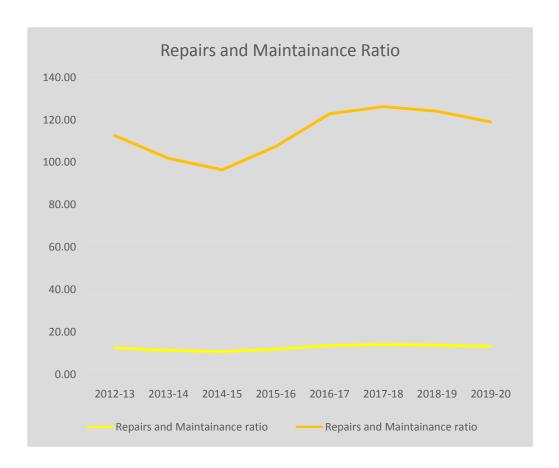
During the year 2015-2016 the repairs and maintenance cost increased to 12.02 to 14.11 in the year 2017-2018 a continuous increasing trend in ratio in Bangalore metropolitan transport corporation. In the year 2018-2019 and 2019-2020 as slow decrease was noticed during the study period.

Hence it can be concluded that in BMTC the repairs and maintenance ratio is not satisfactory as it shows increase in majority of the years during study period but however it is in decreasing sign from 2018 as noticed.

**Chart No: 4.1.17** 

# Repairs and Maintenance Ratio in BMTC from 2012-2013

#### to 2019 to 2020



Fuel, oil and lubricants expenses Ratio

It is an operating expenses maintained in organization The Fuel, oil and Lubricants expenses ratio is calculated using fuel expenses and net sales of Bangalore Metropolitan Transport Corporation

Table No: 4.1.18

Repairs and Maintenance Ratio in BMTC from 2012-2013 to 2019 – 2020

fuel ,oil and lubricants expenses Ratio		
Year	Fuel expenses ratio	Increase/Decrease
2012-13	40.64	100
2013-14	43.27	106.47
2014-15	38.54	94.85
2015-16	31.58	77.71
2016-17	37.05	91.17
2017-18	37.12	91.33
2018-19	40.75	100.28
2019-20	39.76	97.84

Source: Data collected from Annual Reports and Accounts from

#### 2012-13 to 2019-2020

From the above Table 4.1.18 and Chart 4.1.18 it shows the calculation of fuel, oil and lubricant expenses ratio during the study period.

During the year 2012-2013 the ratio calculated is 40.638 with fuel expenses with 61607.8 and Net sales 151600.16 further it was increased to 43.268 in 2013-2014 comparing to the previous year. In the year 2014-15 the fuel, oil and lubricant

expenses was decreased to 38.544 with 76862.85 and Net sales of 199411.06.Bangalore Metropolitan Transport Corporation had the highest fuel and lubricant costs of approximately 35 percent of its total expenditure during the study period from 2012 to 2106.

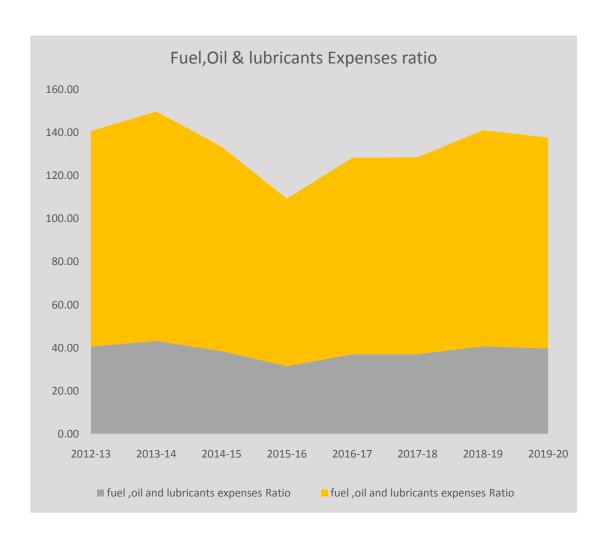
The increase in the operating expenses will lead to less profit for a business often operating expense receive the most scrutiny from a company, as these types of costs may be less fixed than their types of costs may be less fixed than their non-operating expenses.

The highest ratio was identified in the year 2013-2014 as it shows 43.268 in the study period, it indicates low profit of the business as money spent is more for this purpose, and the lowest fuel, oil and lubricant ratio was identified in the year 2016-2017 with an expenses of 65500.09 and net sales pf 177047.15 comparing to the previous year and the entire study period in Bangalore Metropolitan Transportation Corporation.

Hence it can be concluded that the expenses are more in the study period but how ever in the year 2019-2020 we can find a little reduction in the ratio but company should concentrate on improvement of the profit it can seek governments help to overcome this Problem .

#### **Chart No: 4.1.18**

Fuel, Oil & Lubricants Expenses Ratio in BMTC from 2012-2013 to 2019 to 2020



### **Taxes on Passenger Vehicles**

Taxes on Passenger Vehicles is an operating expenses in Bangalore Metropolitan Transport Corporation increase in the expenses means less profit for a business and decrease in the operating expenses indicated improvement in the profit. Taxes on passenger Vehicles Ratio is calculated using Taxes and Net Sales of the organization.

Table No: 4.1.19

Taxes on Passenger Vehicles Ratio in BMTC from

2012-2013 to 2019 - 2020

Taxes on Passenger Vehicles expenses		
Year	Taxes on passenger vehicle	
2 041	ratio	Increase/Decrease
2012-13	5.58	100
2013-14	5.57	99.90
2014-15	5.57	99.89
2015-16	5.57	99.96
2016-17	5.58	100.06
2017-18	5.58	100.04
2018-19	5.58	99.98
2019-20	5.57	99.92

Source: Data collected from Annual Reports and Accounts from

2012-13 to 2019-2020

Taxes on Passenger Vehicles expenses is calculated using Taxes and Net sales in Bangalore Metropolitan Transport Corporation in the above Table 4.1.19 and Chart 4.1.19.

It shows the analysis from 2012-13 The taxes on passenger vehicle ratio to 5.576 with the tax 8453.85 and Net sales 151600.16 further which moved backward to 5.570 a very slight decrease in the ratio is noticed in the year 2013-14 comparing to the previous year.

During the year 2014-15 taxes on passenger vehicle ratio is been shown to 5.570 with taxes 11107.82 and Net sales 199411.06 which indicates decreasing trend till the year 2014-15 comparing to the previous years. And further from 2015-16 to 2017-18 it is increasing which proves the increase in the expenses in the organization. From 2018-19 it shows 5.575 and in the year 2019-2020 it declined to 5.71.

The highest the ratio during the study period is represented in the year 2016-2017 shows to 5.579 with a tax amount of 9878.67 and Net sales 177047.15 which indicates less profit in the study period as the expense are more in operating expenses

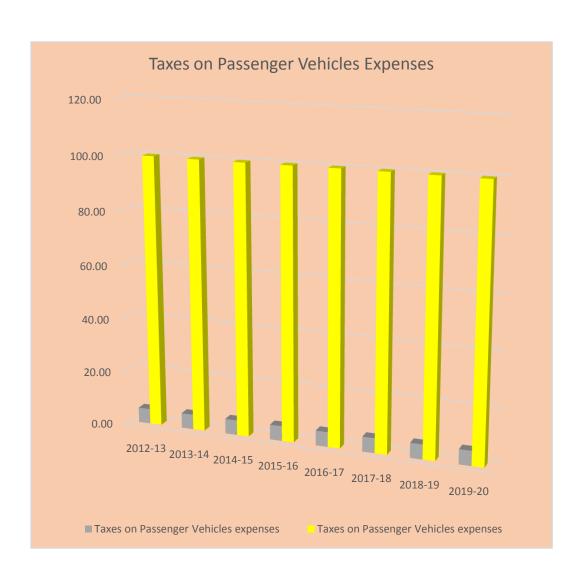
The lowest taxes on passenger vehicle ratio is shown in the year 2014-15 with 5.570 its taxes in the year was 11107.82 and the net sales was 199411.06 which is a good trend noticed in this year comparing to other years in the study period.

Hence it can be concluded that there is a fluctuations in the ratio comparing from one year to the other year .in the recent years of the study period it is noticed to be declining to 5.571 which as to still decreased for the better performance of the company.

**Chart No: 4.1.19** 

## Taxes on Passenger Vehicles Expenses Ratio in BMTC from

### 2012-2013 to 2019 to 2020



### Welfare expenses ratio

Welfare expenses ratio is an expenses on activities to improve working conditions, employer-employee relations, and employee morale and employee performance. It is calculated using welfare expenses and net sales of the BMTC.

Table No: 4.1.20
Welfare expenses Ratio in BMTC from 2012-2013 to 2019 - 2020

Welfare expenses ratio		
Year	Welfare expenses ratio	Increase/Decrease
2012-13	6.07	100
2013-14	7.36	121.25
2014-15	7.61	125.44
2015-16	8.80	144.98
2016-17	10.26	169.09
2017-18	10.72	176.60
2018-19	11.97	197.29
2019-20	13.60	224.15

Source: Data collected from Annual Reports and Accounts from

2012-13 to 2019-2020

The welfare expenses ratio is calculated using welfare expenses and net sales of Bangalore Metropolitan Transport Corporation from the above table 4.1.20 and chart 4.1.20 during the study period.

Increase in the welfare expenses will increase the productivity in the organization but funds spent more for the purpose of welfare may lead to less profit of the business

The highest welfare ratio is noticed in the year 2019-20 i.e. 13.603 with a welfare expenses of 24582.33 and Net sales of 180700.09 comparing to the previous years during the study period. Which helps to improve the efficiency of the employees in the organization but it declines the concentration on Profit of the business when the company is facing decline stage in terms of profit.

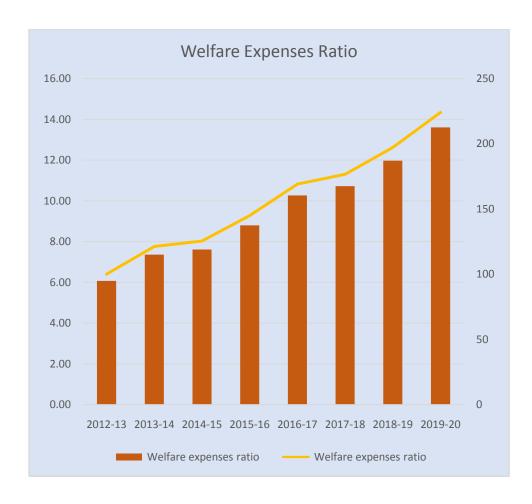
The lowest ratio is noticed in the year 2012-13 was 6.06 in terms of ratios with welfare expenses of 92008 and net sales 151600.16 comparing to other years in the entire study period. It is noticed that in the study period from the year 2012-13 to till the year 2019-2020 the welfare expenses ratio is in increasing trend in Bangalore Metropolitan Transport Corporations .which starts from 6.069 further moves to 7.358 in the year 2013-14 with 12992.14 welfare expenses and 176557.36 of Net sales, in the year 2014-15 it is increased to 7.613 comparing to the previous year further to 8.799, 10.262 in 2016-17. In the year 2017-18 to 2020 the welfare ratio was 10.71 and increased to 13.603.

Hence it can be concluded that welfare expenses is important for the employees which helps in the productivity of the organization but simultaneously it should concentrate on the income of the organization so the expenses can be reduced on welfare activities till the settlement in profit is faced.

**Chart No: 4.1.20** 

# Welfare Expenses Ratio in BMTC from

### 2012-2013 to 2019 to 2020



## Administrative Expenses Ratio

It is an efficiency ratio that measures how well a company is able to manage its non-operating expenses and generate sales during the normal course of operations. It is calculated using administrative expenses and net sales of the organization.

Table No: 4.1.21

Administrative Expenses Ratio in BMTC from 2012-2013 to 2019 - 2020

Administrative expenses Ratio		
Year	Administrative Expenses	
	ratio	Increase/Decrease
2012-13	4.13	100
2013-14	3.55	86.00
2014-15	3.18	76.94
2015-16	3.16	76.38
2016-17	3.79	91.66
2017-18	4.09	98.87
2018-19	4.28	103.50
2019-20	3.71	89.80

Source: Data collected from Annual Reports and Accounts from

2012-13 to 2019-2020

Administrative Expenses Ratio is calculated using administrative expenses and net sales from Table 4.1.21 and Chart 4.1.21 during the study period in BMTC

An increasing in administrative expenses ratio implies that the company is able to generate additional sales with the same fixed infrastructure. Higher the ratio better it is, as it implies better operating leverage of the central functions

In the year 2012-13 administrative expenses ratio shows to 4.133 with 6264.45 administrative expenses and Net sales to 151600.16 and in the year 2013-14 the ratio declined to 3.55 and further it continued to decrease to 3.179, 3.156 in the year 2014-2016. But in the year 2016-17 a slight increase was noticed in administrative expenses 3.787 which moved to upward direction to 4.08 in the year 2017-2018 with 7209.92 and net sales 176470.6 further it showed 4.276 in the year 2018-2019 but in the recent period it was declined.

The highest administrative expenses ratio was noticed in the year 2018-2019 with 4.276 this expenses are related to the organizations as a whole as opposed to individual departments or business units. Companies incur administrative expenses is to perform basic operations, increase efficiency or comply with laws and administrative expenses

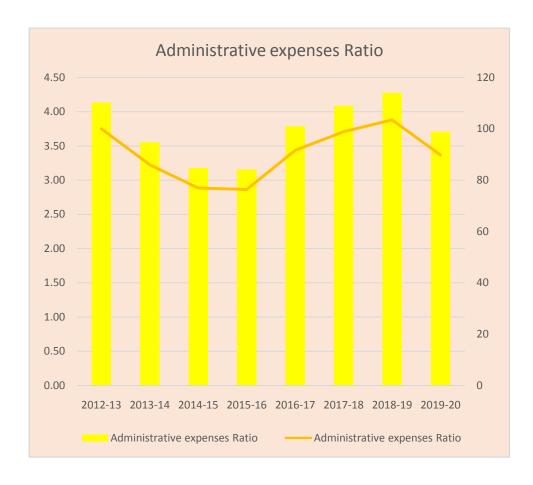
The lowest Administrative expenses during the study period was considered as 3.156 in the year 2015-16 which indicates the expenses is diverted and the profit of the company can be increased by reducing the administrative expenses.

Hence the administrative can be reduced by reducing purchasing asset or property to rent and by reducing entertainment expenses. Increase in the ratio is for the purpose of increasing the efficiency in the organization. But it reduces profit of the organization.

**Chart No: 4.1.21** 

# Administrative Expenses Ratio in BMTC from

## 2012-2013 to 2019 to 2020



Depreciation of vehicles to sales Ratio

It refers to the rate at which the vehicles in BMTC loses its value from the first year we bought it. In fact the cost of the vehicle drops as soon as we start driving it off dealership lot.it is calculated using depreciation of vehicle and net sales

Table No: 4.1.22

Depreciation of vehicles to sales Ratio in BMTC from 2012-2013

to 2019 - 2020

Depreciation of vehicles to sales Ratio		
Year	<b>Depreciation of vehicles to</b>	
rear	sales ratio	Increase/Decrease
2012-13	7.43	100
2013-14	7.06	95.02
2014-15	6.83	91.94
2015-16	5.87	78.92
2016-17	5.89	79.23
2017-18	5.84	78.59
2018-19	6.58	88.59
2019-20	5.96	80.14

Source: Data collected from Annual Reports and Accounts from

2012-13 to 2019-2020

From the above Table 4.1.22 and Chart 4.1.22 it is noticed that Depreciation of vehicles to sales ratio is been calculated during the study period in Bangalore Metropolitan Transport Corporation.

