A STUDY ON WORKING CAPITAL MANAGEMENT WITH SPECIAL REFERENCE TO NEW MANGALORE PORT AUTHORITY, MANGALORE

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SUBMITTED BY

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DECLARATION

I, SURAVI G JANA bearing Reg. No. 2116184 hereby declare that the project titled “A STUDY ON WORKING CAPITAL MANAGEMENT WITH SPECIAL REFERENCE TO NEW MANGALORE PORT AUTHORITY, MANGALORE has been prepared by me towards the partial fulfilment of the requirements for the Master of Business Administration (MBA) program under the guidance of DR. NAGENDRA S, Associate Professor, AIMIT. I also declare that this project report is my original work and has not previously formed the basis for the award of any degree, diploma, associate ship, fellowship or other similar titles of any other university

Date: 05/07/2023 SURAVI G JANA

Place: Mangalore Reg. No. 2116184

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EXECUTIVE SUMMARY

The New Mangalore port, located near Panambur, in Mangalore, Karnataka, India, serves as Karnataka's primary port and ranks as the seventh largest port in India. Under the administration of the New Mangalore Port Trust (NMPT), it was inaugurated on May 4, 1974, by Prime Minister Indira Gandhi, following the commencement of construction in 1962. The port is owned by the Ministry of Shipping.

This is a project report titled "**A STUDY ON WORKING CAPITAL MANAGEMENT WITH SPECIAL REFERENCE TO NEW MANGALORE PORT AUTHORITY, MANGALORE ".** The area of the project is Finance. The information provided in the financial statements, and analysis allows the financial analyst to asses a company's financial position and performance and profitability of working capital. Financial tools such as comparative and ratio analysis are used to analyse the study.

The objective of this project Report is to understand the analysis of financial efficiency of New Mangalore Port Trust for the period 2017-18 to 2021-22 and to study the profitability of New Mangalore port trust

CHAPTER 1
INTRODUCTION

1.1.1 INDUSTRY PROFILE

The port and shipping industry play a crucial role in facilitating import and export activities, primarily conducted through maritime trade by ships. India has a rich history of sea commerce, being a significant hub for maritime trade in the South Asian region for centuries. As early as 2900 BCE, during the Indus Valley civilization, Indian traders embarked on long oceanic voyages before the establishment of the Silk Road. These traders sailed across the Indian Ocean and the Arabian Sea, covering vast distances to reach markets in West Asia, East Asia, Southeast Asia, and East Africa. Concurrently, traders from these regions, particularly from Arabia and China, frequently visited the Indian Subcontinent to trade commodities such as silk, spices, and even slaves. The shipping sector thrived due to the trade connections between Asian and European countries.

India's ports and shipping industry hold immense importance in fostering the nation's trade, commerce, and overall economic development. The establishment of ports in India can be traced back to commercial disputes between England and France. Lothal, situated in Gujarat, is considered the earliest harbour utilized by the Indus Valley civilization. However, Kolkata is recognized as India's first functional port during the British era.

The primary objective of Indian ports is to enhance the country's revenue and cater to the needs of its people by facilitating import and export activities. A wide range of commodities, including crude oil, LPG, edible oil, wood logs, raw cashews, paraffin wax, chemicals, machinery, salt, limestone, vegetables, fruits, plywood, iron ore, pallets, coffee, cocoa powder, tiles, foodstuffs, wax candles, polished granite, rice, printed books, and more, are imported and exported through these ports. Numerous countries actively engage in marine commerce for their import and export operations

1.1.2 Growth and Development

The capacity expansion of ports is projected to grow at a compound annual growth rate (CAGR) of 5-6 percent until 2022, resulting in an additional capacity of 275-325 million metric tons (MT). The utilization of domestic rivers has been identified as a cost-effective and environmentally friendly mode of freight transportation, with the government aiming to have 23 waterways operational by 2030.

Recent Developments:

- In the first quarter of FY 2021-22, Adani Ports and Special Economic Zone Ltd recorded a significant year-on-year increase of 83 percent, handling 75.69 million metric tons (MMT) of cargo.

- India's merchandise exports reached US$95 billion in the three months ending June 2021.

- In April 2021, the Competition Commission of India (CCI) approved Adani Ports and Special Economic Zone Limited's plan to acquire 89.6 percent stake in Gangavaram Port Limited.

- Adani Ports entered into an agreement with Vishwa Samudra Holdings Pvt. Ltd. in April 2021, acquiring a 25 percent ownership in Adani Krishnapatnam Port Limited (Krishnapatnam Port) for Rs. 2,800 crores.

- Adani Ports and Special Economic Zone Limited announced its intention to acquire 58.1 percent of Gangavaram Port Limited for Rs. 36.04 billion (US$493.7 million) in March 2021. Currently, the port is owned by DVS Raju and his family.

- In March 2021, Adani Ports announced a collaboration with John Keells Holdings and the Sri Lankan Ports Authority to develop and operate the West Container Terminal at the Colombo Port in Sri Lanka for a period of 35 years.

- Jawaharlal Nehru Port Trust initiated a comprehensive solid waste management project in February 2021 as part of its green port initiatives.

- Mormugoa Port Trust extended concessions on iron ore imports and export freight traffic until June 2021 in November 2020 to support India's iron ore shipping trade during the COVID-19 pandemic.

- In November 2020, JSW Infrastructure completed the acquisition of Chettinad Group's port business for Rs. 1,000 crore (US$135.50 million). This acquisition includes ownership and operational control of a deep draught international coal terminal and a bulk terminal at Kamarajar Port Limited, as well as a coal and bulk commodity terminal at New Mangalore Port Trust (NMPT).

- Adani Ports and Special Economic Zone Limited finalized the acquisition of Krishnapatnam Port Company Ltd. in October 2020, with a total enterprise value of Rs. 12,000 crore (US$1.63 billion).

- In July 2020, Adani Ports and Special Economic Zone Ltd conducted an offshore bond issue, raising US$750 million.

- From April 2000 to March 2021, the port sector in India received a total of US$1.64 billion in foreign direct investment (FDI).

- DP World announced a new train service between Kochi and Bangalore in January 2020, resulting in cost and transit time reductions of over 40% between the two cities.

1.1.3 Major Ports of India

1. Kolkata Port: Located in Kolkata, West Bengal, it is India's oldest operating port and the only riverine major port in the country. It was built by the British East India Company and is known as Syama Prasad Mookerjee Port Trust.

2. Paradip Port: Situated in Jagatsinghpur, Odisha, it is a natural deep-water port on India's east coast, where the Mahanadi and Bay of Bengal rivers meet.

3. New Mangalore Port: Located in Panambur, Karnataka, it is the deepest inner harbor on the west coast of India. It is the state's only major port and the seventh largest port in India.

4. Cochin Port: Situated in Kochi, Kerala, it is India's first transshipment port. Cochin Port Trust and Dubai Ports World operate it, while the Ministry of Shipping, Government of India, owns it.

5. Jawaharlal Nehru Port (Nhava Sheva Port): Situated east of Mumbai, it is India's largest container port. It is operated by the Jawaharlal Nehru Port Trust and owned by the Government of India. The port handles a variety of exports and imports, including textiles, sporting items, carpets, chemicals, and more.

6. Mumbai Port: Located in Mumbai, Maharashtra, it is a natural harbor with deep water. Incorporated as a corporation on June 26, 1873, the Mumbai Port has grown over the years with the development of berths and cargo processing capacity.

7. Kamarajar Port (Ennore): Formerly known as Ennore Port, it is situated on the Coromandel Coast, north of Chennai. It is India's first public company and port. Kamarajar Port is envisioned as Asia's energy port, operates as India's first corporatized port, and specializes in trades like thermal coal, automobiles, project cargo, and more.

8. Chennai Port: Previously known as Madras Port, it is India's second largest container port. Located in Chennai, Tamil Nadu, it opened in 1881. The port is operated and owned by Chennai Port Trust, the Ministry of Shipping, and the Government of India. It handles

various trades, including automobiles, iron ore, granite, coal, fertilizers, and petroleum products.

9. Mormugao Port: Situated in Goa, it is India's most important iron ore export port. The port, which opened in 1885, is operated by Mormugao Port Trust and owned by the Government of India.