The highest Depreciation vehicles to sales Ratio was in the year 7.432 with depreciation of vehicle 11267.65 and Net sales of 151600.16 the higher the depreciation would encourage business to invest in the asset. Depreciation is set off against profits. This in turn reduces the tax outflow in the initial yeas, improving cash profits

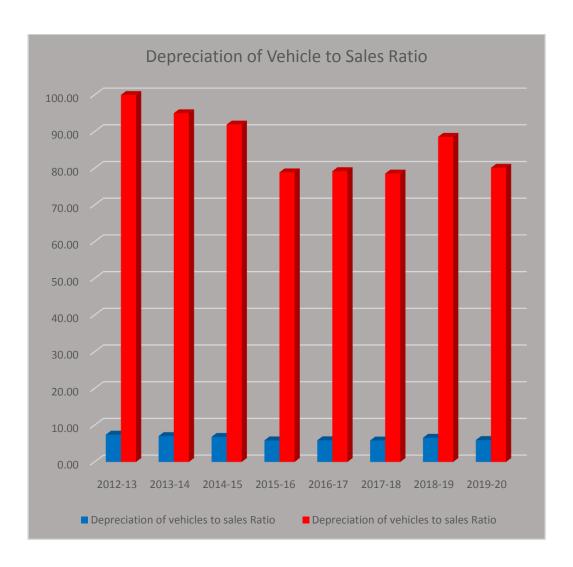
The lowest depreciation vehicles to sales ratio was noticed in the year 2017-18 which shows to 5.840 the reduction in depreciation expenses will increase companies' Net income of the organization. In the year 2012-13 he depreciation vehicles to sales ratio was 7.432 with depreciation of vehicle was 11267.65 and Net sales was 151600.16 further it was decreased to 7.062 with 12469.24 depreciation of vehicle and Net sales of 176557.36 from the year 2014-15 to 2017-2918 it was found a declining stage which further moved little settlement in the year 2018-2019 and in 2019-2020 again it was reduced to 5.956

Hence it can be concluded that the depreciation of vehicles to sales ratio during the study period was fluctuating from 2012-13 to 2019-2020 in the recent year it was reduced to 5.956 with 10763.46 and net sales of 180700.09 .which trends to reduce its depreciation expenses.

**Chart No: 4.1.22** 

# Depreciation of Vehicle to Sales Ratio in BMTC from

#### 2012-2013 to 2019 to 2020



### Non-operating expenses ratio

Non-operating expenses are often considered to be the cost that a company must incur to fulfil certain monetary obligations .it plays an important role when it comes to ascertaining the net earnings of a firm during any given period.

Table No: 4.1.23

Non-operating expenses Ratio in BMTC from 2012-2013 to 2019 – 2020

Non-operating expenses Ratio		
Non-operating Expenses		
ratio	Increase/Decrease	
3.82	100	
5.39	141.05	
5.51	144.21	
4.97	130.10	
4.97	129.99	
4.91	128.63	
3.24	84.80	
2.86	74.79	
	Non-operating Expenses ratio 3.82 5.39 5.51 4.97 4.97 4.91 3.24	

Source: Data collected from Annual Reports and Accounts from

2012-13 to 2019-2020

The non-operating expenses ratio is calculated using Non-operating expenses and net sales. From the above Table 4.1.23 and chart 4.1.23 the analysis of non-operating expenses ratio is shown.

The non-operating expenses ratio shows to 3.819 in 2012-2013 with an non-operating expenses of 5790.55 and net sales of 151600.16 further its was increased to 5.508 in the year 2013-14 comparing to previous year which indicates less profit in the organization in the year 2104-2015 its ratio was 5.508 and continued to be in down ward trend when compared from one year to other.

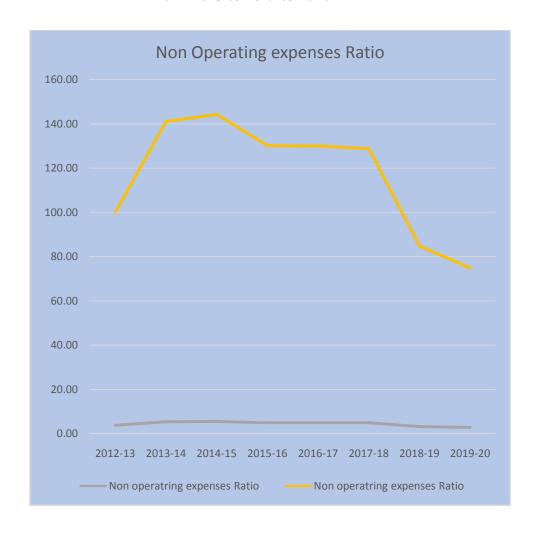
During the year 2015-16 the non-operating expenses ratio was further declined to 4.969 with a non-operating expenses of 9531.42 and net sales of 191802.62. Further it moved little downward to 4.965 in 2016-17 which indicates a good sign in the organization from 4.965 to 4.913 as on an average all the three years a settlement was achieved with a slight changes but from 2017 to 2020 it was reduced from 4.91 to 2.85 and which improves the profit of the organization

Hence reduction in non-operating expenses can concentrate on profit of the organization in the recent years it was noticed that the non-operating expenses are reduced to 2.85, the non-operating expenses like interest expenses and losses generally fall under other income and expenses. It can be concluded that reduction in the non-operating expenses ratio was satisfactory during the study period in BMTC.

**Chart No: 4.1.23** 

# Non-Operating Expenses Ratio in BMTC from

### 2012-2013 to 2019 to 2020



Net Profit Ratio

It is also known as net profitability ratio it is a way to measure the financial performance or profitability of a business in relation to the costs associated with the production and distribution of products along with other expenses.

Table No: 4.1.24

Net Profit Ratio in BMTC from 2012-2013 to 2019 - 2020

Net Profit Ratio		
Year	Net profit ratio	Increase/Decrease
2012-13	-9.76	100
2013-14	-8.36	85.65
2014-15	-3.25	33.35
2015-16	0.72	-7.33
2016-17	-14.74	151.00
2017-18	-12.33	126.35
2018-19	-18.46	189.17
2019-20	-30.40	311.50

Source: Data collected from Annual Reports and Accounts from

2012-13 to 2019-2020

Table No 4.1.24 and Chart 4.1.24 shows the Net profit ratio of Bangalore metropolitan Transport Corporation analysis of Net Profit ratio during the study period shows the following outcomes:

The Net Profit ratio of BMTC was highest in the year 2015-2016 the value of the ratio in this year was 0.715 which proves that the company is running in profit

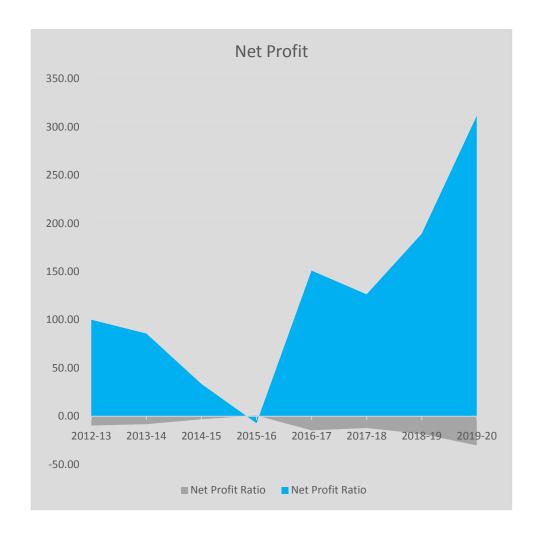
The lowest Net Profit ratio of BMTC was in the year 2019-2020 the value of the ratio in this year was (30.40) which demonstrates that the company is making less money than it is spending which is not a good sign of the organization. In fact it can diminish the tax liability as taxes are imposed on the profitability, A negative net profit means no profit and as such no taxes imposed to the organization.

During the year 2012-2013 to 2014-2015 the BMTC was incurred losses which shows the value to (9.75) to (3.25) further in the year 2015-16 there was a positive net profit which was noticed but again from the year 2016-17 to 2020 a drastic declining stage was continued in the organization

Hence it can be concluded that the Economic downturns, unfortunate ventures and expansion expenditure can contribute to negative net profit margins, which occurs when business spends more than it earns during a particular period it can concluded that the company should take the initiation to increase its Net profits by reducing its expenses and increase its sales by raising the price of tickets to improve its status.

Chart No: 4.1.24

Net Profit Ratio in BMTC from 2012-2013 to 2019 to 2020



Net worth ratio

The net worth ratio states the return that shareholders could receive on their investment in a company, if all of the profit earned were to be passed through directly to them. Thus the ratio is developed from the perspective of the shareholder which is used to analyse investor returns.

Table No: 4.1.25

Net worth Ratio in BMTC from 2012-2013 to 2019 - 2020

Net worth Ratio		
Year	Net worth ratio	Increase/Decrease
2012-13	0.54	100
2013-14	0.35	64.77
2014-15	0.25	45.51
2015-16	0.23	42.62
2016-17	0.04	6.78
2017-18	-0.11	-20.13
2018-19	-0.28	-51.51
2019-20	-0.50	-92.47

Source: Data collected from Annual Reports and Accounts from

2012-13 to 2019-2020

Table No.4.1.20 and Chart 4.1.25 shows the net worth ratio of BMTC Analysis of net worth ratio during study period shows the following outcome:

The Net worth ratio of BMTC was highest in the year 2012-13, the value of the ratio in this year was 0.543, a positive and increasing net worth indicates good financial health

Which includes a flow of income, returns on investment and a cash balance that is growing in BMTC

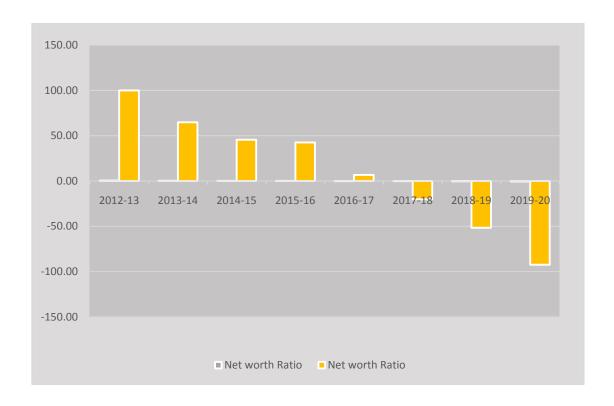
The Net worth ratio of BMTC was lowest in the year 2019-2020, the value of the ratio in this year was (0.502), A negative ratio indicates a net liabilities are higher than net assets, which means the investment hasn't paid off in a way that easily quantifiable

In the year 2013-14 the net worth ratio is positive but it got declined comparing to the previous year from 0.54 to 0.35 and further in the year 2012 to 2017 a continuous decrease is observed in the net worth but from the year 2017-18 to 2019-2020 it shows a Negative value which is not good position to the organization.

Hence it can concluded that the net worth ratio in BMTC was not satisfactory in the recent periods of the study period as it is showing the negative balance so it suggested to BMTC for cutting debt, they can take measures to convert the negative net worth ratio to positive ratio by eliminating the debt of the organization and developments in the services.

Chart No: 4.1.25

Net worth Ratio in BMTC from 2012-2013 to 2019 to 2020



### **Return on Equity capital ratio**

Return on equity is a ratio that provides investors with Insight into how efficiency a company is handling the money that shareholders have contributed to it. It measures the profitability of a corporation in relation to stockholders

Table No: 4.1.26

Return on Equity capital Ratio in BMTC from 2012-2013 to 2019 – 2020

Return on Equity Capital		
Year	Return on Equity Capital	
	Ratio	Increase/Decrease
2012-13	4.92	100
2013-14	3.51	71.35
2014-15	2.89	58.75
2015-16	3.02	61.41
2016-17	0.53	10.76
2017-18	-1.55	-31.49
2018-19	-4.89	-99.34
2019-20	-10.14	-205.99

Source: Data collected from Annual Reports and Accounts from

2012-13 to 2019-2020

Table No.4.1.26 and Chart 4.1.26 shows the Return on Equity capital ratio of BMTC Analysis of return on equity capital ratio during study period shows the following outcome:

The Return on equity capital ratio of BMTC was highest in the year 2012-13, the value of the ratio in this year was 4.924 during the study period in the organization. A rising Return on Equity capital indicates that a company is increasing its profit generation without needing as much capital. And it also indicates how well a company's management deploys shareholder capital

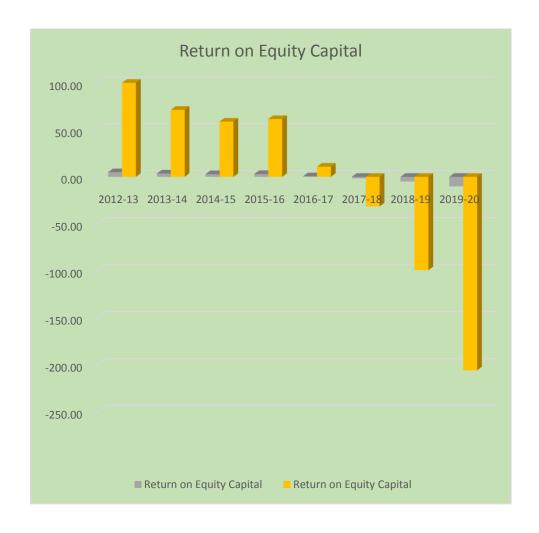
The return on equity capital ratio of BMTC was lowest in the year 2019-2020, the value of the ratio in this year was (10.144) which indicates a less efficient usage of equity capital, it also means that its shareholders are losing, rather than gaining value. This is usually a very bad sign for investors and managers try to avoid a negative return as aggressively as possible

It is observed that during the year 2013-2014 the value of the ratio is 3.513 comparing to the previous year 2012-13 declined from 4.92 further in 2015-15 it is decreased to 2.89, a slight increase was identified in the returns of the equity capital the value of the ratio was 3.02. In the year 2016-17 the value of the ratio was noticed to 0.52 which further turned to negative from 2017 - 2020 during the study period of the organization

Hence it can be concluded that the Return of equity capital ratio is positive in the year 2012 to 2017 though it is declining but from the year 2017-18 the companies return of equity capital is negative so it is suggested to improve its equity returns by raising the price of the tickets and also they can reduce the operating expenses with labour costs.

**Chart No: 4.1.26** 

## Return on Equity Capital Ratio in BMTC from 2012-2013 to 2019 to 2020



# Return on capital employed

It is a profitability ratio, measures how efficiently a company is using its capital. They show how well a company utilizes its assets to produce profit and is commonly used by investors to determine whether a company is suitable to invest in or not

Table No: 4.1.27

Return on capital employed Ratio in BMTC from 2012-2013 to 2019 - 2020

Return on capital employed			
Year	Return on Capital		
	employed	Increase/Decrease	
2012-13	36.85	100	
2013-14	21.46	58.24	
2014-15	16.44	44.61	
2015-16	16.14	43.81	
2016-17	2.80	7.61	
2017-18	-6.79	-18.44	
2018-19	-20.13	-54.63	
2019-20	-37.82	-102.63	

Source: Data collected from Annual Reports and Accounts from

2012-13 to 2019-2020

The return on capital employed is been calculated using Net profit after tax and interest and capital employed in BMTC which shows the analysis of Return on capital employed during the study period which is as follows:

The return on capital employed ratio of BMTC was highest in the year 2012-13, the value of the ratio in this year was 36.847 which indicates a successful growth of company with a financial health and also larger chunk of profits can be invested back into the company for the benefit of shareholders.