10. Visakhapatnam Port: It is the sole major port in Andhra Pradesh and the largest on the Eastern Coast of India. Located midway between Chennai and Kolkata, it opened on December 19, 1993, and is known for its significant cargo volume.

1.1.4 Industry Competition

1. Belekere Port: Located north of Ankola and south of Karwar, Belekere Port is the second largest minor port in Karnataka after Mangalore. Its strategic advantage is its proximity to Hospet and Bellary, known for iron ore mining. The port primarily serves for iron ore exports.

2. Malpe Port: Situated in Udupi district, Malpe Port is primarily used for fishing activities. It is undergoing development with plans to construct a 44-meter-long, 12-meter-wide dock and dredging up to 4.50 meters.

3. Karwar Port: Positioned at the northernmost tip of the Karnataka coast, Karwar Port is located on the southern bank of the Kali River, about 64 kilometers south of Mormugao Port.

4. Honnavara Port: Honnavara Port is situated at the meeting point of the Sharavathi River and the Arabian Sea, near the city of Honnavara in the Uttar Kannada District. Efforts to upgrade the port to handle larger ships have faced challenges.

5. Padubidri Port: Located in Udupi district, discussions have taken place regarding the development of Padubidri Port to handle coal required for a nearby thermal power plant in the village of Nandikur.

6. Kundapura Port: Kundapura Port is situated close to the city of Kundapura in Udupi District, at the confluence of the Pancha Gangoli River. Despite its proximity to NH17 and the Konkan Railway, the development of this port has not progressed significantly.

7. Bhatkal Port: Bhatkal Port is a well-protected harbor located on the bank of the Sharabhi River. It has the potential to be expanded into a modern fishing harbor with advanced fish handling facilities. The port is surrounded by hills and a river.

8. Hangarakatta Port: Hangarakatta Port is situated at the banks of the Sita and Swarna rivers. Currently, access to this port is limited to a sandbar. With the construction of appropriate river training walls, this port can be converted into an all-weather port.

1.1.5 Market Share

India accounts for approximately 95% (by volume) and 68% (by value) of the country's external trade, with its ports collectively having a cargo handling capacity of around 2400 million tonnes per year (MTPA). Additionally, India holds a prominent position among the top five ship recycling nations globally, contributing to about 30% of the global ship recycling market.

1.1.6 Present Status and Future Prospects

The Major Port Authorities Act 2021, adopted by the Government of India, aims to grant more autonomy to major port trusts by transforming them into port authorities. This transition enables ports to make quicker decisions regarding infrastructure development.

Regarding the impact of the epidemic, late 2020 experienced the most significant decline, with cargo volumes dropping by over 23.25% compared to the same period the previous year. However, starting from June 2020, there have been signs of recovery in freight and container traffic. Since November 2020, major ports have consistently reported positive growth.

The Maritime India Vision 2030 emphasizes various projects such as the construction of new ports, establishment of world-class mega ports, development of transhipment hubs, and modernization of port infrastructure. These initiatives are expected to create 7 to 10 lakh new

employment opportunities in the industry. Moreover, the Maritime Vision 2030 is projected to attract investments ranging from 1 lakh to 1,25,000 crores for capacity expansion and the construction of state-of-the-art facilities at Indian ports.

There is currently an increased focus on developing a highly efficient multi-modal logistics network. The government is actively working on policy changes in multimodal logistics and upgrading inland waterway infrastructure to facilitate this objective.

1.1.7 SWOC Analysis

Strengths:

- Expertise in handling hazardous items during freight operations
- Round-the-clock pilotage services
- Comprehensive land and sea security measures
- Strong business performance

Weaknesses:

- Limited capacity for handling specialized cargo
- Increased tariff rates
- Weak hinterland connectivity
- Open competition from other ports and private facilities

Opportunities:

- Growing global demand for various types of cargo
- Diverse Indian export and import markets
- Potential for further infrastructure development
- Enhancement of management and training practices
- Efficient utilization of available resources to reduce turnaround times

Challenges:

- Port operations governed by a legislative system, leading to limitations
- Influence of government in decision-making processes
- Private and competitive ports offering lower shipping prices

1.2 COMPANY PROFILE

1.2.1 Background of the Company

New Mangalore Port, located near Panambur in Mangalore, Karnataka, India, is an all-weather port and the largest port in Karnataka. Managed by the New Mangalore Port Trust (NMPT), it was inaugurated on May 4, 1974, by Prime Minister Indira Gandhi, with construction commencing in 1962. Owned by the Ministry of Shipping, the port consists of 17 berths and primarily serves the hinterlands of Karnataka and Kerala.

The port, previously known as "Mangalore bunder" or "Old bunder," played a significant role during the golden era of Karnataka under the Vijayanagara Empire. In order to meet the growing demands of maritime modernization and development, the Mangalore Harbor Project was initiated in 1962 and completed in May 1974. It was officially inaugurated on January 11, 1975, by Prime Minister Indira Gandhi.

Initially, the project and port were centrally managed by the Government of India until the establishment of the Port Trust Board on April 1, 1980, under the Major Port Trust Act of 1963. Since then, New Mangalore Port has been operating as the country's 9th Major Port Trust, alongside other major ports.

India heavily relies on efficient sea routes for import and export activities, making the shipping industry and waterway transit crucial components of the country's transport sector. With the largest merchant shipping fleet among developing nations and ranking 17th globally in terms of shipping tonnage, India's shipping sector supports various services, including cargo transportation, shipbuilding/repairing, freight forwarding, lighthouse facilities, and maritime personnel training.

The establishment of New Mangalore Port was necessitated by the limitations of the ancient port in meeting the evolving needs of maritime modernization and development, leading to its inception.

1.2.2 Management style

The New Mangalore Port Trust (NMPT) is managed by the Central Government of India. The management team comprises Shri Sarbananda Sonowal, who serves as the Union

Cabinet Minister for the Ministry of Ports, Shipping, and Waterways as well as the Ministry of Ayush. Additionally, Shri Shripad Naik and Shri Shantanu Naik hold the positions of Honourable Ministers of State, and Dr. Venkata Ramana Akkaraju serves as the Chairman of NMPT.

1.2.3Organizational Structure

Dr. Venkata Ramana Akkaraju	Chairman
Lt. Col Biju Warrier	Secretary
Shri. Vinayaka Rao B.S	FA & CAO
Shri. Y.R. Belagal	Traffic Manager
Capt. S.R. Pattanayak	Dy. Conservator
Shri. Paritosh Bala	Chief Engineer.(Civil)
Shri. Satish Honnakatte	Chief Mechanical Engineer
Shri. Deepak Chaturvedi, ITS	Chief Vigilance Officer
Dr. Srinivasulum M	Chief Medical Officer

1.2.4 Infrastructure Facilities

The port features a well-designed layout with sixteen well-constructed berths to accommodate increased site visitors. Ships can easily navigate the port with a draft of 14 meters and a total port capacity of 76.77 million metric tons per annum.

In terms of storage facilities, there is a covered storage area spanning 55,000 square meters, an open storage facility covering 160,000 square meters, and a designated area of 200,000 square meters for storing liquid shipments. The overall land area of the port spans 2,032 acres, with a waterfront area occupying 320 acres.

1.2.5 Achievements, awards

FICCI grants “Outstanding Leadership Award” to NMPT

- New Mangalore Port Trust (NMPT) hopes to handle between 36.29 and 39.21 million tonnes of cargo during 2020-21
- Large parcel size container vessel calls at New Mangalore Port
- Traffic throughput of NMPT for the first quarter of FY 2020-21
- Award for Implementation of the Best Technology

- Milestone in Traffic Handled at NMPT
- Swatchata sarvekshan award 2018 received by Chairman Shri.M.T Krishna Babu, IAS
- Highest cargo discharge in a day
- Handling of over dimension cargo

1.2.6 Quality Policy

The NMPT is dedicated to delivering secure and cost-effective services related to seaport operations while complying with all relevant statutory and regulatory requirements.

They are committed to ensuring environmental safety, providing excellent service, and enhancing customer satisfaction through the implementation of a robust Quality Management System and continuous improvement of all their processes.

Vision "To be a professional provider of Port infrastructural and services of world class standards"

Mission "To become one of the leading liquid and multi cargo ports in India by adopting the state of the art technology, infrastructure and cargo handling system complying with environmental, social, and security standards"

1.2.7 Future growth and prospectus

The New Mangalore Port Trust (NMPT) is implementing various initiatives to enhance its competitiveness and attract more business. In the financial year 2019-20, the port achieved a net profit of Rs. 137.29 crore and aims to improve road and rail connectivity to facilitate efficient cargo movement.

In order to enhance competitiveness, NMPT is implementing measures such as the adoption of national booking and payment systems to streamline cargo handling processes.

The chairman of NMPT has established a dedicated Business Development Team within the organization. This team actively engages with customers and visits industrial and plantation areas in the hinterlands to increase revenue.

Infrastructure development projects have also been initiated at the port to further strengthen its capabilities.

The port expects an increase in the number of cruise ships calling this year, with an anticipated rise to 36 ships compared to 24 in the previous fiscal year.

1.3 INTRODUCTION OF THE STUDY

Introduction:

The study titled "A Comparative Study on Working Capital Management with Special Reference to New Mangalore Port Authority (NMPA), Mangalore, and Other Major Ports" aims to analyze and evaluate the efficiency of Working Capital Management at NMPA. The study utilizes ratio analysis as a financial tool to gain insights into NMPA's working capital performance and compares it with other major ports.

To understand and measure the efficiency of Working Capital Management of NMPA: The study focuses on analyzing the various components of working capital, including current assets and current liabilities, to assess NMPA's ability to effectively manage its short-term financial obligations. Ratio analysis will be used to evaluate key working capital ratios such as liquidity ratios, current ratios, and cash ratios, providing a comprehensive understanding of NMPA's working capital efficiency over the period from 2017-18 to 2021-22. Net working capital with that of other major ports. This comparative analysis will shed light on the financial position of NMPA in relation to its peers and provide insights into its relative performance. By examining the net working capital trends of other major ports, the study will identify any potential strengths or weaknesses in NMPA's working capital management practices.

By conducting a comparative analysis using ratio analysis, this study seeks to contribute to the understanding of NMPA's working capital management and its relative position among other major ports. The findings of the study will provide valuable insights for NMPA in terms of improving its working capital efficiency, enhancing liquidity management, and maintaining financial stability. Additionally, the study will offer recommendations based on the analysis to help NMPA make informed decisions and optimize its working capital management practices.

CHAPTER 2
LITERATURE REVIEW

(Scholar, 2012) Efficient management of working capital is essential for the success of any business organization. Investment in working capital affects the liquidity and profitability of the business. An attempt to increase profitability would lead to decrease in liquidity and a high liquidity position would adversely affect the profitability. Therefore, the business organization strives to maintain a trade-off between the liquidity and profitability. The paper attempts to study the working capital management practices of selected companies in the automobile sector. Motaal's test has been applied to assess the liquidity position of the companies. Further an attempt has also been made to study whether there is correlation between the liquidity and profitability. The working capital management is measured in terms of various ratios like the current ratio, liquidity ratio, stock turnover ratio, debtors' ratio and working capital ratio. The profitability of the companies is measured as Return on Capital Employed and Return on Net Worth. The study is based on secondary data collected from the published corporate annual reports of the company. The results of Motaal's test indicate that out of ten companies selected for the study, the liquidity position of Bajaj Auto Ltd is best whereas Tata Motors is at rank ten indicating a very low liquidity position

(Farooqi, 2016) Working capital management is the discipline of management which is inevitable in all walks of economic life whether in a household or in an enterprise, in the public domain or in private domain, profit oriented or not .The efficient working capital management is most crucial factor in maintaining survival, liquidity, solvency and profitability of any business organization. Moreover, an optimal working capital management positively contributes to the firm's value. The profitability and the efficiency of every sector in the nation have direct bearing on the prosperity of economy which can be primarily achieved through efficient working capital management practices. It helps in designing a framework to smoothen the financial constraints of business so as to make effective use of its resources. Keeping in mind the significance of working capital management an attempt has been made to examine its impact on the profitability of Indian automobile industry. The Indian automobile industry is one of the largest in the world with an annual production of 23.36 million vehicles in FY 2014-15.The Automobile industry accounts for 22 per cent of the country's manufacturing gross domestic product (GDP).For the purpose of this research paper three Indian Automobile company namely Tata motors ltd., Maruti Suzuki India ltd and Mahindra &Mahindra ltd. are taken ,as these are the giants

companies in Indian Automobile industry and plays a pivotal role in growth of Indian economy. For analysing the result ROCE is used as dependent proxy variable for profitability. Whereas CR, DTR, ITR are used as independent proxy variable for substantiating the impact of working capital management on the profitability of companies.

(Panigrahi, 2014) Working capital generally states that for the improvement in profitability we should manage our working capital effectively and most of the studies recommended to have good amount of working capital in the organization. All the researches on this topic conclude that the companies should avoid under-investment in working capital if they want higher profit margins. With negative working capital there can be a danger of insolvency but it is not true forever. If the company is having a good image in the market and good relation with their creditors it can get the benefit from the negative working capital also. Hence, the question arises that having negative working capital is good for an organization or not and if a company is earning profit continuously with having negative working capital, can we say that it is a sign of managerial efficiency or there might be the chances of possible bankruptcy of the company? Keeping these views in mind, this research article explains the conceptual background of the negative working capital and how it affects profitability of the corporate.

(Vyas, 2021) An attempt had made in this research to explain working capital management in context of chemical industry in India. Five chemical companies considering market capitalization had been selected and research period covers five years from 2016 to 2020. In order to justify the topic accounting tool – Ratio analysis is applied in which Inventory Turnover Ratio (X), Working Capital Ratio (X), Acid Test Ratio (X) and Collection Ratio and Cash Position Ratio (%) are used while statistical test – ANOVA test for single factor is applied to comparatively analyse significant difference in selected working capital ratios between selected Chemical companies which depicted that there is significance difference in Working Capital Ratio (X), Acid Test Ratio (X) and Collection Ratio and Cash Position Ratio (%) accept in Inventory Turnover Ratio (X) between selected Chemical companies. It had suggested that companies must focus on its working capital in order to avoid short term finical crisis and have smooth functioning of its business operation.

(Kandpal, 2015) For a successful working of a business organization fixed and current assets play a vital role as organization generally invests in these options. An attempt has been made in this paper to study the working capital components and the effect of working capital management policies on profitability of 10 Infrastructure companies. The paper also tries to study the correlation between liquidity, profitability and Profit before Tax (PBT) of selected Infrastructure companies. The study is based on secondary data collected from annual reports of different Infrastructure companies and PROWESS (CMIE Database) for the period 2007 to 2012. In this paper there is an application of correlation and regression analysis to identify the significant effects of Working capital management on the profitability. The Management

of operating capital is indispensable as it might induce a direct impact on profitability and liquidity.

(Ajmera, 2021) The main aim of this article is to find out the working capital management and its impact on profitability in Tyre Industry of selected companies which are listed on stock exchange in India. Approach/ Methodology/ Design: For the study, a time span of 8 years from 2011-12 to 2018-19 is considered, and based on it, any relation of net profit margin ratio and working capital components like current ratio, quick ratio, inventory turnover ratio, working capital turnover ratio is considered. The sample is selected based on higher market capitalisation during the study period. Regression analysis is also employed to investigate the impact of WCM on corporate profitability. Findings: The major findings of this study indicate that the profitability of Balkrishna was good compared to the other companies. The working capital of Ceat shows highly positive working capital management, whereas Apollo shows negative working capital management. These results were identified with the help of accounting tool as Ratio analysis and statistical tools as Regression analysis and ANOVA test for selected data. Practical Implication: The study examines the scenario of tyre industry with the help of working capital management in selected companies. The results of the study could be an indicator of the performance of the selected companies. Originality/Value: This paper provides some key insights to health and efficiency of the selected companies. The working capital ratios are indicative of good working capital management, leading to identifying issue in financial management and eventually improving the performance of the tyre industry.