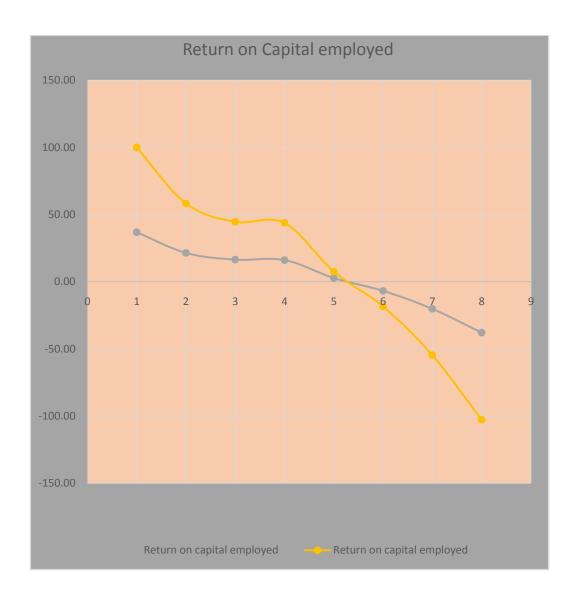
The return on capital employed ratio of BMTC was lowest in the year 2019-2020, the value of the ratio in this year was (37.815) Companies with negative capital employed usually have a highly Negative working capital exceeding the size of their Net fixed assets. A decline in Return on capital employed signal the loss of competitive advantage.

During the year 2013-14 the value of the ratio was notice to be 21.459 comparing to the previous year it has declined from 36.847 with 36750.62 Net profit after tax and interest and 171255.71 capital employed. Further in the year 2014-15 to 2016-17 a continues decline is noticed in the returns of capital employed. From 2017-18 to 2019-2020 the value of the ratio was shown negative comparing to the previous year during the study period

Hence it can be concluded that the return on capital employed from 2012 to 2017 was positive with fluctuations from one year to other year. It is suggested that by selling outdated buses would lower the company's total asset base and thus improve the company's return on capital employed.

Chart No: 4.1.27

Return on Capital employed Ratio in BMTC from 2012-2013 to 2019- 2020



Capital Turnover ratio

Capital turnover ratio indicates the efficiency of investment capital used to produce revenues, Capital turnover is expressed as a ratio of annual sales to invested capital. It is calculated using sales and capital employed of BMTC.

Table No: 4.1.28

Capital Turn Over Ratio in BMTC from 2012-2013 to 2019 - 2020

Capital Turn Over Ratio				
Capital Turnover Ratio	Increase/Decrease			
1.08	100			
1.03	95.07			
1.08	99.89			
0.98	90.25			
0.90	82.61			
0.74	68.17			
0.72	66.71			
0.64	59.39			
	1.08 1.03 1.08 0.98 0.90 0.74 0.72			

Source: Data collected from Annual Reports and Accounts from

2012-13 to 2019-2020

Table No.4.1.28 and Chart 4.1.28 shows the capital turnover ratio of BMTC Analysis of capital turnover ratio calculated using sales and capital employed during study period shows the following outcome:

The Capital Turnover Ratio of BMTC was highest in the year 2012-13, the value of the ratio in this year was 1.084, and it indicates that funds are coming in and flowing out on a regular basis, giving the company an opportunity to expand the business and inventory with the capital. It also indicates a better utilization of long term funds of owners and the lenders.

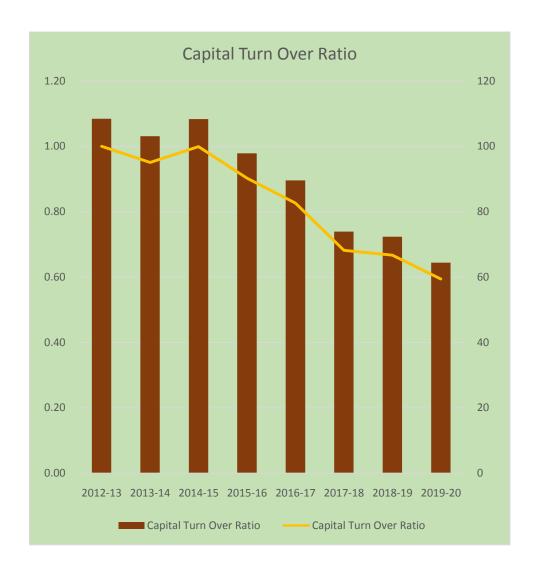
The capital turnover ratio of BMTC was lowest in the year 2019-2020, the value of the ratio in this year was 0.644, it indicates that a business is investing in too many accounts receivable and inventory to support its amount of bad debts or obsolete inventory

It is noticed that in the year 2013-2014 the capital turnover ratio was 1.030 with 176557.36 sales and capital employed was 171255.71 which was reduced comparing to the previous year during the study period, further it shows a declining stage from the year 2015-16 to 2020 of the recent year of the study period.

Hence it can be concluded that capital turnover ratio is satisfactory in the beginning of the study period but further it is declined in the value so it is suggested to improve its capital turnover ratio with shorter operating cycles, avoid stockpiling and increase sales revenue which brings an increase in the capital turnover ratio.

**Chart No: 4.1.28** 

# Capital Turn Ratio in BMTC from 2012-2013 to 2019- 2020



Fixed assets to sales Ratio

The fixed assets to sales ratio is an efficiency ratio that measures how well a company uses its fixed assets to generate sales. It is calculated by using fixed assets and sales of Bangalore Metropolitan Transportation Corporation

Table No: 4.1.29

Fixed assets to sales Ratio in BMTC from 2012-2013 to 2019 - 2020

Fixed assets to sales Ratio				
ase				

Source: Data collected from Annual Reports and Accounts from

2012-13 to 2019-2020

The return on capital employed is been calculated using fixed assets to sales in BMTC which shows the analysis of Fixed assets to sales Ratio during the study period from the Table 4.1.29 and Chart 4.1.29 which is as follows:

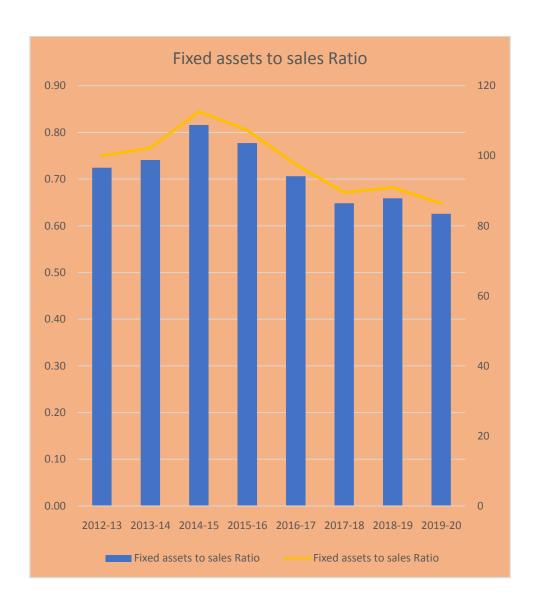
The fixed assets and capital sales Ratio of BMTC was highest in the year 2014-15, the value of the ratio in this year was 0.815, if a company has a higher fixed assets to sales ratio than its competitors, and it shows the company is using its fixed assets to generate sales better than its competitors

The fixed assets and capital sales Ratio of BMTC was lowest in the year 2019-2020, the value of the ratio in this year was 0.625, a low fixed assets ratio generally indicates the opposite, and a firm does not use its assets effectively or to its full potential to generate revenue. The ratios alone do not confirm how effective a company uses its fixed assets

During the year 2012-13 the value of the ratio was 0.724 with 209302.51 fixed assets and 151600.16 sales further it has increased to 0.740 in the year 2013-14 comparing to the previous year 2012-13 which indicates a good trend of the organization, from the year 2015-16 to2019-2020 the value of the ratio is in decreasing trend in the organization during the study period.

Hence it can concluded that the fixed assets to sales ratio is satisfactory in BMTC but it can be suggested to improve its ratio by liquidating assets, improving efficiency and accelerating accounts receivables will help the organization to meet satisfactory level by increasing its fixed assets to sales ratio.

Chart No: 4.1.29
Fixed assets to Sales Ratio in BMTC from 2012-2013 to 2019- 2020



Capital gearing ratio

The capital gearing ratio is used to evaluate the efficiency of the capital structure of the company. It is calculated by dividing the common shareholders fund by long term debt of BMTC during study period.

Table No: 4.1.30

Capital Gearing Ratio in BMTC from 2012-2013 to 2019 - 2020

Capital Gearing Ratio				
Year	Capital Gearing Ratio	Increase/Decrease		
2012-13	2.10	100		
2013-14	1.56	74.20		
2014-15	1.98	94.10		
2015-16	2.30	109.21		
2016-17	3.18	151.31		
2017-18	1.64	77.87		
2018-19	2.55	121.56		
2019-20	3.03	144.20		

Source: Data collected from Annual Reports and Accounts from

2012-13 to 2019-2020

Table No.4.1.30 and Chart No. 4.1.30 shows the capital gearing ratio of BMTC Analysis of capital gearing ratio calculated using shareholders fund and long term debt during study period shows the following outcome:

The fixed assets and capital sales Ratio of BMTC was highest in the year 2016-17, the value of the ratio in this year was 3.179, it indicates that a company may not be able to meet its debt obligations if its business slows down and also it indicates that a company has a higher degree of financial leverage and is more susceptible to downturns in the economy and the business cycle.

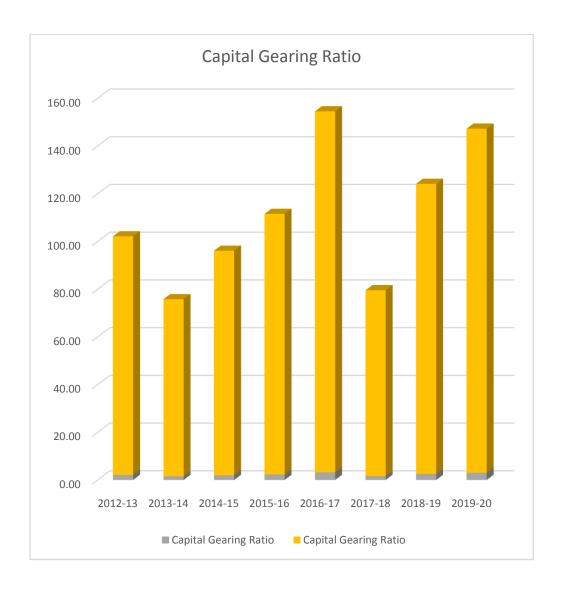
The Capital gearing Ratio of BMTC was Lowest in the year 2013-14, the value of the ratio in this year was 1.559, it indicates the company has a small proportion of debt versus equity and also accelerates wealth creation by investing a larger amount than an investor could have. Potentially pay less income tax, interest and other costs of gearing may be tax deductible.

During the year 2012-13 the capital gearing ratio was 2.101 further it has decreased to 1.559 in 2013-14 comparing to the previous year which is a good sign of the BMTC, in the year 2014-15 to 2017 i.e. from 1.977 to 3.179, which decline to 1.636 in the year 2017-18 with 148159.79 shareholders fund and 90539.71long term debt. But in the recent years of the study period from 2018-2020 the capital gearing ratio is been increased in BMTC.

Hence it can concluded that Capital gearing ratio is satisfied in BMTC but to reduce their gearing ratio they can pay off their debts like selling shares releasing more shares to the public to increase shareholders equity, which can be used to pay the company's debt and also it can reduce operational costs by increasing profits

Chart No: 4.1.30

Capital Gearing Ratio in BMTC from 2012-2013 to 2019- 2020



#### **Z-SCORE ANALYSIS**

Ratio investigation and related prescient models (for example Z-score) can be very valuable instruments in estimating the general strength of a subject; be that as it may, alert should be practiced on the grounds that, proportions are developed from bookkeeping information which (as late occasions have illustrated) is dependent upon understandings and even control. Second, outside correlations can be viewed uniquely as broad rules and not as total industry standards. Third, adjustment to industry composite proportions doesn't set up inside a healthy level of confidence that the subject firm is performing ordinarily or is all around oversaw. Monetary proportion examination is surely a basic piece of the valuation cycle. Prescient models, similar to the Z-score, give added worth and believability to the interaction and our work item. Such models, nonetheless, ought not to be utilized as the sole premise of assessment. An investigator should accumulate direct information about the tasks and the board of a subject business, outside the budget summaries, to supplement the proportions and ends related thereto

Development of the Z-Score Model

#### X1, Working Capital/Total Assets (WC/TA)

The functioning capital/complete resources proportion, as often as possible found in investigations of corporate issues, is a proportion of the net fluid resources of the firm comparative with the maximum capitalization. Working capital is characterized as the distinction between current resources and current liabilities. Liquidity and size attributes are unequivocally thought of. Normally, a firm encountering reliable working misfortunes will have contracting current resources according to add up to resources. Of the three liquidity proportions assessed, this

one end up being the most significant. Two other liquidity proportions tried were the current proportion and the speedy proportion. There were discovered to be less useful and subject to unreasonable patterns for some faltering firms.

#### X2, Retained Earnings/Total Assets (RE/TA)

Retained income is the record which reports the aggregate sum of reinvested profit and additionally misfortunes of a firm over as long as its can remember. The record is additionally alluded to as procured excess. It ought to be noticed that the held profit account is dependent upon "control" through corporate semi redesigns and stock profit presentations. While these events are not apparent in this examination, it is possible that a predisposition would be made by a considerable rearrangement or stock profit and appropriate 193 corrections ought to be made to the records. This proportion of total productivity after some time is the thing that I alluded to before as "another" proportion. The age of a firm is verifiably thought to be in this proportion. For instance, a somewhat youthful firm will presumably show a low RE/TA proportion since it has not had the opportunity to develop its combined benefits. Hence, it could be contended that the youthful firm is fairly oppressed in this investigation, and its shot at being delegated bankrupt is moderately higher than that of another more established firm, ceteris paribus. Yet, this is exactly the circumstance in reality. The occurrence of disappointment is a lot higher in a company's prior years. In 1993, around half of all organizations that fizzled did as such in the initial five years of their reality (Dun and Bradstreet, 1994). Furthermore, the RE/TA proportion estimates the influence of a firm. Those organizations with high RE, comparative with TA, have financed their resources through maintenance of benefits and have not used as much obligation.

# X3, Earnings before Interest and Taxes/Total Assets (EBIT/TA)

This proportion is a proportion of the genuine efficiency of the company's resources, autonomous of any assessment or influence factors. Since an association's definitive presence depends on the acquiring force of its resources, this proportion seems, by all accounts, to be especially fitting for examines managing corporate disappointment. Moreover, indebtedness from a bankrupt perspective happens when the absolute liabilities surpass a reasonable valuation of the company's resources with esteem dictated by the procuring force of the resources. As we will show, this proportion consistently beats other benefit measures, including income.

## X4, Market Value of Equity/Book Value of Total Liabilities (MVE/TL)

Value is estimated by the consolidated market worth of all portions of stock, liked and normal, while liabilities incorporate both current and long haul. The action shows how much the company's resources can decrease in esteem (estimated by market worth of value in addition to obligation) before the liabilities surpass the resources and the firm becomes indebted. For instance, an organization with a market worth of its value of Rs.1, 000 and obligation of Rs.500 could encounter a 66% drop in resource esteem before indebtedness. Be that as it may, a similar firm with Rs.250 value will be indebted if resources drop only 33% in esteem. This proportion adds a market esteem measurement which most other disappointment examines didn't consider. The proportional of X4 is a marginally adjusted adaptation of one of the variables194 utilized adequately by Fisher (1959) in an investigation of corporate security yield-spread differentials. It likewise gives off an impression of being a more compelling indicator of liquidation than a comparable, all the more generally utilized proportion; total

assets/all out obligation (book esteems). At a later point, we will substitute the book worth of total assets for the market esteem to determine a segregate work for secretly held firms (Z') and for non-producers (Z").

Later models, for example, the KMV approach, are basically founded available worth of value and its unpredictability. The value market esteem fills in as an intermediary for the company's resource esteems.