(Alsulayhim, 2019) Working capital management is an important concept that could influence companies in many ways. An efficient management of working capital can help a company to manage its finances and increases its profitability. This study investigates the relationship between working capital management and profitability in non-financial companies listed in the Saudi Stock Exchange. A sample of 67 companies is used for a period of ten years (2007-2016). Quantitative method using multiple linear regression and pooled data set is used for analysis. The results indicate a positive relationship between working capital management and profitability. However, each company could have a different optimal level of working capital and could require different strategies to increase profitability. This study is limited to non-financial companies listed in the Saudi Stock Exchange. This study is a positive contribution to working capital management literature as it uses a relatively large sample, a longer time period, and multiple profitability proxies in the context of Saudi Arabia which has few researches in this area.

(Louw et al., 2017) The way a firm manages its working capital can have a decisive influence on the firm’s profitability and liquidity. In view of the prominent role that the retail industry plays in the South African economy, the purpose of this study was to investigate the

effect of working capital management on the profitability of South African retail firms. Eighteen retail firms that were listed on the Johannesburg Securities Exchange for a period of nine years (2004-2012) were analysed. The findings show that a strategy of reducing investment in inventory and trade receivables, while increasing trade payables, appears to improve the profitability of South African retail firms. Inventory management seems to have the strongest statistically significant impact on a firm's profitability. Hence, it is recommended that retail firms implement advanced inventory management systems in order to optimise inventory levels and enhance profitability.

(Viswanathan et al., 2016) Working capital management refers to management of current assets and of current liabilities. Every company may have an optimal level of working capital that maximizes their value. Prior evidence has determined the relationship between working capital and performance. The working capital management was determined by the cash conversion period and position of working capital, indicated by profitability and liquidity analysis. As the data selected for the study consists of observations in a time series manner so, analytical method is used in this study. Ten companies were selection during the study period is confined only 10 years from 2003-2004 to 2012-2013. The financial and statistical tools used for the study were Ratio Analysis, Descriptive Statistics and Indices. Results indicate that high investment in inventories and receivable lead to lower profitability and current assets to total assets lead to higher profitability. The results conclude that a strong relationship between working capital management and financial position of selected pharmaceutical companies in India.

(Nagendra and Shreelakshmi, 2022) A company needs sufficient non-current assets and current assets for the successful running of the business and maximization of the wealth of the firm. Especially, in the short-run current assets or working capital management plays an important role in the success or failure of the firm and its impact on its profitability of the firm. This article aims to examine the impact of working capital management on the performance and as well as the market value of companies in the logistics industry. This study used the fixed effect panel data analysis with a data set covering six logistics companies listed on the Bombay Stock Exchange, India for the period 2013-2022. To estimate the relationship between working capital management and the performance of companies used Return on Assets (ROA), Return on Equity (ROE), and Market value to Book value (MVBV) as dependent variables in the research models. The main results indicate that the positive relationship between working capital, market value, and profitability is not very clear. Logistics companies' sales are negatively associated with MVBV and ROE of logistics companies. The cash conversion cycle is found statistically not significant, and the relationship between CCC and profitability is negative. Overall, of the study, it is concluded that working capital has an impact on the profitability of logistics companies in India.

2.2 OBJECTIVES

- To understand and measure the efficiency of Working Capital Management of NMPA for the period of 2017-18 to 2021-22
- To comparative analysis of Net Working Capital with five major ports

CHAPTER-3
PROBLEM IDENTIFICATION

3.1 PROBLEM IDENTIFICATION

3.1.1 Statement of the Problem

3.2 Research Design

With the use of ratio analysis and comparison with other ports, the New Mangalore Port Authority's working capital is measured using the descriptive research design.

3.3 Scope of the Study

The five-year research period is relevant to the working capital management of the NMPA. The working capital model and firm ratios are examined in the study. Records, yearly reports, publications, and the official website's data have all been included in the analysis.

3.4 Data Sources

Primary Data: The Asst. Account Officer of the New Mangalore Port Authority was interviewed to get the primary data.

Secondary Data is gathered from the administration, annual reports, periodicals, and corporate websites of the company.

3.5 Research Instrument

3.6 Financial Tools and Techniques for analysis

The Annual Reports and pertinent papers of the Company are used to compile the Data.

Utilizing Working Capital Management. To quantify and comprehend the study's goals, ratios were expressed in tables and graphs.

3.7 Limitations of the Study

The study was only conducted over a five-year period, and data collecting took place in a relatively short amount of time. Because of the study's short time frame and inability to conduct research efficiently, data collection was challenging.

Only with the other five main ports are the gross working capital and net working capital compared.

CHAPTER 4
DATA ANALYSIS AND INTERPRETATION

Liquidity Position of the Company

4.1 Liquid Ratio

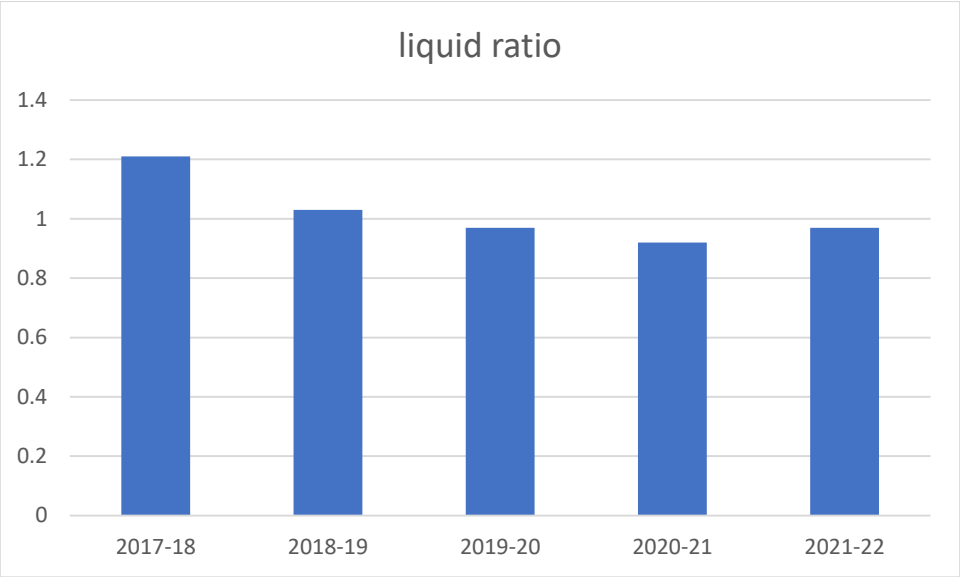
The study was only conducted during a five-year period, and data gathering took place in a relatively short amount of time. Because the study's time frame was so short, it was impossible to conduct research efficiently.

Only with the other five main ports are the gross working capital and net working capital compared.

Liquid Ratio = Quick Assets / Current Liabilities

Table No. 4.1 Liquid Ratio

Year	Quick Assets	Current Liabilities	Liquid ratio
2017-18	10,42,11,33,950	8,58,35,00,538	1.214089043
2018-19	6,81,65,81,667	6,56,02,73,270	1.039069774
2019-20	5,96,48,33,033	6,13,44,56,159	0.972349118
2020-21	6,42,69,71,591	6,92,07,85,278	0.928647738
2021-22	7,12,77,50,957	7,28,99,63,840	0.977748465



The trajectory of the NMPA's liquid ratio, as is shown in the above table, indicates a possible fall in its capacity to cover short-term liabilities with quick assets. The firm should concentrate on enhancing its cash flow management and liquidity to guarantee its financial stability as this shows that NMPA's liquidity situation has decreased.

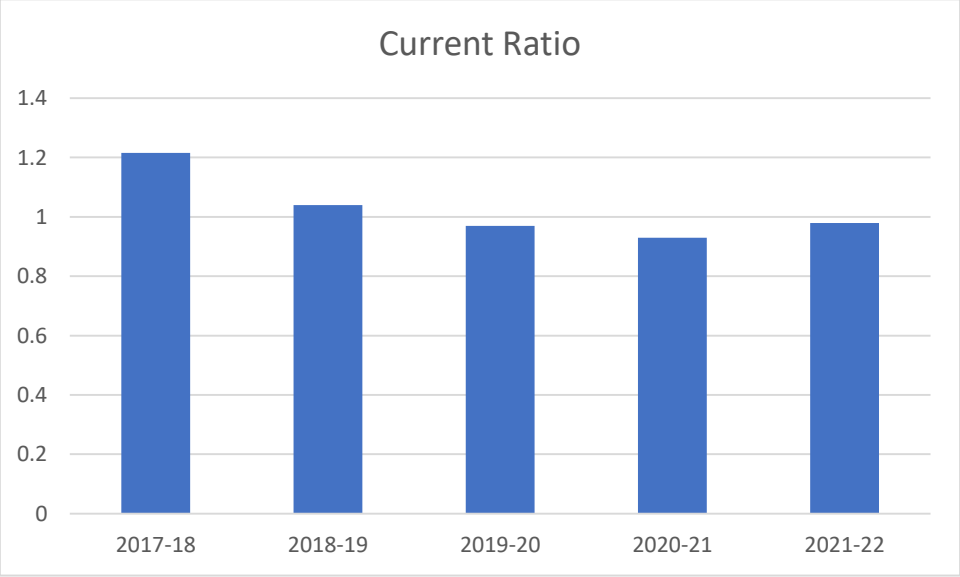
4.2 Current Ratio

A financial indicator called the current ratio evaluates a company's ability to pay its current liabilities with its current assets. It is calculated by dividing current liabilities, which are short-term debt obligations due within a year, by current assets, which are assets expected to generate cash within a year. A higher current ratio indicates a stronger ability to meet short-term obligations. It is computed using the formula below.

Current Ratio = Current Assets / Current liabilities

Table No. 4.2 Current Ratio

Year	Current Assets	Current Liabilities	Current Ratio
2017-18	10,43,53,78,990	8,58,35,00,538	1.215748627
2018-19	6,83,13,10,492	6,56,02,73,270	1.041314929
2019-20	5,97,64,95,597	6,13,44,56,159	0.974250275
2020-21	6,43,69,11,678	6,92,07,85,278	0.930084003
2021-22	7,14,13,11,171	7,28,99,63,840	0.979608586



based on the table above The current ratio for NMPA has been trending downward over time. The solid ability of NMPA to meet short-term commitments with current assets was shown by its strong current ratio of 1.2157 in 2017–18. The current ratio did, however,

progressively decline over the years. By 2021–2022, the current ratio fell to 0.9796 and remained below the optimum level of 1. Due to this deteriorating tendency, it is possible that NMPA won't be able to use its present assets to pay its short-term debts.

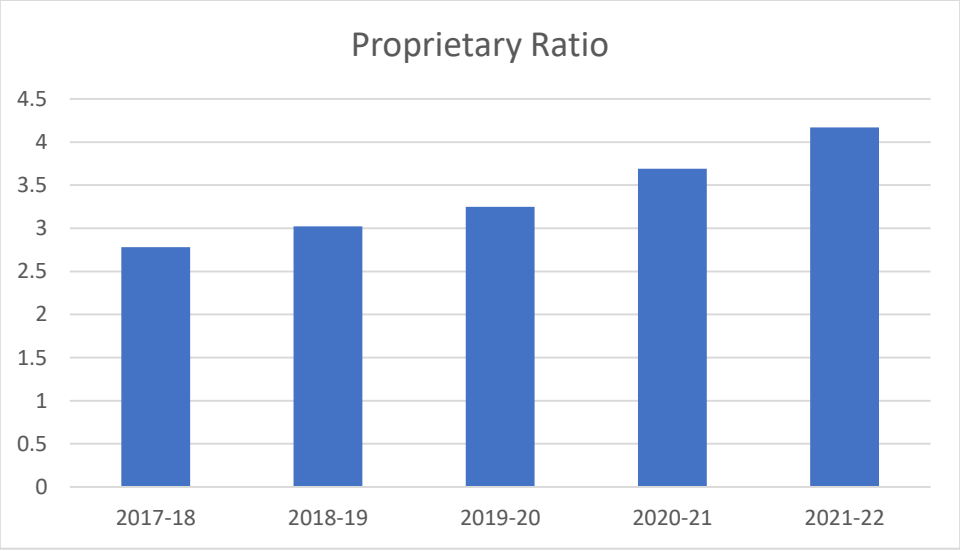
4.3 Proprietary Ratio/ Equity Ratio

The proprietary ratio is the shareholder's fund to total assets ratio. It is sometimes referred to as the equity ratio or the ratio of net worth to total assets. A high ratio indicates that the company has sufficient equity to support operations. It can be thought out using the formula.

Proprietary Ratio= Shareholders Fund / Total Assets

Table No. 4.3 Proprietary Ratio

Year	Shareholders Fund	Total Assets	Proprietary Ratio
2017-18	25,42,60,62,013	9,14,89,84,829	2.779112928
2018-19	27,96,96,12,857	9,25,30,15,912	3.022756377
2019-20	30,14,88,26,249	9,28,78,12,902	3.246063047
2020-21	32,79,44,15,274	8,88,45,68,980	3.691165587
2021-22	35,74,47,24,424	8,58,19,84,784	4.165088301



The NMPA's proprietary ratio trend is seen in the above table to be steadily increasing over time, showing that a greater proportion of shareholder funds were used to finance the company's assets. As a result, NMPA will be in a better financial situation and run a lower danger of financial trouble. The company's growing dependence on equity capital is a positive sign because it denotes less reliance on outside sources and more stable finances.

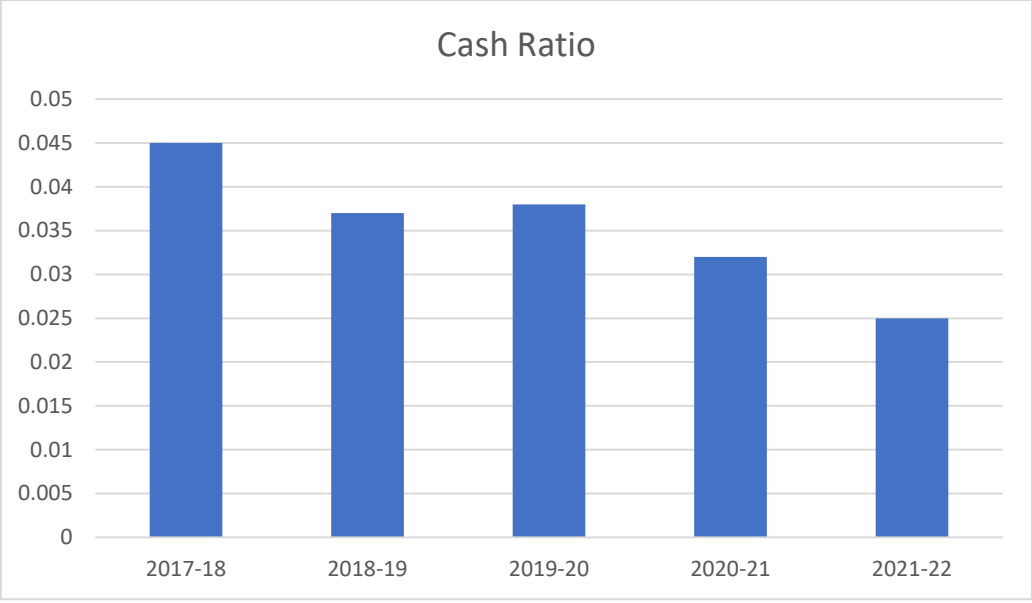
4.4 Cash Ratio

A financial measure called the cash ratio evaluates a company's ability to pay its immediate liabilities using cash and cash equivalents. It is calculated by dividing cash and cash equivalents by current obligations. A higher cash ratio indicates more capacity to meet short-term obligations with easily available cash. It is computed using the formula below.