X5, Sales/Total Assets (S/TA)

The capital-turnover proportion is a standard monetary proportion outlining the deals producing capacity of the association's resources. It is one proportion of the board's ability in managing cutthroat conditions. This last proportion is very significant in light of the fact that it is the most un-critical proportion on an individual premise. Truth be told, in light of the uni-variate measurable importance test, it would not have showed up by any means. Nonetheless, in view of its novel relationship to other factors in the model, the business/complete resources proportion positions second in its commitment to the in general separating capacity of the model. All things considered, there is a wide variety among ventures in resource turnover, and we will determine an elective model (Z"), without X5 at a later point.

Z score Model

Z = 0.717(P1) + 0.847(P2) + 3.107(P3) + 0.420(P4) + 0.998(P5)

# Z score analysis of BMTC

Table 4.1.31: Z-Score Analysis for the Year 2012-2013

Particulars	Amount	Factor	Result
Retained earnings/Total assets	0.03996154	1.4	0.06
EBIT/ Total assets	0.2301385	3.3	0.76
Net sales/ Total assets	0.67733162	0.999	0.68
Market value of equity /Total	1.8981	0.6	1.14
Working capital/Total assets	0.03943031	1.2	-0.05

Z-Score	2.58

The analysis of Z score of BMTC was valued to 2.58 therefore it was in Gary area – Therefore it requires careful monitoring

Table 4.1.32: Z-Score Analysis for the year 2013-2014

Particulars	Amount	Factor	Result
Retained earnings/Total assets	0.037689898	1.4	0.05
EBIT/ Total assets	0.144810067	3.3	0.48
Net sales/ Total assets	0.695696648	0.999	0.70
Market value of equity /Total liabilities	1.62004	0.6	0.97
Working capital/Total assets	0.096923388	1.2	-0.12

Z-Score	2.08

The analysis of Z score of BMTC was valued to 2.08 therefore it was in Gary area – Therefore it requires careful monitoring

Table 4.1.33: Z-Score Analysis for the year 2014-2015

2014-2015			
Particulars	Amount	Factor	Result
Retained earnings/Total assets	0.059745511	1.4	0.08
EBIT/ Total assets	0.112424816	3.3	0.37
Net sales/ Total assets	0.740864476	0.999	0.74
Market value of equity /Total	1.68754	0.6	1.01
Working capital/Total assets	0.090593337	1.2	-0.11

Z-Score	2.10

The analysis of Z score of BMTC was valued to 2.08 therefore it was in Gary area – Therefore it requires careful monitoring

Table4.1.34: Z-Score Analysis for the year 2015-2016

2015-2016			
Particulars	Amount	Factor	Result
Retained earnings/Total assets	0.099559312	1.4	0.14
EBIT/ Total assets	0.11320004	3.3	0.37
Net sales/ Total assets	0.686375809	0.999	0.69
Market value of equity /Total liabilities	1.74799	0.6	1.05
Working capital/Total assets	0.046670055	1.2	-0.06

Z-Score	2.19

The analysis of Z score of BMTC was valued to 2.08 therefore it was in Gary area – Therefore it requires careful monitoring

Table 4.1.35: Z-Score Analysis for the year 2016-2017

2016-2017			
Particulars	Amount	Factor	Result
Retained earnings/Total assets	0.103761214	1.4	0.15
EBIT/ Total assets	0.019761672	3.3	0.07
Net sales/ Total assets	0.631327529	0.999	0.63
Market value of equity /Total	1.9117	0.6	1.15
Working capital/Total assets	0.102116955	1.2	-0.12

Z-Score	1.87

The analysis of Z score of BMTC was valued to 2.08 therefore it was in Gary area – Therefore it requires careful monitoring

Table 4.1.36: Z-Score Analysis for the year 2017-2018

Particulars	Amount	Factor	Result
Retained earnings/Total assets	0.05698119	1.4	0.08
EBIT/ Total assets	0.049187363	3.3	-0.16
Net sales/ Total assets	0.535163605	0.999	0.53
Market value of equity /Total liabilities	1.36257	0.6	0.82
Working capital/Total assets	0.100399468	1.2	-0.12

Z-Score	1.15

In the year 2017-2018 BMTC comes under danger zone as per interpretation table score 1.15 falls under "Distress" Zone Likelihood of insolvency within 12 months. Therefore, it was required intensive care

Table 4.1.37: Z-Score Analysis of BMTC for the year 2018-2019

Particulars	Amount	Factor	Result
Retained earnings/Total assets	0.121412027	1.4	0.17
EBIT/ Total assets	0.138789962	3.3	-0.46
Net sales/ Total assets	0.498770799	0.999	0.50
Market value of equity /Total	1.34397	0.6	0.81
Working capital/Total assets	0.168330633	1.2	-0.20

Z-Score	0.81

In the year 2018-2019 BMTC comes under danger zone as per interpretation table score 0.81 falls under "Distress" Zone Likelihood of insolvency within 12 months. Therefore, it was required intensive care

Table 4.1.38: Z-Score Analysis of BMTC for the year 2019-2020

Particulars	Amount	Factor	Result
Retained earnings/Total assets	0.159744028	1.4	0.22
EBIT/ Total assets	0.243551889	3.3	-0.80
Net sales/ Total assets	0.41478561	0.999	0.41
Market value of equity /Total liabilities	1.11179	0.6	0.67

Working capital/Total assets	0.237596195	1.2	-0.29	

Z-Score	0.22

In the year 2019-2020 BMTC comes under danger zone as per interpretation table score 0.22 falls under "Distress" Zone Likelihood of insolvency within 12 months. Therefore, it was required intensive care

## Conclusion of Z-Score

Table 4.1.39: final Z-Score of BMTC

Year	Z Score
2012-2013	2.58
2013-2014	2.08
2014-2015	2.1
2015-2016	2.19
2016-2017	1.87
2017-2018	1.15
2018-2019	0.81
2019-2020	0.22

We can observe that Z score was constantly in decreasing trend. Initial 5 year BMTC was in Gary Area where proper care should have been taken. Therefore Z score was in Distress Zone which indicates intensive care must be taken to save BMTC form insolvency

## **COEFFICIENT CORRELATION**

Correlation refers to the linear relationship two variables. The coefficient of correlation is a measure of the association between two numerical variables. Usually denoted as X and Y. It is a symmetrical relationship. If X is correlated with Y, Y is correlated with X

Correlation refers to the technique used in measuring the closeness or degree of relationship between two quantitative variable

Table 4.1.40: Correlation between Fixed assets and Long terms loans

	Fixed Assets	Long terms Loans
Fixed Assets	1	0.69
Long terms Loans	0.69	1

Correlation between fixed assets and long term loans was 0.69 it is identified that the relationship is positive but it is below 1 which can be considered as week positive relationship in BMTC

Table 4.1.41: Correlation between Operating expenses and Net sales

	operating expenses	Net sales
operating expenses	1	0.49
Net sales	0.49	1

Correlation between operating expenses and Net Sales is valued to 0.49. It is identified that the relationship between Operating expenses and net sales in BMTC was Positive but its weaker as it is less that the value of 1

Table 4.1.42: Correlation between Employees cost and Net sales

	Employee Cost	Net sales
Employee Cost	1	
Net sales	0.36	1

The correlation between Employ cost and Net sales in BMTC valued to 0.36. Which indicates that the relationship is positive correlation between employee cost and net sales in BMTC

Table 4.1.43: Correlation between Welfare expenses and Net sales

	welfare Expenses	Net sales
welfare Expenses	1	
Net sales	0.45	1

The Correlation between Welfare expenses and Net sales in BMTC was valued to 0.45. It indicates that the relationship is positive

Table 4.1.44: Correlation between Administrative expenses and Net Sales

	Administrative Expenses	Net sales
Administrative Expenses	1	
Net sales	0.03	1

The Correlation between administrative expenses and Net sales was valued to 0.03, it indicates a positive relationship in Administrative expenses in BMTC

## **ANOVA ANAYLSIS**

The logic utilized in ANOVA to analyse method for various gatherings is like that utilized with the t-test to think about method for two free gatherings. At the point when single direction ANOVA is applied to the unique instance of two gatherings, single direction ANOVA gives indistinguishable outcomes as the ttest. The goal to utilize One Way ANOVA is to survey the meaning of contrasts between at least two gatherings implies on a solitary autonomous variable

# A) Analysis of Total Cost (Division Wise)

 ${
m H_{0}} ext{-}$  There is no Significance relationship between total expenses among divisions of BMTC

H<sub>1</sub>- There is a significance relationship between total expenses among divisions of BMTC

Table 4.1.45 Total cost on Divisions

Groups	Count	Sum	Average	Variance
East	8	34.35	4.29375	0.001198214
West	8	30.41	3.80125	0.001183929
North	8	32.13	4.01625	0.000598214
South	8	33.13	4.14125	0.0058125
Central	8	30.09	3.76125	0.8666125
BMTC	8	30.14	3.7675	0.00145

Table 4.1.46: ANOVA Showing Total Cost on divisions wise

Source of					
Variation	SS	df	MS	F	P-value
Between Groups	1.99271	5	0.398542	2.72708	0.03196
Within Groups	6.1380	42	0.14614		
Total	8.130698	47			

To Test the significance in means of total expenses among various divisions of BMTC analysis of variance (ANOVA) was applied. For testing the hypothesis by ANOVA procedure, F- Test was applied. In ANIOVA table, calculated value of F-test with Corresponding p-Value is given. F was 2.727 and p- value was 0.03196. Here p-value was more than 0.05. Hence we reject the null hypothesis and we accept alternative hypothesis i.e. there was a significance difference of Total Expenses in rupees among all

The different components of BMTC.

## **B)** Analysis of Total Earnings

- $H_0$  there is no significance relationship between Total revenues on the financial performance
- H<sub>1</sub>- there is a significance relationship between total revenues on the financial performance

Table 4.1.47 : Tale showing Total revenue

Groups	Count	Sum	Average	Variance
Traffic Revenue	8	32655.77	4081.97125	197994.284
Traine Revenue	O	32033.77	1001.97123	197991.201
Other Revenue	8	16141.82	2017.7275	13573408.33
Gross Revenue	8	38921.23	4865.15375	462298.3277

Table 4.1.48 : Table showing Anova of total earnings

Source of	SS	df	MS	F	P-value
Variation	~~	<b>W</b> 2	1126	-	1 1000
Between					
Groups	34619502	2	17309751.12	3.64833	0.043659916
Within Groups	99635907	21	4744566.981		
Total	134255409	23			

able: 4. 1.48 Depicts data relating to ANOVA of Total Revenue among different sources of BMTC. In ANOVA table F value was 3.64833 and p- value was 0.04365. Here p-value was less than 0.05. Hence we reject null hypothesis i.e. there was a significance difference of total revenues between various sources of variation of BMTC and we accept alternative hypothesis i.e., there was no significance difference of total revenues between various sources of BMTC

# C) Analysis of Investment on inventories

 $(H_0$ - There is no Significance relationship between Total Investment on Inventories

 $H_1$ - There is a significance Relationship between Total Investment on Inventories)

Table 4.1.49: Inventories analysis

Groups	Count	Sum	Average	Variance
Fuel	8	0.63	0.07875	0.000755357
Lubricants	8	9.47	1.18375	0.189541071
Tyre, Tube and Flap	8	3.11	0.38875	0.101069643

Batteries	8	1.53	0.19125	0.006926786
T Spare Parts	8	24	3	0.203028571
a Other Consumable items	8	62.99	7.87375	3.893255357
b Stationery and Uniform	8	61.74	7.7175	30.48027857
l Total	8	3.43	0.42875	0.006298214

e

## : 4.1.50 ANOVA of Inventory Management

Source of Variation	SS	df	MS	F	P-value
Between Groups	623.4340188	7	89.06200	20.42639	2.512233
Within Groups	244.168075	56	4.36014		
1					
Total	867.6020938	63			
3,702					

To test the significance difference in means of inventory management between various sources of BMTC, Analysis of Variance (ANIVA) was applied. For testing the hypothesis by ANOVA procedure, F- test was applied. In ANOVA table calculated value of F-test with corresponding p- value was given. F value was 20.436 and p-value was 2.512 was more than 0.05 hence we accept the null hypothesis and we reject alternative hypothesis i.e., there was no significant difference of inventory management among various sources of BMTC

# D) Analysis of operating results in lakh

 $(H_0$  – There is no Significance Relationship between operating Results and its influence of BMTC

 $H_1$ - There is a Significance Relationship between Operating Results and its Influence of BMTC)

Table 4.1.51: Operating Result analysis

Groups	Count	Sum	Average	Variance
Schedules	8	50144	6268	30780.29
Fleet	8	52021	6502.625	33427.41
new Vehicles	8	3671	458.875	216165.8
vehicles scrapped	8	3431	428.875	48323.84
Routes	8	18674	2334.25	15185.64

Table 4.1.52: Anova on Operational results

Source of Variation	SS	Df	MS	F	P-value
Between Groups	290098944.9	4	72524736.21	1054.497	6.064838
Within Groups	2407181.125	35	68776.60357		
Total	292506126	39			

Above Table 4.1.52 Shows data relating to ANOVA of operational results in lakh. In ANOVA table F value was 1054.49 and p – value was 6.0648. Here p – value was more than 0.05. Hence we accept the null hypothesis and reject alternative hypothesis i.e. there was no significant difference of total operational results in lakh among various groups of BMTC

# E) Analysis of working results

 $(H_0$ - There is no significance relationship between working results of BMTC  $H_1$ - There is a significance of relationship between working results of BMTC)

Table 4.1.53: Table showing Working Results

Groups	Count	Sum	Average	Variance
Monthly pass	8	340335.41	42541.92625	22852659
daily pass	8	146708	18338.5	26863836
student pass	8	33243.1	4155.3875	205367.24
Others	8	96932.06	12116.5075	340752352

Table 4.1.54: Anova of Working Results

Source of Variation	SS	df	MS	F	P-value
Between Groups	58579707460	4	14644926865	141.35039	4.37518
Between Groups	30377707100	•	11011720003	111.55057	1.57510
Within Groups	3626254194	35	103607262.7		
Total	62205961654	39			

Table 4.1.54 Shows data relating to ANOVA of working results in lakh of BMTC. In ANOVA table F value was 141.350 and p – value 4.375. Here p- value was more than 0.05 hence we accept the null hypothesis and reject alternative hypothesis i.e., there was no significant difference of total working results in lakh among various components of BMTC

#### CHAPTER - V

# FINDINGS, SUGGESTIONS AND CONCLUSION

# Major findings of the study 5.1

#### INTRODUCTION

This chapter includes the major findings, conclusions and suggestions. The major findings of the study presented are based on the analysis of the data and interpretation. The conclusions enumerated herein are based on the analysis of the Secondary data as well as the Magazines used in the present work. However, important and main conclusions are drawn from the analysis of the Secondary data more particularly derived from the Annual Reports of the Bangalore Metropolitan Transport Corporation.

#### 1.2 SUMMARY OF FINDINGS

- The current Ratio in BMTC was seen that in the year 2012-13 it was 67% which declined to 38 percent in 2013-14 and the most noteworthy current resources was distinguished in the year 2015-16 which was esteemed to 71.44 percent further the least proportion was considered has 28.21 percent in the year 2019-20.
- The fast proportion was 0.55 in 2014-15 the proportion is been declined additionally expanded by 0.44 there is a vacillation in the speedy proportion from one year to another. The most noteworthy proportion was seen in the year 2015-16 and the least fast proportion was distinguished in the year 2019-20 which was esteemed to 0.25
- The supreme proportion of BMTC during the examination time frame was fulfilled it was seen that the most noteworthy total proportion was seen in the year 2013-14 which was esteemed to 1.08 and the least proportion is been

perceived as 0.09 in which the money and bank balance was less contrasting with the whole investigation time frame

- The Debtors Turnover proportion estimates the effectiveness of the organization during the period2103-14 the borrowers turnover proportion is been showing an expanding pattern contrasting with 2012-13 which demonstrates a decent pattern, the most elevated account holders turnover proportion during the examination time frame was in the year 2015-16 which shows 80.10 and the least indebted individuals turnover proportion was during the year 2016-2017 as it shows 26.761 in the investigation period.
- The functioning capital proportion examination during the investigation time frame was seen to be negative during the year 2012-13it shows to negative of 17.17 and during the whole examination time frame it was seen that the functioning capital proportion was not acceptable. In the year 2015-16 it was esteemed to 14.70
- The obligation value proportion in the year 2013-14 was up to 0.64 and during 2014-15 it was inclining down with the proportion of 0.50 which was diminished by 0.135 contrast contrasting with the earlier year. The most minimal obligation value proportion was in the year 2016-17 with 0.314 which demonstrates lower measure of financing by obligation through loan specialists
- The subsidized obligation to add up to capitalization proportion thinks about its complete liabilities to add up to capital. The most elevated financed obligation to capital proportion in the year 2013-14 appearance the proportion 38.93 and the least subsidized obligation to add up to capitalization proportion was in the year 2019-2020 which diminished to 24.18 contrasting with the earlier long stretches of the investigation time frame.