Cash Ratio = Cash / Current liability

Table No. 4.4 Cash Ratio

Year	Cash	Current liability	Cash Ratio
2017-18	38,46,32,673	8,58,35,00,538	0.044810701
2018-19	24,87,32,313	6,56,02,73,270	0.037914932
2019-20	23,57,26,115	6,13,44,56,159	0.038426571
2020-21	21,95,84,627	6,92,07,85,278	0.031728282
2021-22	18,58,58,448	7,28,99,63,840	0.025495112



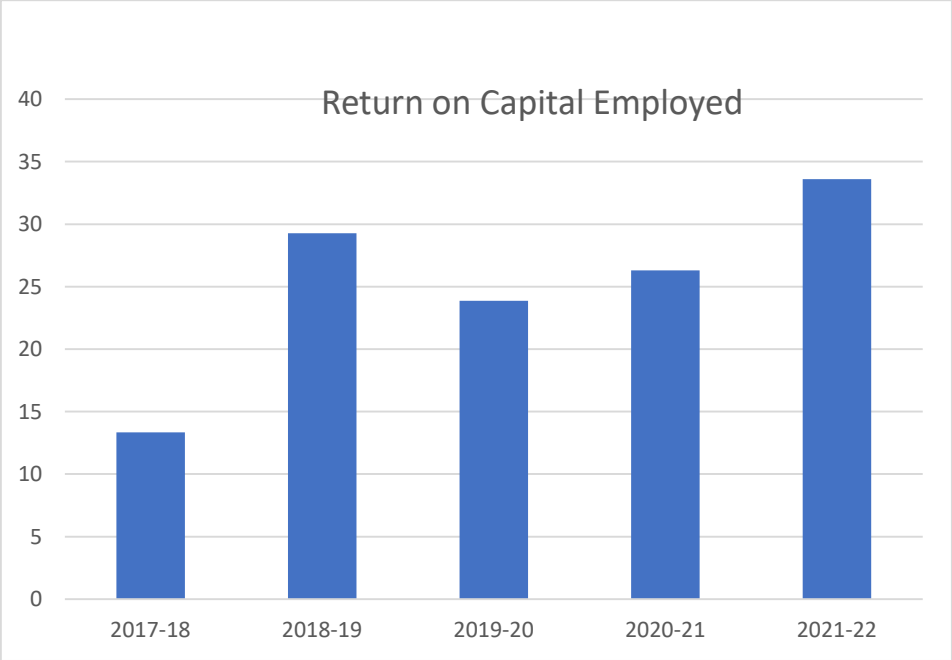
The firm may be less able to satisfy its short-term commitments using its available cash and cash equivalents, according to the above table's declining trend in NMPA's cash ratio over time. This emphasizes how important it is, when it comes to satisfying short-term obligations, to manage cash properly, to maintain a healthy level of liquidity, and to consider alternative choices outside only cash reserves.

4.5 Return on Capital Employed

The Return on Capital Employed (ROCE) ratio estimates the profitability of a company's capital investment. It demonstrates how successfully a company utilises its capital to generate profits. The ROCE is calculated by taking the Net Profit before Tax and dividing it by the Capital Employed, then taking that number and expressing it as a percentage. It is computed using the formula below.

Return on Capital Employed = Net Profit before Tax / Capital Employed * 100

Year	Net Profit before Tax	Capital Employed	Ratio
2017-18	1442518748	1071.03	13.35
2018-19	2,64,06,49,758	902.03	29.27
2019-20	2,10,08,14,487	879.8	23.87
2020-21	2,16,08,57,456	821.5	26.3
2021-22	2,80,99,90,134	836.38	33.59



The NMPA's ROCE ratio development is seen in the above table to have increased steadily over time. The company showed effective business procedures and superior capital management by being able to generate favorable returns on the capital invested. This demonstrates that NMPA has produced earnings that are commensurate with the capital it has invested, which is good for the company's financial success.

4.6 Operating Ratio

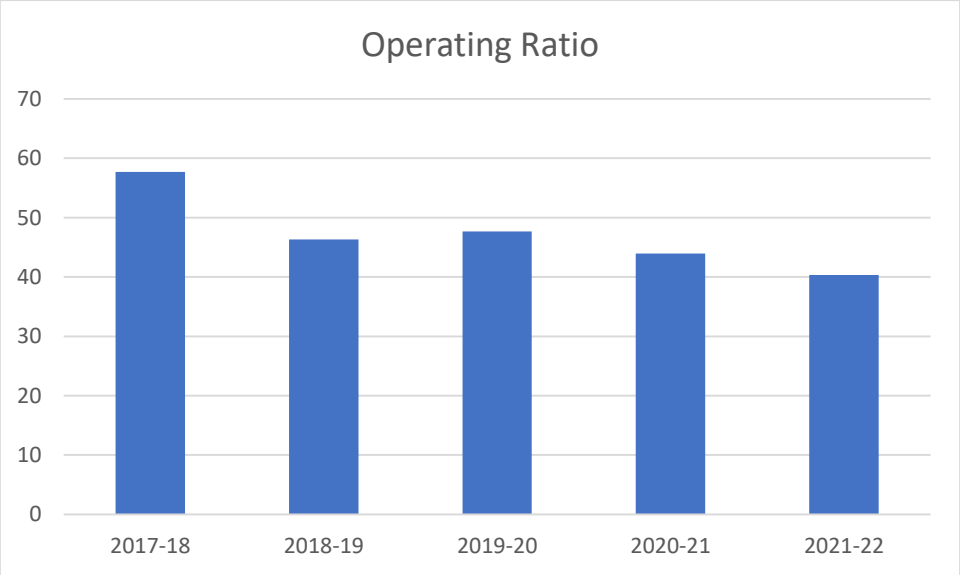
By comparing operating costs with operational profits, the operating ratio, a financial indicator, evaluates the efficiency of an organization's operations. By dividing operational costs by operating revenues, it is calculated as a percentage. An increased cost-control and

operational efficiency are indicated by a reduced operating ratio. It is computed using the formula below.

Operating Ratio = Operating Expenditure / Operating Income * 100

Year	Operating Expenditure	Operating Income	Ratio
2017-18	291.2	504.76	57.69
2018-19	278.13	600.5	46.31
2019-20	272.84	572.14	47.68
2020-21	261.69	595.64	43.93
2021-22	260.24	644.86	40.35

Table No. 4.6 Operating Ratio



Based on the aforementioned table, it can be seen that NMPA's operating ratio has improved over time. The company's ability to reduce operating expenditures as a percentage of operating income led to improved cost control and higher profitability. This shows that NMPA has been successful in simplifying its business processes and improving the efficiency with which it handles its costs.

4.7 Net Working Capital

The difference between a company's current assets and current liabilities is known as net working capital, or NWC. It displays the cash that is available to pay for immediate expenses

and support ongoing operations. A company's financial condition and its capacity to properly manage working capital can be inferred from changes in net working capital over time. It is computed using the formula below.

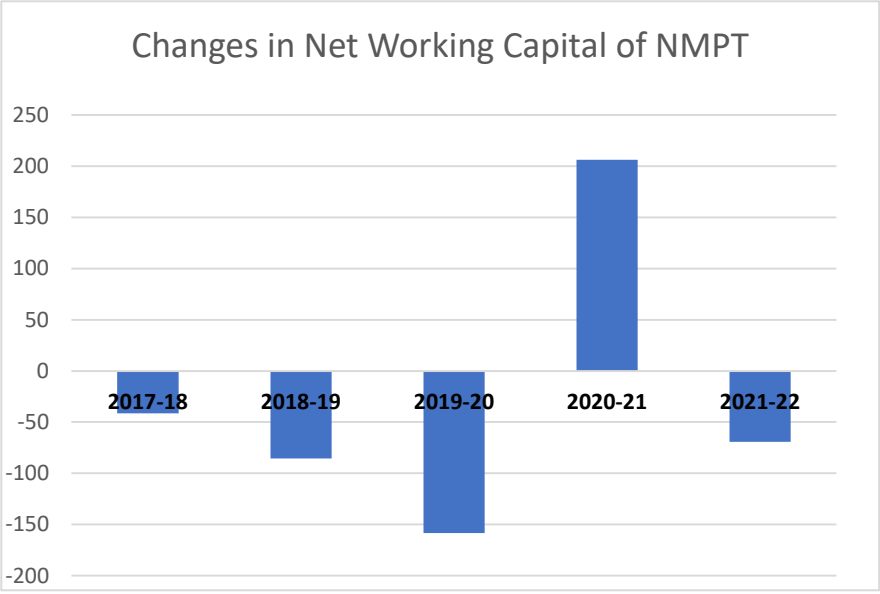
Net Working Capital = Current Assets – Current Liabilities

Percentage Change in Net working capital

$$= \frac{\text{Current Year Net Working Capital} - \text{Previous Year Net Working Capital}}{\text{Previous Year Net Working Capital}} * 100$$

Table No. 4.7 Changes in Net Working Capital

Year	Current Assets	Current Liabilities	Net Working Capital	Changes
2017-18	10,43,53,78,990	8,58,35,00,538	1,85,18,78,452	-41.38
2018-19	6,83,13,10,492	6,56,02,73,270	27,10,37,222	-85.36
2019-20	5,97,64,95,597	6,13,44,56,159	-15,79,60,562	-158.28
2020-21	6,43,69,11,678	6,92,07,85,278	-48,38,73,600	206.32
2021-22	7,14,13,11,171	7,28,99,63,840	-14,86,52,669	-69.27



According to the aforementioned table, changes in Net Working Capital for NMPA over time show a mix of positive and negative tendencies. Positive changes suggest an increase in liquidity, whilst negative changes denote a drop in liquidity. It is essential for NMPA to effectively manage its working capital by maximizing its current assets and liabilities in order to maintain a healthy liquidity position and successfully meet its short-term obligations.

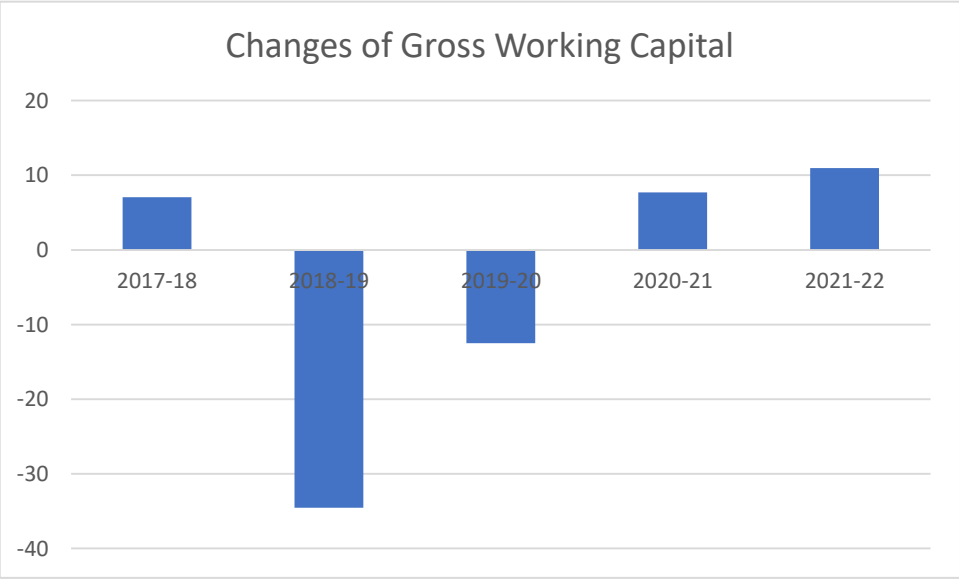
4. 8 Changes Gross Working Capital

The whole amount of a company's current assets is represented by the Gross Working Capital. Gross Working Capital changes over time might provide information about the company's overall financial health and its capacity to successfully manage its present assets. It is computed using the formula below.

$$\text{Gross Working Capital} = \frac{\text{Current Year Gross Working Capital} - \text{Previous Year Gross Working Capital}}{\text{Previous Year Gross Working Capital}} * 100$$

No. 4.8 Changes in Gross Working Capital

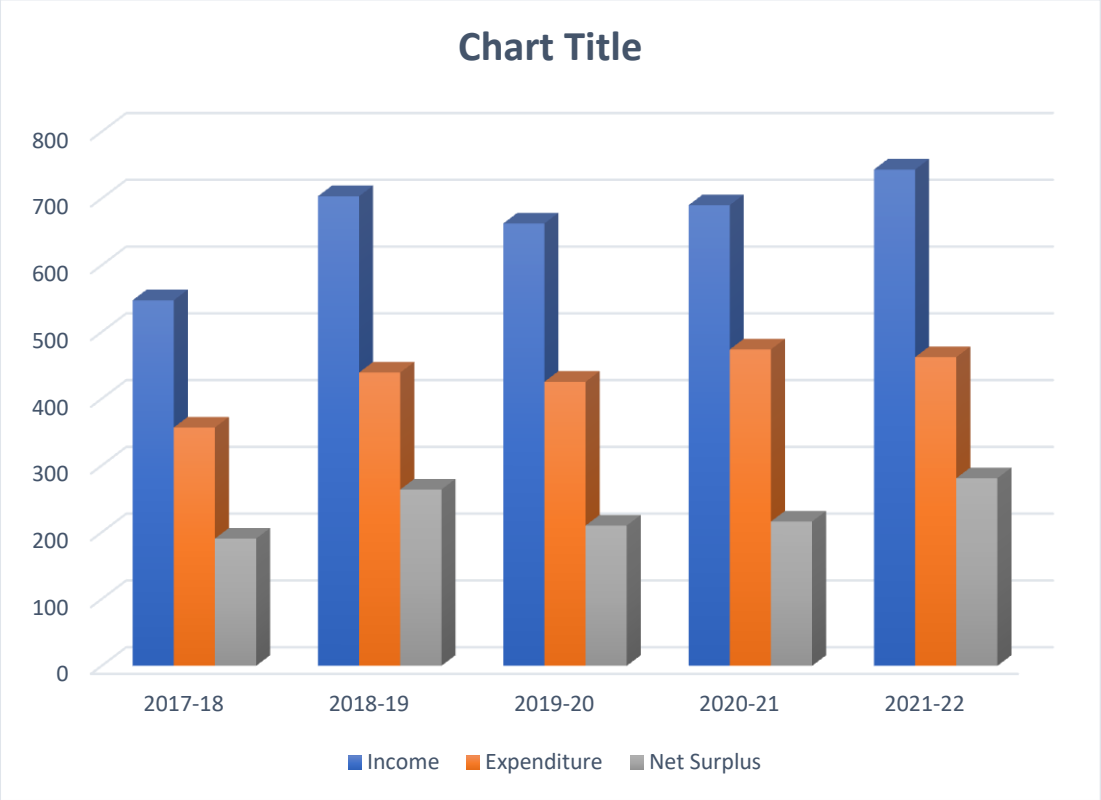
Year	Gross Working Capital	Changes %
2017-18	10,43,53,78,990	7.05
2018-19	6,83,13,10,492	-34.53
2019-20	5,97,64,95,597	-12.51
2020-21	6,43,69,11,678	7.7
2021-22	7,14,13,11,171	10.94



According to the aforementioned table, there have been both positive and negative moves in NMPA's gross working capital. Positive changes suggest growth and an improved financial state, whereas negative changes indicate challenges or losses in the company's total current assets. The NMPA must effectively manage its working capital if it is to maintain a stable financial position and satisfy its operational demands.