- The value Ratio during the year 2012-13 was 42.31 which was diminished to 41.11 and the most elevated value proportion during the examination time frame is 53.61 and in the year 2016-17 which and the least proportion was in the year 2013-2014 came about to 41.11which demonstrates higher danger to the banks. In the year 2018-19 it is expanded to 49.54which was diminished to 48.43 in 2019-20
- During the year 2012-13 the dissolvability proportion was 58, during the year 2013-14 the organizations dissolvability proportion is expanded to 59 contrasting with the earlier year in the year 2914-15 the dissolvability proportion is declined to 55. the most noteworthy proportion was seen as 59 in the year 2013-14 and the least proportion was seen in the year 2016-17 up to 46 percent
- In the year 2012-13 the fixed resources proportion was 2.20 and in the year 2013-14 it was expanded to 2.283 which is unfortunate, during the year 2014-15 the fixed resources for total assets proportion was diminished to 1.99, the most minimal proportion during the examination time frame was in the year 2019-20 was notice to be 1.36
- In the year 2012-2013 it shows 4.64 percent of fixed resources for all out long haul assets with a fixed resources of 209303.51 and 45071.74 long haul advances during the year 2013-2014 the fixed resources for all out long haul reserves got decreased to 3.56 from 4.64 contrasting with the earlier year. The most noteworthy fixed resources for all out long haul assets during the investigation time frame was in the year 2012-2013 which shows proportion to 4.64
- In the year 2012-2013 was 0.189 with the complete current resources added up to Rs17990.32 and investors reserve added up to Rs 94720.54. which was diminished in the year 2013-14 with 15439.69 of complete current resources and

- 104341.49 of investors reserve During the year 2014-2015 and 2015-16 it is expanded to 0.20, 0.23 thusly which impacts the presentation of the association .yet in the year 2016-17 it is diminished to 0.19 contrasting with the earlier year
- The most elevated Interest inclusion proportion is been seen in the year 2012-13 as it shows 15.72 further from 2017-2020 the interest inclusion proportion is said be in adverse the least interest inclusion proportion was in the year 2019-2020 which shows a negative proportion of (72.71).
- It is seen that in the year 2012-13 the working costs esteemed to 1.154 further expanded to 1.17. The most elevated Operating Ratio was seen in the year 2019-2020 with 258089.45 working costs and net deals of Rs. 180700.09 demonstrating working proportion to 1.428. During the 2015-2016 the working proportion was showed 1.094 which addresses the least working proportion in the examination time frame
- The representative expense proportion in 2012-2013 shows 38.03, the most elevated Employee cost proportion was seen in the year 2019-2020 which shows to 59.407 with 107349.56 of worker cost and 180700.09 of Net Sales in the investigation time frame. The least worker cost proportion was recognized in the year 2014-2015 which is displayed as 37.77 contrasting with the entire years in the whole examination time frame.
- The most noteworthy other expense proportion was recognized in the year 2018-19 shows to 1.710 with 3145.83 of other expense costs and 183884.05 of Net deals. The most minimal proportion is distinguished in the year 2015-2016 which shows to 0.594 with a costs of 1140.61 and the Net deals during the year was 191802.62 contrasting with whole years during the examination time frame.

- The Repairs and support proportion in the year 2012-13 shows 12.58 with 19078.78 expense and 151600.16 net deals. The most noteworthy proportion during the investigation time frame is shown 14.114 during the year 2017-2018 contrasting with the whole examination time frame and the least proportion was considered as 10.781 in the year 2014-2015.
- Bangalore Metropolitan Transport Corporation had the most noteworthy fuel and ointment expenses of roughly 35% of its complete consumption during the examination time frame from 2012 to 2016. The most elevated proportion was recognized in the year 2013-2014 as it shows 43.268
- It shows the examination from 2012-13 the assessments on traveller vehicle proportion to 5.576. The most elevated the proportion during the investigation time frame is addressed in the year 2016-2017 shows to 5.579 with an expense measure of 9878.67 and net deals 177047.15. The least duties on traveller vehicle proportion is displayed in the year 2014-15 with 5.570 its assessments in the year was 11107.82 and the net deals was 199411.06 which is a decent pattern seen in this year contrasting with different years in the investigation time frame
- The most elevated government assistance proportion is seen in the year 2019-20 for example 13.603 with a government assistance costs of 24582.33 and Net deals of 180700.09. The most minimal proportion is seen in the year 2012-13 was 6.06. It is seen that in the investigation period from the year 2012-13 to work the year 2019-2020 the government assistance costs proportion is in expanding pattern.
- In the year 2012-13 regulatory costs proportion shows to 4.133. In the year 2013-14 the proportion declined to 3.55 and encourage it kept on diminishing to 3.179, 3.156 in the year 2014-2016. The most noteworthy authoritative costs proportion was seen in the year 2018-2019 with 4.276. The most reduced Administrative

costs during the examination time frame was considered as 3.156 in the year 2015-16

- The most elevated Depreciation vehicles to deals Ratio was in the year 7.432 with devaluation of vehicle 11267.65 and Net deals of 151600.16. The most minimal devaluation vehicles to deals proportion was seen in the year 2017-18 which shows to 5.840
- The non-working costs proportion shows to 3.819 in 2012-2013. Further it was expanded to 5.508 in the year 2013-14 contrasting with earlier year. In the year 2104-2015 its proportion was 5.508. Further it moved minimal descending to 4.965 in 2016-17 yet from 2017 to 2020 it was decreased from 4. 91 to 2.85 and which works on the benefit of the association.
- The Net Profit proportion of BMTC was most elevated in the year 2015-2016 the worth of the proportion in this year was 0.715. The least Net Profit proportion of BMTC was in the year 2019-2020 the worth of the proportion in this year was (30.40)
- The Net worth proportion of BMTC was most elevated in the year 2012-13, the worth of the proportion in this year was 0.543. The Net worth proportion of BMTC was least in the year 2019-2020, the worth of the proportion in this year was (0.502). In the year 2013-14 the total assets proportion is positive yet it got declined contrasting with the earlier year from 0.54 to 0.35 and advance in the year 2012 to 2017 a nonstop diminishing is seen in the total assets yet from the year 2017-18 to 2019-2020 it shows a Negative worth
- The Return on value capital proportion of BMTC was most elevated in the year 2012-13, the worth of the proportion in this year was 4.924 during the examination time frame in the association. It is seen that during the year 2013-

- 2014 the worth of the proportion is 3.513 contrasting with the earlier year 2012-13 declined from 4.92 further in 2015-15 it is diminished to 2.89. In the year 2016-17 the worth of the proportion was seen to 0.52 which further diverted to negative from 2017 2020.
- The profit from capital utilized proportion of BMTC was most elevated in the year 2012-13, the worth of the proportion in this year was 36.847 and was least in the year 2019-2020, the worth of the proportion in this year was (37.815).
- The Capital Turnover Ratio of BMTC was most elevated in the year 2012-13, the worth of the proportion in this year was 1.084. The capital turnover proportion of BMTC was least in the year 2019-2020, the worth of the proportion in this year was 0.644 it is seen that in the year 2013-2014 the capital turnover proportion was 1.030. Further it shows a declining stage from the year 2015-16 to 2020 of the new year of the examination time frame.
- During the year 2012-13 the worth of the proportion was 0.724. The fixed resources and capital deals Ratio of BMTC was most elevated in the year 2014-15, the worth of the proportion in this year was 0.815 and it was least in the year 2019-2020, the worth of the proportion in this year was 0.625.
- During the year 2012-13 the capital equipping proportion was 2.101 further it has diminished to 1.559 in 2013-14. In the year 2014-15 to 2017 for example from 1.977 to 3.179, which decrease to 1.636 in the year 2017-18. BMTC capital outfitting proportion was most elevated in the year 2016-17, the worth of the proportion in this year was 3.179 and Lowest in the year 2013-14, the worth of the proportion in this year was 1.559.

## **5.2.1 Z-SCORE ANALYSIS**

- Z Score of BMTC from year 2012-2013 to 2016-2017 was falling under hazy situation which implies cautious checking is required. However, no concreter advance was taken to work on the exhibition of the company. As a piece of further developing the income acquiring limit of the organizations, different new income creating plans were presented and it has procure a warm greeting from the travellers. To keep up with similar degree of solidness in the incomes, the company come up short on the requires assets as far as more number of vehicles, course legitimization, more number of team and great conditions transports. The successful kilometres has expanded however has not come about into expansion altogether procuring for BMTC. Steps were adopted yet proficient strategy in embedding the choice and assessing the exhibition every once in a while was not done. Because of no responsibility for the exhibition in the following coming years for example 2018 to 2020, the exhibition as far as monetary position has declined. As a piece of social commitment, partnership is hauling itself adding more misfortunes to it
- Z score for the year 2018-19 onwards has fallen in a peril zone. This misery zone gives a sign of probability of bankruptcy with a year. A concentrated consideration is must for saving itself from going into bankruptcy. Taking a gander at the figure of misfortune step by step, the position was of indebtedness. Organization has utilized every one of the assets and state government has given all conceivable monetary guide. Presently, whatever monetary assistance offered by the enterprise will go into vein. It won't assist the company with giving any profit from the capital utilized by the public authority. At this stage if enterprise wish to improve and save itself from additional misfortune its dissolvability

position, then, at that point the entire company needs to gone through into a cycle of restoring itself. A well arrangement come closer from government is required. Government can 233 even consider postponing the capital advance given to the enterprise has a stage towards alleviating the partnership from the obligation position. A budgetary situation for the equivalent should be possible. An expert methodology from the base to top is required

## 5.2.2 Correlation Analysis

- Correlation between fixed assets and long term loans was 0.69 it is identified that
  the relationship is positive but it is below 1 which can be considered as Moderate
  positive relationship in BMTC
- Correlation between operating expenses and Net Sales is valued to 0.49. It is
  identified that the relationship between Operating expenses and net sales in
  BMTC was Positive but it's moderately positive as it is less that the value of 1
- The correlation between Employ cost and Net sales in BMTC valued to 0.36.
   Which indicates that the relationship is positive correlation between employee cost and net sales in BMTC. The Correlation between Welfare expenses and Net sales in BMTC was valued to 0.45. It indicates that the relationship is moderately positive correlation
- The Correlation between administrative expenses and Net sales was valued to
   0.03, it indicates a positive relationship in Administrative expenses in BMTC

## 5.2.3 FINDINGS OF ANOVA

• In ANIOVA table, calculated value of F-test with Corresponding p-Value is given. F was 2.727 and p- value was 0.03196. Here p-value was more than 0.05. Hence we reject the null hypothesis and we accept alternative

- In ANOVA table F value was 3.64833 and p- value was 0.04365. Here p-value was less than 0.05. Hence we reject null hypothesis i.e. there was a significance difference of total revenues between various sources of variation of BMTC and we accept alternative hypothesis i.e, there was no significance difference of total revenues between various sources of BMTC
- In ANOVA table calculated value of F-test with corresponding p- value was given. F value was 20.436 and p-value was 2.512 was more than 0.05 hence we accept the null hypothesis and we reject alternative hypothesis i.e., there was no significant difference of inventory management among various sources of BMTC
- The working results in lakh of BMTC. In ANOVA table F value was 141.350 and
   p value 4.375. Here p- value was more than 0.05 hence we accept the null
   hypothesis and reject alternative hypothesis i.e., there was no significant
   difference of total working results in lakh among various components of BMTC.
- ANOVA of working results in lakh of BMTC. In ANOVA table F value was 141.350 and p value 4.375. Here p- value was more than 0.05 hence we accept the null hypothesis and reject alternative hypothesis i.e., there was no significant difference of total working results in lakh among various components of BMTC.

## **5.2.4Suggestions**

• It can sell any capital resources that are not producing a re-visitation of the business and re-amortization of advance should be possible to work on the current proportion in the association .Thus it assists us with estimating the monetary presentation of the association and to take right choices by the financial backers of the organization

- Bangalore Metropolitan Transportation Corporation need to focus on further developing the Inventory turnover which lead to quicker change of stock into debt holders and money, the speedy resources would rise bringing about the fast proportion and furthermore they can focus on the assortment time frame which will straightforwardly effect on the fast proportion.
- The by and large position is good till the year 2018-2019 yet the vacillation is relatively high in the year 2020 to defeat this position organizations can build their liquidity position in a couple of various ways
- The dependability of indebted person's turnover proportion can be accomplished by focusing on normal follow of the receivables and building solid customer relationship which assists them with defeating from the decay of debt holder's turnover proportion.
- It is proposed to oversee and work on its functioning capital by inspecting interest instalments of the BMTC and overseeing stock. Customary observing of net working capital proportion is required, overseeing costs better to further develop income. Endeavours ought to be expanded to keep up with the current resources contrasting with current liabilities
- It can be proposed that the obligation value proportion of an organization can be accomplished by expanding deals incomes and ideally benefits and it should gather in diminishing the obligations by expanding its benefits in BMTC
- It is proposed to diminish the subsidized obligation to capital proportion by focusing on its incomes and benefits which can be accomplished by expanding the deals and decreasing the expense in Bangalore Metropolitan Transportation Corporation.

- Higher the value proportion to accomplish it the organization is proposed to build the commitment of investors to the funding to keep up with organization's better long haul dissolvability position.
- The most noteworthy dissolvability proportion shows the capacity of the association in gathering its commitments subsequently it is recommended to pack in working on the capacity of the association and furthermore assists with expanding the benefit of the association.
- Increase in fixed resources for total assets proportion it demonstrates that the firm is powerless against startling occasions and changes in the business environment consequently the organization is recommended to focus on diminishing the proper resources for total assets proportion which helps in keeping up with the liquidity of money in the association
- The Fixed resources of an organization is recommended to use over the long haul to assist with producing pay when a proper resources has arrived at the finish of its helpful life, it is typically discarded by selling it for a rescue esteem
- The organization is recommended put away its money on contributing on long haul supports which gives us the profits to the associations and to lessen the all-out current resources which incorporates current resources and investors reserve in BMTC
- Hence it is counsel ready to keep a more grounded interest inclusion to meet its obligation commitment by working on its networking pay and diminishing in the working costs to meet a decent interest inclusion proportion

- The working proportion of BMTC isn't good during the investigation time frame henceforth it is recommended to diminish the costs and furthermore to put away cash for the innovation reason will help in working pay
- The higher the representative expense demonstrates the venture on human asset in the association with the end goal of work... End of representatives additionally one of the justification expansion in worker cost proportion
- Increase in the expense consistently for the income thought process is acceptable yet without income if the costs are expanding it can't be considered as the sound situation of the organization. So it is encouraged to keep a wellbeing position with great benefit and speculation ought to be accomplished for useful reason.
- The fixes and support in the association expands the costs and ill-advised administration henceforth it is proposed to deal with fixes and upkeep cost without excessing a lot of which shows the awful pattern of the association
- The expansion in the working costs will prompt less benefit for a business frequently working cost get the most examination from an organization, as these sorts of expenses might be less fixed than their kinds of expenses might be less fixed than their non-working costs
- The charges on traveller vehicle proportion shows that higher the proportion demonstrates less benefit in the investigation time frame as the costs are more in working costs the lower the duty shows a positive pattern thus it is proposed to diminish the costs
- The government assistance costs is significant for the representatives which helps in the efficiency of the association yet at the same time it should focus on

the pay of the association so the costs can be diminished on government assistance exercises till the settlement in benefit is confronted.