4.9 Financial Performance for last 5 Years

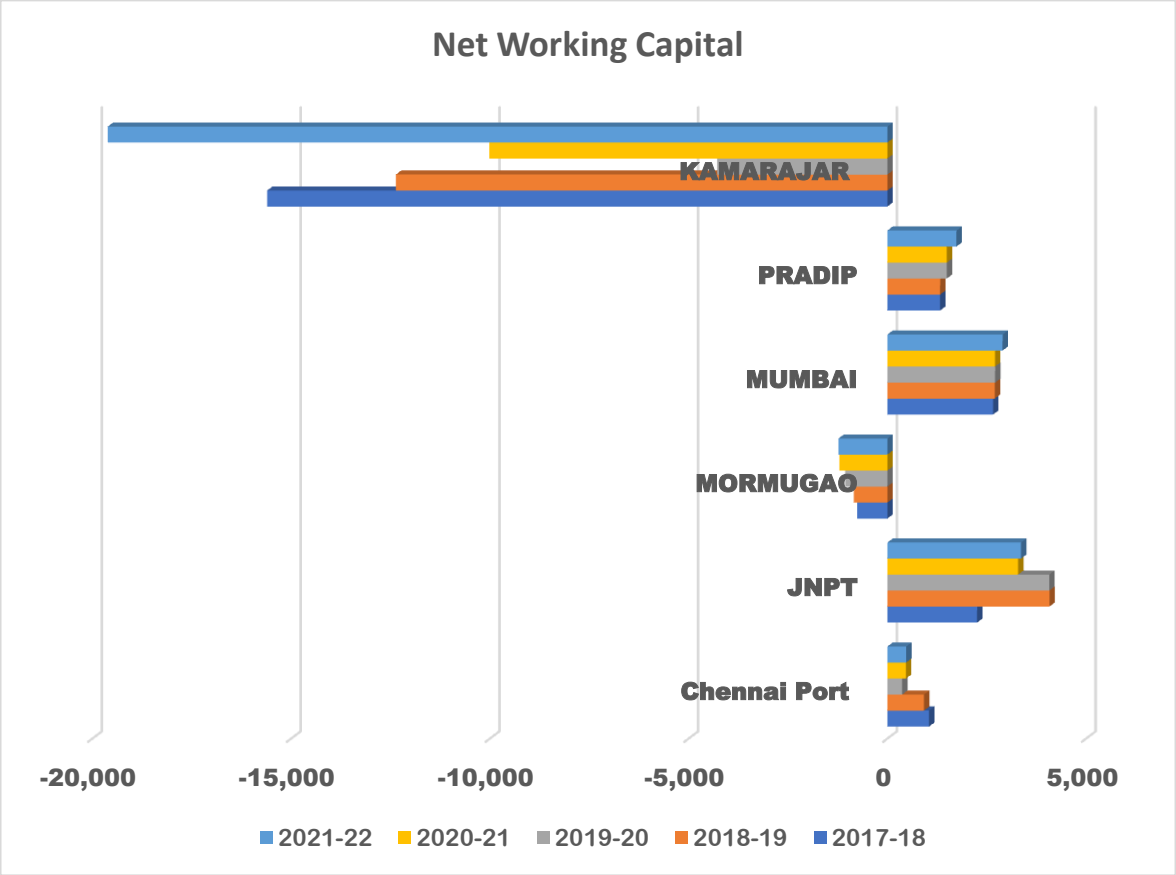
	2017-18	2018-19	2019-20	2020-21	2021-22
Income	547.46	703.32	662.47	689.93	743.26
Expenditure	356.92	439.25	425.39	473.84	462.26
Net Surplus	190.54	264.07	210.08	216.09	281



The NMPA has a track record of profitability during the previous five years. The company was able to increase its income year after year and was consistently able to generate net surpluses, a sign of wealth. Even though spending and income periodically varied, NMPA's financial performance demonstrated growth and stability. The corporation's best year was shown by its highest net surplus and a considerable rise in income in 2021–2022. A sign of sound administration and advancement is the NMPA's overall financial success.

4.10 Net Working Capital compared with other ports

Year	Chennai Port	JNPT	MORMUGAO	MUMBAI	PRADIP	KAMARAJAR
2017-18	1,050	2,258.63	-758	2659.56	1326.06	-15603.76
2018-19	923	4,077.99	-845	2704.71	1328.5	-12366.43
2019-20	373	4,073.27	-1,059	2711.76	1495.44	-4282.72
2020-21	466	3,290.27	-1,207	2706.8	1496.56	-10014.3
2021-22	474	3,362.81	-1,232	2899.25	1738.9	-19613.38



The provided data shows the Net Working Capital values for different major ports, including Chennai Port, JNPT (Jawaharlal Nehru Port Trust), MORMUGAO, Mumbai Port, PRADIP, and KAMARAJAR, over the years 2017-2018 to 2021-2022.

1. Chennai Port: The Net Working Capital for Chennai Port increased from 1,050 in 2017-18 to 474 in 2021-22, indicating a positive trend.

2. JNPT: JNPT had a consistently higher Net Working Capital compared to other ports, with values ranging from 2,258.63 in 2017-18 to 3,362.81 in 2021-22.

3. MORMUGAO PORT: MORMUGAO had negative Net Working Capital values throughout the years, with the lowest value being -1,232 in 2021-22.

4.MUMBAI PORT : Mumbai Port had fluctuating Net Working Capital values, with a peak of 2,759.56 in 2017-18 and a decrease to 2,899.25 in 2021-22.

5. PRADIP PORT: PRADIP had relatively stable Net Working Capital values, ranging from 1,326.06 in 2017-18 to 1,738.9 in 2021-22.

6.KAMARAJAR PORT: KAMARAJAR had consistently negative Net Working Capital values, with the lowest value being -19,613.38 in 2021-22.

The Net Working Capital comparison among the major ports shows variations in financial positions. JNPT consistently maintained a higher Net Working Capital, while MORMUGAO and KAMARAJAR had negative values, indicating potential liquidity challenges. The other ports, including Chennai Port, Mumbai Port, and PRADIP, showed mixed trends in Net Working Capital over the years.

CHAPTER 5
FINDINGS AND CONCLUSIONS

FINDINGS

Some of the findings have been made while working on projects for the company. The findings of the report based on the analysis are as follows:

- NMPA's liquid ratio has declined over the years, indicating a potential decrease in its ability to cover short-term liabilities with quick assets.

- The current ratio for NMPA has been decreasing, suggesting a potential difficulty in using current assets to meet short-term obligations.

- NMPA's proprietary ratio has shown a steady rise, indicating a larger percentage of shareholder funds being used to finance assets and greater financial stability.

- The cash ratio for NMPA has been declining, indicating a potential challenge in meeting short-term obligations using available cash and cash equivalents.

- NMPA's ROCE ratio has consistently increased, demonstrating improved profitability and efficient capital management.

- The operating ratio of NMPA has improved over time, indicating better cost control and increased profitability.

- Among major ports, JNPT consistently maintained a higher net working capital, while MORMUGAO and KAMARAJAR faced potential liquidity challenges with negative net working capital values.

- Chennai Port, Mumbai Port, and PRADIP showed mixed trends in net working capital over the years.

The findings highlight various aspects of NMPA's financial performance and the financial positions of major ports. NMPA has shown profitability, but it should focus on improving liquidity and managing its working capital effectively. The report suggests areas for improvement, such as cash flow management, cost control, and liquidity management, to ensure financial stability and growth.

CONCLUSION

The summer internship project "A study on working capital of NMPA in comparison with other major 5 ports" examined the working capital dynamics of NMPA and compared it with other major ports from 2017-18 to 2021-22. The analysis provided insights into the financial performance and liquidity positions of NMPA and the major ports.

The study identified a declining trend in NMPA's liquid ratio, indicating a potential decrease in its ability to cover short-term liabilities using quick assets. This highlights the need for NMPA to improve its cash flow management and enhance liquidity in order to maintain financial stability.

Furthermore, the current ratio of NMPA showed a decreasing trend over the years, suggesting potential challenges in utilizing current assets to meet short-term obligations. On the other hand, the proprietary ratio demonstrated a steady rise, indicating a stronger financial position for NMPA with reduced financial risk, as the company relied more on shareholder funds to finance its assets. The analysis also revealed a falling trend in NMPA's cash ratio, implying potential difficulties in meeting short-term obligations solely with available cash and cash equivalents. This emphasizes the importance of effective cash management and considering alternative options for fulfilling short-term obligations.

On a positive note, NMPA's return on capital employed (ROCE) exhibited a consistent rise, indicating improved profitability and efficient capital management. The company's operating efficiency also increased over time, as reflected by its operating ratio, indicating successful cost control and enhanced profitability. In comparison with other major ports, JNPT consistently maintained a higher net working capital, indicating better financial strength. However, MORMUGAO and KAMARAJAR faced liquidity challenges with negative net working capital values, while the remaining ports showed mixed trends in net working capital.

The study underscores the significance of effective working capital management, cash flow management, and liquidity improvement for NMPA. It provides valuable insights into NMPA's financial performance in relation to other major ports, highlighting the need for strategic measures to enhance liquidity, profitability, and operational efficiency.

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