- Hence it is proposed that the managerial can be decreased by diminishing buying resource or property to lease and by lessening amusement costs. Expansion in the proportion is to build the productivity in the association. Yet, it diminishes benefit of the association.
- The devaluation of vehicles to deals proportion during the investigation time frame was fluctuating henceforth it is recommended to focus on benefit making as opposed to contributing more on the costs
- The non-working costs of the BMTC is proposed to be decreased and should focus on benefit of the association. The costs like interest costs and misfortunes for the most part fall under other pay and costs
- It is recommended to work on the net benefit of the BMTC as it is by all accounts less in the examination time of the investigation .the decrease in net benefit shows that the organization is getting less cash
- The study period as it is showing the negative equilibrium so it proposed to BMTC for cutting obligation, they can take measures to change the negative total assets proportion over to positive proportion by disposing of the obligation of the association and advancements in the administrations.
- The organization's arrival of value capital is negative so it is proposed to further develop its value returns by raising the cost of the tickets and furthermore they can lessen the working costs with work costs.

- It is recommended that by selling obsolete transports would bring down the organization's complete resource base and hence work on the organization's profit from capital utilized.
- The capital turnover proportion is good in the start of the examination time frame yet further it is declined in the worth so it is proposed to further develop its capital turnover proportion with more limited working cycles, abstain from accumulating and increment deals income which acquires an expansion the capital turnover proportion.
- It can be recommended to work on its proportion by selling resources, further developing effectiveness and speeding up accounts receivables will assist the association with meeting acceptable level by expanding its decent resources for deals proportion.
- The Capital outfitting proportion is fulfilled in BMTC however to decrease their equipping proportion they can take care of their obligations like selling shares delivering more offers to general society to build investors value, which can be utilized to pay the organization's obligation and furthermore it can diminish functional expenses by expanding benefits

## **5.2.5 Z-Score Analysis**

It is seen that the Z score investigation in BMTC was good during the examination time frame from 2012-2020 has all the year it was positive tolerably subsequently it is proposed to improve to firmly certain. From the year 2017-2018 it was ceaselessly declining 1.15 to 2018-19 it was 0.81 and in the year 2019-2020 it shows 0.22

## **5.2.6 Coefficient Correlation**

Coefficient of Correlation was determined for knowing the connection between fixed resources and long haul credits. According to the test, the outcome was 0.69, which imply that there was a powerless positive relationship.

The proper resources doesn't affect the change (expansion) in long haul credits. The connection be tween's working costs and net deals was come about to 0.49 which demonstrates a positive relationship further the relationship was likewise determined to realize the worker cost and net deals of BMTC was esteemed to 0.36. Which shows that it sure connection. To examine the connection between government assistance costs and net deals the estimation of relationship came about to 0.03 signified has positive relationship.

### **5.2.7 ANOVA**

In ANIOVA table, determined worth of F-test with Corresponding p-Value is given. F was 2.727 and p-esteem was 0.03196. Here p-esteem was more than 0.05. Consequently we reject the invalid theory and we acknowledge elective

- In ANOVA table F esteem was 3.64833 and p-esteem was 0.04365. Here p-esteem was under 0.05. Thus we reject invalid theory for example there was an importance distinction of all out incomes between different wellsprings of variety of BMTC and we acknowledge elective theory i.e., there was no importance contrast of all out incomes between different wellsprings of BMTC
- In ANOVA table determined worth of F-test with relating p-esteem was given. F esteem was 20.436 and p-esteem was 2.512 was more than 0.05 subsequently we acknowledge the invalid theory and we reject elective

speculation i.e., there was no huge distinction of stock administration among different wellsprings of BMTC

- ANOVA of working outcomes in lakh of BMTC. In this table F esteem was 141.350 and p esteem 4.375. Here p-esteem was more than 0.05 thus we acknowledge the invalid speculation and reject elective theory i.e., there was no huge contrast of absolute working outcomes in lakh among different segments of BMTC.
- ANOVA of working outcomes in lakh of BMTC. In the introduced table F esteem was 141.350 and p esteem 4.375. Here p-esteem was more than 0.05 thus we acknowledge the invalid speculation and reject elective theory i.e., there was no huge contrast of absolute working outcomes in lakh among different segments of BMTC.

## **5.3 Conclusions**

BMTC being an administration undertaking is going through a difficult stretch during the investigation time frame. From antiquated time of its reality till date parcel numerous social commitments are finished. The changing time expectation for everyday comforts and improvement in transportation mode and its accessibility has offers a major conversation starter before an administration whether to proceed with such a misfortune! Simultaneously government can't get rid of the company. An exceptionally basic inquiry should be addressed is the manner by which long and how to make do with the monetary need.

Enterprise should consider changing the technique for its activity. Some hint of commercialization the assets should be carried out. Passing by the most recent report of the representative and inspector general of India, the state governmentpossessed public area endeavours are in desperate need of changes is the collected misfortunes are to be subdued. It has been examined that the partnership can't deal with the functioning capital and the net benefit of the association is negative according to the investigation done during the examination time of BMTC

The report additionally showed that notwithstanding the expanding misfortunes, the public authority had been streaming against the tide, expanding its all-out speculation to acquire would be the right choice for the organization. Furthermore, it's constantly recommended to decrease the working costs of the BMTC

The state government is giving the fundamental capital needed by the Bangalore Metropolitan vehicle Corporation and they offer types of assistance to the general population in a city like Bangalore it is required as all classes of individuals live in Bangalore greater part of people in general rely on street transportation due the expense. Also, the proper course of enterprise is making it hard to battle against the private administrators.

## **5.4 Scope for Future Research**

- Comparison of Cost and income boundaries of BMTC should be possible with private administrators
- A investigation of showcasing technique embraced by Private administrators can measure up to that of BMTC
- Few Techniques/instruments are utilized for estimating the monetary presentation. Some various strategies/devices can be utilized for drawing distinctive outcome.

- Field study can be attempted for knowing the assumption for the travellers.
   Traveller's perspectives can be executed for working on the exhibition
- The credibility study can be attempted for re-organizing of BMTC.
- As the investigation was restricted to just a Bangalore City, yearly monetary execution of BMTC in last 8 years was thought of. Scientists saw numerous wide extent of the investigation which can be additionally reached out for more productive outcomes.
- Some distinctive sort of result could be inferred if more number of years was taken for the investigation reason. One can assess the exhibition of BMTC in the time of Profitability that of the misfortune making years. Variables answerable for acquiring positive outcome can be distinguished and can be executed for changing over the adverse outcome into a positive outcome.
- Overall BMTC taxi be contrasted and diverse depots. One can recognize depots with positive outcome and steps can be taken to build the degree of benefit. Same way depots with adverse outcomes can be chosen for restoring it.
- Profit/Loss creating Corporation can be chosen and correlation of BMTC should be possible.

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# BANGALORE METROPOLITAN BALANCE SHEET AS AT

	Year 2014-15 Rs. in lakhs	10455.48	00:00		5312 25	0.00	90404.63	*	13225.48	2855.62		3			61823.70		14.71		49110.48		75.15	00.00	5618.22				30260.25	269159.97
	Rs. in lakhs	1	2 202	10									46924.44	3746.59	11152.67										36750 62	6490.37		
CAPITAL AND LIABILITIES	Particulars		2. Equity shares - Central Government	II. CAPITAL CONTRIBUTION (Schedule II)		2. Union Government Capital	III. INTERNAL RESOURCES (Schedule III B)	IV. RESERVES AND FUNDS		2. Depreciation Reserve (Schedule IV)	V. LOANS	a) Secured loans (Schedule V)	Term Loan from Commercial Banks	K.U.I.D.F.C Megacity	K.U.I.D.F.C JINURM	b) Unsecured loans	HDFC Loan towards Employees	VI. LIABILITIES	. Current Liabilities & Provisions (Schedule VI)	. Provision for write-off of anticipated loss on	disposal of obsolete stores	. Provision for bad and doubtful debts/advances	. Deposits (Other than Public Deposits)	VII NET DBOET		Care		Grand Total
1	Year 2013-14 Rs. in lakhs		0.00		5312.25		79004.63		2 1	3140.27	-	rd.		25	66914.22 3.	1	16.68		40037.40	42.62 2.		0.00	5681.95 4.	1	51509 54		-	253784.98

(Significant Accounting Policies (Schedule IX) (Notes forming part of accounts given separately)

Date: 21.11.2015 Place: Bangalore

44

(H.K. RAMAMANI) CHIEF ACCOUNTS OFFICER-CUM-F.A.

TRANSPORT CORPORATION 31st MARCH 2015

(DR. EKROOP CAUR)
MANAGING DIRECTOR

## **BANGALORE METROPOLITAN**

**BALANCE SHEET AS AT** 

			*	- A +		1.1		,	
	Year 2015-16 Rs. in lakhs	10459.48	5312.25 0.00 92904.63	15509.11	59471.45	6.93	45676.81 55.09. 0.00 6098.91	31632.91	279442.57
	Rs. in lakhs		200		8004.69 51466.76	Ne.		30260.25	
CAPITAL AND LIABILITIES	Particulars	EQUITY CAPITAL (Schedule i) Equity shares - State Government Equity shares - Central Government	CAPITAL CONTRIBUTION (Schedule II) Kamataka Government Capital Union Government Capital INTERNAL RESOURCES (Schedule III B)	RESERVES AND FUNDS Reserves (Schedule III A) Depreciation Reserve (Schedule IV)	LOANS Secured Ioans (Schedule V) Term Loan from Commercial Banks Loan from K.U.I.D.F.C.	Unsecured loans	Current Liabilities & Provisions (Schedule VI) Provision for write-off of anticipated loss on disposal of obsolete stores Provision for bad and doubtful debts/advances Deposits (Other than Public Deposits)	NET PROFIT  Net Profit b/f from previous year  Less: Net Loss b/f from Net Revenue  Appropriation Account	Grand Total
		0	= - 2 =	≥ - 3	. e c	b) VI.	÷ 2/ € 4/	2 + ≰	
1970	Year 2014-15 Rs. in lakhs	10459.48	5312.25 0.00 90404.63	13225.48	61823.70	14.71	49110.48 75.15 0.00 5618.22	36750.62 6490.37 30260.26	269159.97

(Significant Accounting Policies (Schedule - VIII) (Notes forming part of accounts given separately)

Date: 17.10.2016 Place: Bangalore 44

(H.K. RAMAMANI)
CHIEF ACCOUNTS OFFICER

## TRANSPORT CORPORATION

31st MARCH 2016

	Year 2015-16 RS. in	232008.59	46	0.00	14776.19	0.00	0.00		2504.48	2004 40	0.00	650.18	334.71	00:0	3.44	2732.82	227.62	75	2	0 %	**	22.00	0.00		
ETS	Rs.in lakhs		10772.46	2306.56	1697.17											7		1278.61	12766.02	0.00				* **	
PROPERTY AND ASSETS	Particulars	FIXED ASSETS (at cost) Schedule I) Fixed Assets Capital Work in progress				Insurance and Accident reserve fund Other Investments	7.7		Stores and Spares Work in Progress	Sundry Debtors Debtors Considered good	Debtors Considered doubtful	Advance to Employees	Advance to Suppliers Advance to other parties	Interest earned on investment but not received Stock Adjustment Account	Asset Adjustment Account	Deposit by the Corporation Pre-paid Expenses	Cash	Cash in Hand	Current Account	Term Deposit (Schedule VIII) Depot Managers Account	Total  Total	NETLOSS	Add: Net loss bif from the previous year	Appropriation Account	
		÷ + ≤		5.15	-	- 0	0.210			oi ⊝	<u> </u>	_		4. 7.	9	. 8	6 :	- =	8	6° <b>≘</b>	≥	> ,	- 6		
	Year 2014-15 Rs. in lakhs	231797.55	8987.85	0.00	12602.63	0.00	0.00	2067 50	27.83	4184.98	0.00	218.41	7237.99	3.45	0.00	554.21				j.	33.44	6	)		

(DR. EKROOP CAUR)
MANAGING DIRECTOR

## TRANSPORT CORPORATION **BENGALURU METROPOLITAN**

31st MARCH 2017 BALANCE SHEETAS AT

12848.13 3845.27 140.40 8134.88 1056.52 104.46 Rs.in lakhs **Grand Total** PROPERTY AND ASSETS iii) Advance to other parties
4. INTEREST EARNED ON INVESTMENT BUT . FIXED ASSETS (at cost) (Schedule VIII) IV. DEFERRED REVENUE EXPENDITURE Insurance and Accident reserve fund 5. STOCK ADJUSTMENT ACCOUNT 6. ASSET ADJUSTMENT ACCOUNT 7. DEPOSIT BY THE CORPORATION 2. Add: Net loss b/f from Net Revenue V. NET LOSS

1. Net loss b/f from the previous year Particulars i) Debtors considered good ii) Debtors considered doubtful Total iii) Depot Managers Account 2. Capital Work in progress 8. PRE-PAID EXPENSES i) Advance to Employees III. CURRENT ASSETS
1. INVENTORIES 2. SUNDRY DEBTORS ii. Civil works -JnNURM ii) Advance to Suppliers a) Current Account Appropriation Account i) Stores and Spares 2. Other investments ii) Work in Progress 3. Contingency fund b) Term Deposit II. INVESTMENTS ii) Cash at Bank: i) Cash in Hand NOT RECEIVED Fixed Assets i. Civil works 3. ADVANCES iii. Vehicles 9. CASH 10772.46 2504.48 0.00 232008.59 13079.02 2394.49 0.00 650.18 0.00 0.00 Year 2015-16 552.65 12766.02 0.00 334.71 0540.96 2732.82 1278.61 544.68 Rs. in lakhs 279442.57 4589.31 10459.48 0.00 0.00 0.00 11382.25 99404.63 14620.49 14477.92 47280.99 54.81 14375.47 58401.83 4436.53 5541.89 280436.29 Year 2016-17 Rs. in lakhs 47280.99 1.63 14373.84 31632.90 26091.01 Rs. in lakhs **Grand Total** CAPITAL AND LIABILITIES 1. Current Liabilities & Provisions (Schedule VII) Provision for bad and doubtful debts/advances III. INTERNAL RESOURCES (Schedule IIIB) 2. Provision for write-off of anticipated loss on II. CAPITAL CONTRIBUTION (Schedule II) 2.Less: Net Loss b/f from Net Revenue 1 Term Loan from Commercial Banks 2. Depreciation Reserve (Schedule IV) 4. Deposits (other than Public Deposits) 2. Equity shares - Central Government 1. Equity shares - State Government b) Unsecured loans (Schedule VI) I. EQUITY CAPITAL (Schedule I) Particulars a) Secured loans (Schedule V) Karnataka Government capital 1.Net profit b/f from previous year 1. Reserves (Schedule III A) IV. RESERVES AND FUNDS 2. Union Government capital disposal of obsolete stores 1. Loan from K.U.I.D.F.C. Appropriation Account VII. NET PROFIT VI. LIABILITIES

V. LOANS

51466.76

12312.00

15509.11

0.00

92904.63

5312.25

0.00 10459.48

2015-16

lakhs Rs. in Year

2. Others

8014.62

0.00

6098.91

55.09

45676.81

2543.79

233826.96

Year 2016-17 Rs. in lakhs 16833.80

0.00

187.90 237.74 11201.54

0.00

2967.77

0.00 3.44 0.00 3005.83 272.39

9295.86 11.00 0.00

(Significant Accounting Policies (Schedule IX) (Notes forming part of accounts given separately)

Date: 30 06.2017 Place: Bengaluru

31632.91

279442.57

(H.K. RAMAMANI) CHIEF ACCOUNTS OFFICER-FA

(DR. EKROOP CAUR)
MANAGING DIRECTOR

280436.29

43



## **International Journal of Management (IJM)**

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DOI: 10.34218/IJM.11.7.2020.158

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## AN ANALYSIS OF INCOME AND EXPENDITURE WITH SPECIAL REFERENCE TO BMTC, BANGALORE

## Dr. R. Saminathan<sup>1</sup>, Hemalatha. P<sup>2</sup> and Dr. R. Gopinath<sup>3</sup>

<sup>1</sup>Associate Professor & Head, PG & Research Department of Commerce, Government Arts and Science College (Formerly Bharathidasan University Constituent College),
Lalgudi, Tiruchirappalli, Tamil Nadu, India

<sup>2</sup>Research Scholar & Assistant Professor, Mangalore Institute of Management and Science, Bangalore, Karnataka, India

<sup>3</sup>D.Litt. (Business Administration) - Researcher, Madurai Kamaraj University, Tamil Nadu, India

## **ABSTRACT**

The motivation behind this investigation is to dissect the pay and consumption of BMTC by applying basic normal estimation technique. As far as contrasting its exhibition and proficiency for 3 years. It analyzes the data found inside an organization's benefit and misfortune account. The examination depended on optional information from records, reports and profile of the Bangalore metropolitan vehicle enterprise. Basic normal strategy is a technique which can be gotten by the normal pace of earnings and consumption things in the fiscal report and can be determined by duplicating the complete of the units essentially by the quantity of getting factors.

A goal of the investigation incorporates examining the productivity, perceiving the feeble functional regions and friends' in general monetary exhibition with appropriate idea for a superior adequacy and to defeat from the frail regions dissected in the organization. Transport is viewed as the existence line of the economy of the country. A productive street transport area, specifically, assumes a pivotal part in a district's financial advancement and development. Uniting both organic market sides, street transport area impacts whole range of social and financial exercises of a country. As of now, BMTC is one of the better run transport frameworks in the country.

**Key words:** Comparative Analysis, Financial Statements, Profitability.

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https://iaeme.com/Home/issue/IJM?Volume=11&Issue=7

## 1. INTRODUCTION

The term near examination is utilized to gauge the monetary connections between factors more than at least two announcing periods. Businesses utilize relative investigation as an approach to recognize their cutthroat positions and working outcomes over a characterized period. There are various approaches to gauge monetary execution as the financial backer might wish to look further into budget summaries and search out edge good and bad times. Near investigation is utilized with basic normal computation strategy basic normal technique is utilized by taking the normal of pay and costs by duplicating with factors to show up at the distinction. Gopinath (2019 b) concluded that based on the commercial activities impact to perception of electronic commerce practices by one way ANOVA test.

Most of the strong economies have adopted CSR principles within their corporate regulatory Mechanisms Gopinath (2019 a). Transportation is the fundamental wellspring of exchanging action which is a piece of financial development which takes care about development of people starting with one spot then onto the next. As we have different types of transportation in this paper creator focuses on the public transport transportation in Bangalore.

BMTC has achieved free presence with impact from 1997 after bifurcation from KSRTC. It began working under 2 level frameworks and later exchanged over to 3 level frameworks because of expansion in the volume of tasks.

## 2. REVIEW OF THE LITERATURE

Selvam et al. (2019) examines and estimates the value added Intellectual coefficient to measure the impact of intellectual capital on the Indian banking sector. The study confirms that there was progress in the overall performance of sample banks over the study period and the study also reflects the biased growth of a few sections in the Indian banking segment. Pavithran et al. (2018) concluded that the effect of adopting International Financial Reporting Standards, on the financial performance of sample companies of India during pre and post IFRS period of convergence. The study used Wilcoxon signed rank test, to test the statistical difference in financial ratios, prepared as per both the standards. Ganga et al. (2015) reveals that objective was to analyze the overall performance of the company and existing relationship between the current assets and current liabilities which helps in ascertaining the strengths and weakness in the operation and financial position of an enterprise. In this study used various research techniques to find the evaluation of financial performance of the company. Sathya and Umarani (2015) deciphered aims at to investigate the financial presentation of the organization and the 5 organizations. The exploration plan of the investigation is graphic examination plan and auxiliary information was gathered from the distributed sites of association for the examination. The apparatuses utilized for investigation is relative proportion examination of the monetary record. Appropriate proportions were outlined and determined to know the monetary exhibition of the organization. Gopinath et al. (2019) inferred that helpful to the financial planners and brokers for understanding pulse of the investors.

Hiran (2016) inferred that innovative copy examined the effect of liquidity proportion and furthermore examined the effect of influence proportion for example level of working Influence, level of monetary influence and joined influence on such proportions of productivity of organizations under investigation. The effect of working influence is reverse on working benefit shows higher extent of fixed expense in all out cost. Monetary influence is conversely identified with return on total assets in light of the fact that working benefit is less because of higher extent of fixed expense subsequently to increment working benefit the executives should attempt to build deals. Bijendra and Singhvi (2017) outlined that the study which aimed at analyzing profitability position of the Indian pharmaceutical sector. They conducted profitability of pharma companies having two main distinguishes facets which is a defensive

sector and it involves very high cost of Research & Development, which does not guarantee any assured returns. It was hence concluded that any firm with focus on Research & Development, Operating Profit and Gross Profit matters more, as their efforts Research & Development will generate returns after longer time period.

## 3. METHODOLOGY

**Secondary Sources**: Data involves the Bengaluru Metropolitan Transport Corporation manual, Bengaluru Metropolitan Transport Corporation website, annual administrative report BMTC magazines (Sanchara) and existing records.

**Period of the Study**: The study covered of 3 years income statement of BMTC located in Bangalore.

## **Objectives**

- To compare its performance for various periods.
- To analyze its financial position with income and expenses.
- To measure the efficiency of its performance.

## **Hypothesis of the Study**

There is significance association of various Divisional performance of the BMTC.

 $H_0$ - There is no Significance relationship between total expenses among divisions of BMTC.

H<sub>1</sub>- There is a significance relationship between total expenses among divisions of BMTC.

There is a significance relationship between components of Revenues of BMTC.

H<sub>0</sub>-There is no significance relationship between various Incomes of BMTC.

H<sub>1</sub>-There is a significance relationship between various Income of BMTC.

## **Limitations of the Study**

- This study is confined only to Bangalore.
- The study was limited to only three years financial data (2017-2020).
- The study is purely based on secondary data.

## 4. ANALYSIS AND INTERPRETATION

**Table 1** Traffic Revenue from sale of tickets during the period 2017 to 2020

Sl. No.	Financial Year	Traffic Revenue (in lakhs)						
1	2017-2018	181450.34						
2	2018-2019	167998.91						
3	2019-2020	168661.33						
Source: Data collected from the annual reports of BMTC								

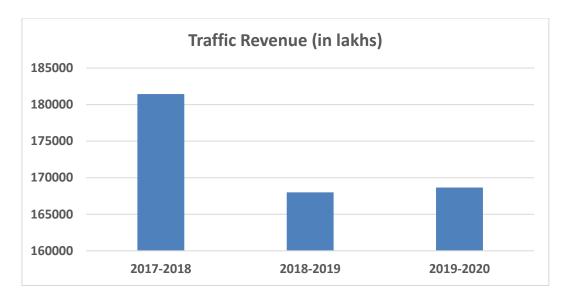


Chart 1 Traffic Revenue from sale of tickets during the period 2017 to 2020

**Inference:** As per table - 1 and chart - 1 it depicts that the traffic revenue has reduced from the period 2017-18 to 2018-19 the reasons are introduction of Metro, Car Pooling was popular, the two wheeler loans were cheaper which prompted people to go for it hence people using BMTC reduced during this period. This also shows that the services of BMTC have to improve to attract its potential passengers. In the period 2019-2020 it is witnessed that there is a slight improvement in the revenue which can shoot up to a better level with the innovative strategies that can be implemented by BMTC.

**Table 2** Traffic Revenue from Passenger Luggage for the period 2017 to 2020

Sl. No.	Financial Year	Passenger Luggage (in lakhs)							
1	2017-2018	33.06							
2	2018-2019	22.22							
3	2019-2020	19.48							
Source: Data	ource: Data collected from the annual reports of BMTC								

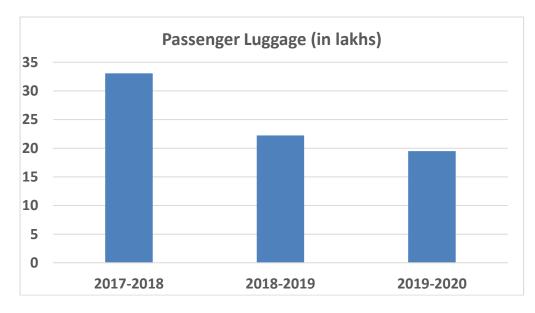


Chart- 2 Traffic Revenue from Passenger Luggage for the period 2017 to 2020

**Inference**: As per table -2 and chart - 2 it depicts that the passenger luggage has reduced from the period 2017-18 to 2018-19 from 33% to 22% and from 2018-19 to 2019-20 there is a drop up to 3% the reasons are as follows the complaints received from passengers stating that buses do not arrive on time, do not halt at designated stops, poorly designed, do not handle the luggage with care even though additional amount is been collected towards transportation of luggage care towards luggage is not to be found. These are the major factors resulting in decline in revenue from passenger luggage's.

Sl. No.	Financial Year	Employee cost (in lakhs)
1	2017-2018	80198.14

**Table 3** Total employee cost of BMTC for the period 2017 to 2020

91737.37

96632.85

Source: Data collected from the annual reports of BMTC

2018-2019

2019-2020

2 3

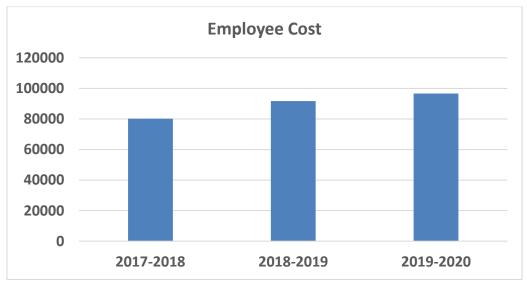


Chart - 3 Total employee cost of BMTC for the Period 2017 to 2020

**Inference**: From the table - 3 and chart - 3 it shows that the cost towards employees as increased the reasons are increase in the salary of the staffs and BMTC as the work force of 35,267 people and 45% of its expenditure involves salaries of staff (As per 2017 annual report). The continuous appraisal in the salary and incentives to the employees of BMTC has resulted in the increasing employee cost even though increase in cost is a negative sign it shows that the BMTC has to retain its existing employees and the employees have bear the city compensatory allowances to lead a decent living, hence even though there is an increase in the employee cost it is justifiable.

**Table 4** Total cost of BMTC for the period 2017 to 2020

Sl. No.	Financial Year	Total Cost (in lakhs)							
1	2017-2018	1140.61							
2	2018-2019	1064.96							
3	2019-2020	2438.02							
Source: Dat	Source: Data collected from the annual reports of BMTC								

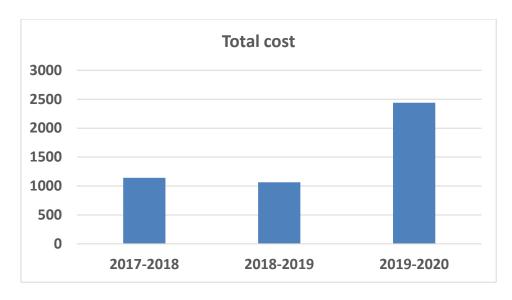
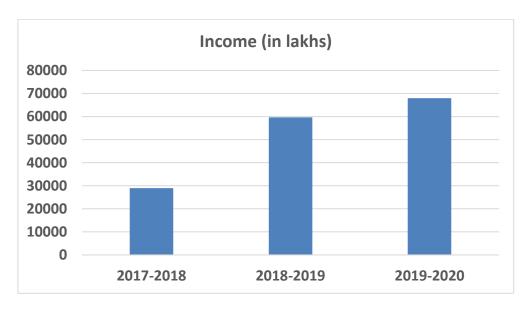


Chart - 4 Total cost of BMTC for the period 2017 To 2020

**Inference**: According to table- 4 and chart - 4 the cost of BMTC has drastically increased from 2017-20 due to various reasons such as poor maintenance of the buses, high operating costs, introduction of many private buses and mini buses, scraping of old buses, strikes and other disturbances in the society resulting in distraction of buses which is an unreasonable expense to be borne by the government. Hence the total cost has been drastically increasing, there should be some strategies planned by BMTC to alter this situation.

**Table 5** Income statement of BMTC for the period 2017 to 2020

Sl. No.	Financial Year	Total Income (in lakhs)							
1	2017-2018	28945.77							
2	2018-2019	59654.27 67990.37							
3	2019-2020								
Source: Data	ource: Data collected from the annual reports of BMTC								



**Chart - 5** Income statement of BMTC for the period 2017 to 2020

**Inference:** From the table - 5 and chart - 5 it is witnessed that there is increase in income of BMTC which is the result of increase in bus fares introduction of Volvo buses which supports better service with higher fare , due to traffic congestions people prefer BMTC for long drives which has resulted in increase in the percentage of people using BMTC which results in better income , increase in student passes also results in one time huge income and the buses flying towards airports have increased which attracts better fares for both passengers and luggage's .hence resulting in better income.

**Table 6** Showing correlation between current assets and current Liabilities

	Total current assets	Total Current Liabilities
<b>Total current assets</b>	1	-0.07
<b>Total Current Liabilities</b>	-0.07	1

It is observed that there is no correlation between Total Current assets and total current liabilities which indicates that it is moving in the opposite direction, if one variable increases the other variable decreases.

**Table 7** Showing correlation between Quick assets and Total Current Liabilities

	Quick Assets	Total Current Liabilities
Quick Assets	1	-0.33
<b>Total Current Liabilities</b>	-0.33	1

It is observed that the correlation between quick assets and total current liabilities valued to (0.33) which is negative position of the organization observed from the year 2017-2020. The study concludes that there is a negative correlation between the quick assets and current liabilities the correlation coefficient is calculated to be (0.33). This strong negative correlation signifies that as the quick assets increase the current liabilities decrease.

 Table 8 Showing correlation between Operating expenses and Net sales

	Operating expenses	Net sales
Operating expenses	1	0.91
Net sales	0.91	1

It is observed that the correlation between Operating expenses and Net sales is positive, which means that changes in operating expenses is related to the Net sales which shows the linear relationship.

Table 9 Showing ANOVA analysis between various divisions of BMTC

Groups	Count	Sum	Average	Variance
East	3	12.76	4.2533	0.0001
West	3	11.45	3.8167	0.0005
North	3	12.05	4.0166	0.0005
South	3	12.21	4.07	0.0075
Central	3	12.79	4.2633	0.0040
BMTC	3	11.23	3.7433	3.333

ANOVA						
Source of Variation	SS	df	MS	F	P-value	
Between Groups	0.701	5	0.14025	65.912	2.6	
Within Groups	0.025	12	0.00213			
Total	0.728	17				

To test the significance among different divisions of BMTC analysis of variance (ANOVA) was applied. For testing the hypothesis by ANOVA procedure, F- Test was applied. In ANOVA table, calculated value of F-test with Corresponding p-Value is given.

**Table 10** Showing ANOVA analysis between incomes of BMTC

Groups	Count	Sum	Average	Variance
Traffic Revenue	3	13093.27	4364.42	12087.86
Other Revenue	3	13308.81	4436.27	33404630.28
Gross Revenue	3	16402.08	5467.36	10794.97

Source of Variation	SS	df	MS	F	P-value
Between Groups	2284777.82	2	1142389	0.1025	0.904
Within Groups	66855026.22	6	11142504		
Total	69139804.05	8			

To test the significance among various Incomes of BMTC analysis of variance (ANOVA) was applied. For testing the hypothesis by ANOVA procedure, F- Test was applied. In ANOVA table, calculated values of F-test with Corresponding P-Value are discussed.

# 5. CONCLUSIONS

BMTC is the most oldest and grounded public restricted organization which has made an adequate name and distinction in the personalities of public for the administrations advertised. This study analyzed the financial position and Income and expenses of the Bangalore Metropolitan Transport Corporation using ratio analysis and correlation based on financial statements. During study period of 3 years it was found that Current Ratio and Quick Ratio are resulted negative Operating Ratio was resulted Positive. The Traffic Revenue from sale of tickets and Passenger Luggage during the period were in decreasing trend it was noticed that in the year 2018 the revenue from sale of tickets was satisfactory, total employee cost and total cost of BMTC was in increasing trend. Division's and Income comparison also conducted to analyze the position using ANOVA. Hence it is suggested that the revenue from sale of tickets and passenger luggage should be increased by increasing the number of frequent buses to the bus stops. It shows that the expense towards workers as expanded the reasons are expansion in the compensation of the staffs, it is seen that there is expansion in pay of BMTC which is the consequence of expansion in transport passages presentation of Volvo transports which supports better help with higher charge. Subsequently if the drivers and staffs are furnished with acceptable preparing office to further develop the development BMTC can draw out its exhibition effectively.

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# A STUDY ON PERFORMANCE MANAGEMENT IN BMTC WITH SPECIAL REFERENCE TO DIVISIONS

# Dr. R. Saminathan<sup>1</sup>, Hemalatha. P<sup>2</sup> and Dr. R. Gopinath<sup>3</sup>

<sup>1</sup>Associate Professor & Head, PG & Research Department of Commerce, Government Arts and Science College (Formerly Bharathidasan University Constituent College), Lalgudi, Tiruchirappalli, Tamil Nadu, India

<sup>2</sup>Research Scholar & Assistant Professor, Mangalore Institute of Management and Science, Bangalore, Karnataka, India

<sup>3</sup>D.Litt.(Business Administration ) - Researcher, Madurai Kamaraj University, Tamil Nadu, India

#### **ABSTRACT**

A financial performance management is essential for every company to know the position of the business in this competitive world which helps them to analyse their strength and weakness. It analyses four years of data. This research study has been done with regards to divisions of BMTC in Bangalore. For the study purpose, secondary data have been collected from the annual report of these divisions for the period of four years starting from 2017-2020. Data has been analysed by applying one-way ANOVA. From the analysis, it has been concluded that there is a statistically significant difference in financial performance of these divisions based on the components like kilometre per litre top up oil, Total Vehicles, average vehicles on road and staff productivity of different zones. The expenses incurred with different zones have been analysed. It has been found from the study BMTC remains in standing Position compared to all other divisions between East, west, north, south and central zones. This also helps us to analyse the revenue and expenditure of the BMTC which gives information about financial health.

Key words: Financial Performance Management, KMPL, Financial health

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# 1. INTRODUCTION

The monetary presentation the executives alludes to the manners in which that an organization oversees and screens monetary outcomes across an association. The basic role of monetary execution the board is to contrast the outcomes with gauge and make changes appropriately. Street transport is viewed as one of the most practical and favoured method of transport, both for cargo and travellers, keeping in view its degree of entrance into populated region. Consequently it is essential for financial turn of events and social combination of the country. The Bangalore Metropolitan Transport Corporation is the sole public transport supplier for dependable, spotless and reasonable travel. The declaration of its prosperity lies in expanding traveller trips ordinarily by a wide scope of client base. With an end goal to modernize its administrations for worker solid, spotless and reasonable travel. Gopinath (2016 a) and Gopinath and Kalpana (2019) concluded that based on the analysis and discussion BSNL has good performance management systems, which makes the employees, were highly satisfied on the promotion, co-workers, work supervision and regard to payment for employees. De-Waal, (2007). PMS is impossible to be effective if focus is not given to performance driven behaviour rigorously and managers acting as role models. De-Waal and Coevert, (2007). The efficient implementation and effectiveness of PMS depends upon the behavioural factors of the employees and manager, and as how the managers beguiled the employees towards PMS. This gives us an impression that there are a variety of behavioural, psychological, and managerial factors that are involved in the effectiveness and efficiency of a employees and the organisation as well (Gopinath, 2016b). Dobija and Kravchenko 2017), the structure of the board of shareholders. Most of the strong economies have adopted CSR principles within their corporate regulatory Mechanisms (Gopinath, 2019). The issues related to industrial relations should also be taken care to improve the performance (Gopinath, 2014). Transportation is the fundamental wellspring of exchanging action which is a piece of financial development which takes care about development of people starting with one spot then onto the next. As we have different types of transportation in this paper creator focuses on the public transport transportation in Bangalore

# 2. REVIEW OF THE LITERATURE

Jawaria *et al.* (2010) this study gives us a clear picture of the PMS in the investigated organization. It fulfils all the major objectives identified for this research that is to study and verify the performance management system currently being applied in organization and comparing it with the standard PM model and to Identify barriers to implementation of effective performance management system

Kashif Rashid *et al.*(2015) the paper measure the financial performance of local and foreign banks operating in Pakistan, and secondly it investigates the causes of performance deficiencies. The performance of the sample banks is measured by using one-way Analysis of Variance ANOVA. It is concluded that foreign banks have a sound financial structure compared to local banks.

Idhayajothi *et al.*(2014) the study reveals that the financial performance is fair. It has been maintaining good financial performance and further it can improve if the company concentrates on its operating. The company should increase sales volume as well as gross profit. The company was able to meet its entire requirements for capital expenditures and higher level of working capital commitment.

Balaji (2015) The study on financial performance of company has revealed the financial strength and weakness of the company. The study shows that the profitability is decreased in the last year due to increases of the expenses and the company should take effective decisions

at the right time so as to rectify the weakness and it will lead to the efficient functioning of the business. The overall performance of the company is satisfactory.

Somnath Das(2020) this study focuses on the fundamental analysis which helps investors to select company to invest using ANOVA the significant relationship is been found with the selected companies specially concerning to Britannia, Daburm Godrej, HUL, ITC, Marico and Nestle companies.

Keerthi and Eswari (2020) The study was conducted in Kumbakonam to find out the financial performance of the bank using ratio analysis. After analysing the bank's five year financial reports. It is concluded that the overall financial performance of the bank is good. Based on the findings it is clear that the Banks's investment on government securities increases and the bank's investment on government securities increases and the bank has to take some necessary actions to improve its cash position and profitability.

Gopinath and Shibu (2014) have investigated the impact of periodical performance appraisal and consecutive rewards on job satisfaction. The research was conduct with BSNL employees through structured questionnaire. They found that in case of performance and satisfaction, one will not exist without other. So if you want to enhance the performance, satisfaction should be improved and vice versa.

Vijaya Batth *et al.*(2018) The examination fuses different monetary proportions of the organizations, which are under Maharatna and Navrana classifications. The examination assists with finding the organizations, which the monetary exhibitions are "great" or "poor". It shows that these organizations monetary execution are poor. In this examination, we tracked down a significant tracking down that, those organizations having great monetary position yet their additionally having less market capitalization. The review of the literature states that poor execution as per the review, but there is a variation in the performance when it is compared from place to place so there is a requirement to analyse the financial performance in road transportation in Bangalore.

### 2. OBJECTIVES

- To assess the relationship between various zones
- To assess the overall financial performance
- To measure the financial condition of the BMTC

#### 3. HYPOTHESIS OF THE STUDY

H<sub>0</sub>: There is no significance relationship between total vehicles used in different zones

 $\mathbf{H}_1$ : There is a significance relationship between total vehicles used in different zones

H<sub>0</sub>: there is no significance relationship between staff productivity among various zones

H<sub>1</sub>: There is a significance relationship between staff productivity among various zones

H<sub>0</sub>: There is no significance relationship between Kilometres per litre

H<sub>1</sub>: There is a significance relationship between kilometres per litre

H<sub>0</sub>: There is no association between utilization of vehicles on road

H<sub>1</sub>: There is an association between utilization of vehicles on road

# 4. METHOD OF DATA COLLECTION

Secondary Data: It refers to the data collected by someone other than the user i.e. the data is already available and analysed by someone else. Common sources of secondary data includes books, magazines, newspapers, journals etc. in this study secondary data collection was used.

# **Sampling Design**

The present study was mainly focused on various divisions of Bangalore Metropolitan Transport Corporation. The samples are (East, West, North , South, North East, Central)the staff productivity , availability of vehicles , utilization of vehicles and KMPS is been considered for the study using ANOVA

# 5. STATISTICAL TOOLS USED

ANOVA technique is been utilised for the following:

- Vehicles available at various divisions
- Vehicles utilised at various divisions
- KMPS at various divisions using Staff Productivity among divisions of BMTC

# 6. PERIOD OF THE STUDY

The study covered a period of 3 years (i.e 2017-2018 to 2019-2020) from the annual reports of BMTC

# 7. LIMITATIONS OF THE STUDY

- This study is confined only to Bangalore.
- The study was limited to only Three years financial data (2017-2020)
- The study is purely based on secondary data

# 8. ANALYSIS AND INTERPRETATION

Table 1 Showing Total Vehicles

Total Vehicles	2017-2018	2018-2019	2019-2020			
East	1030	1031	1058			
West	1179	1181	1202			
North	1389	1412	1471			
South	1120	1139	1158			
North East	898	906	940			
Central	848	852	861			
Source: Annual Reports of BMTC						

Groups	Count	Sum	Average	Variance
East	3	3119	1039.667	252.3333
West	3	3562	1187.333	162.3333
North	3	4272	1424	1789
South	3	3417	1139	361
North East	3	2744	914.6667	497.3333
Central	3	2561	853.6667	44.33333

Source of Variation	SS	df	MS	F	P-value
Between Groups	637510.3	5	127502.1	246.275	1.170
Within Groups	6212.667	12	517.7222		
Total	643722.9	17			

From the table-1, it is analysed that p-value identified has 1.17 which is higher than 0.05, the result is considered has non-significant. Hence it is concluded that null hypothesis is accepted and  $H_1$  is rejected based on the above analysis

 Table 2 Showing Average vehicle on road

Average Vehicle on road	2017-2018	2018-2019	2019-2020
East	865.4	867.6	864.4
West	1011.5	1021.6	1004.8
North	1266.6	1267.8	1239.9
South	1023.3	1022.2	1003.9
North East	787.8	786	788.7
Central	648.5	649.5	640.7
Source: Annual Reports of BMTC	•		

Groups	Count	Sum	Average	Variance
East	3	2597.4	865.8	2.68
West	3	3037.9	1012.633	71.52
North	3	3774.3	1258.1	248.79
South	3	3049.4	1016.467	118.74
North East	3	2362.5	787.5	1.89
Central	3	1938.7	646.2333	23.21

Source of Variation	SS	df	MS	F	P-value
Between Groups	680694.7	5	136138.9	1749.708	0.0966
Within Groups	933.68	12	77.80667		
Total	681628.3	17			

From the table-2 it is analysed that p-value identified has 0.0966 which is higher than 0.05, the result is considered has non-significant. Hence it is concluded that null hypothesis is accepted and  $H_1$  is rejected based on the above analysis

**Table 3** Showing KMPL

2017-2018	2018-2019	2019-2020
4.26	4.24	4.25
3.79	3.83	3.84
3.99	4.03	4.01
4.17	4.02	4.01
4.19	4.3	4.34
3.74	2.33	2.36
	3.79 3.99 4.17 4.19	3.79 3.83 3.99 4.03 4.17 4.02 4.19 4.3 3.74 2.33

Groups	Count	Sum	Average	Variance
East	3	12.75	4.25	1E-04
West	3	11.46	3.82	0.0007
North	3	12.03	4.01	0.0004
South	3	12.2	4.066667	0.00803
North East	3	12.83	4.276667	0.00603
Central	3	8.43	2.81	0.6489

Source of Variation	SS	df	MS	F	P-value
Between Groups	4.482378	5	0.896476	8.09865	0.001509
Within Groups	1.328333	12	0.110694		
Total	5.810711	17			

From the table-3 it is identified that the p-Value is 0.005 which is less than 0.05 indicating the significance relationship between different divisions in BMTC. Hence Null hypothesis is rejected and H<sub>1</sub> is accepted based the data analysed

2018-2019 **Staff Productivity in KMS** 2017-2018 2019-2020 East 34.8 35.1 36.2 West 33.86 34.9 34.3 34.9 35.8 35.4 North South 32.67 32.1 32.1 North East 35.45 35.9 36.8

37.3

37.2

37.3

**Table 4** Showing Staff Productivity in KMS

Groups	Count	Sum	Average	Variance
East	3	74.78	24.92667	345.2721
West	3	103.06	34.35333	0.272533
North	3	106.1	35.36667	0.203333
South	3	96.87	32.29	0.1083
North East	3	108.15	36.05	0.4725
C11	2	111.0	27.26667	0.002222

Groups	Count	Sum	Average	Variance
East	3	74.78	24.92667	345.2721
West	3	103.06	34.35333	0.272533
North	3	106.1	35.36667	0.203333
South	3	96.87	32.29	0.1083
North East	3	108.15	36.05	0.4725
Central	3	111.8	37.26667	0.003333

Source of Variation	SS	df	MS	F	P-value
Between Groups	299.3284	5	59.86568	1.037138	0.439585532
Within Groups	692.6643	12	57.72202		
Total	991.9926	17			

From the table-4 it is rectified that the p-value is valued to 0.439 which is less than 0.05 which shows that there is a significant relationship between various divisions at BMTC. Hence it is concluded that null hypothesis is rejected and H1 is accepted based on the analysis

	Result Analysis				
$H_0$	Total Vehicles	H <sub>0</sub> -Accepted			
$H_1$	Total venicles	H <sub>1</sub> - Rejected			
$H_0$	Arrana as Wahiala an mad	H <sub>0</sub> -Accepted			
$H_1$	Average Vehicle on road	H <sub>1</sub> - Rejected			
$H_0$	KWDI	H <sub>0</sub> -Rejected			
$H_1$	KMPL	H <sub>1</sub> -Accepted			
$H_0$	Cueff Due description in VMC	H <sub>0</sub> -Rejected			
$H_1$	Staff Productivity in KMS	H <sub>1</sub> -Accepted			

# 9. CONCLUSION

Central

Source: Annual Reports of BMTC

The study was conducted in Bangalore to find out the financial performance of the BMTC using ratio analysis. After analysing the three years Annual administrative Report regarding Vehicles available, vehicles utilization, KMPL and KMP. it is concluded that from the analysis of the above study concerning to the availability of vehicles, usage of vehicles kilometre per top up oil and KMS it is found that the there is no significant relationship between different divisions in case of availability and utilization of vehicles of BMTC but the analysis on KMPL and KMS is notified with the significant relationship hence anova test is been applied for the duration of three years of financial statement information and The same have been the conclusion of Saminathan *et al.* (2020). Expectation of exemplary results without providing adequate resources may leads to occupational stress related physical and psychological issues to employees (Gopinath and Ganesan, 2014).

# SCOPE FOR FURTHER RESEARCH

The study provides further scope using various other statistical tools and considering few more years of data as we have considered and analysed three years of data, comparative ratio analysis can be used among various divisions of BMTC. It is important to know the position of the company in the competitive which provides opportunity to extend its growth by providing quality services to the public.

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