# A STUDY ON PERFORMANCE OF PHARMACEUTICAL INDUSTRIES IN INDIAN ECONOMY

**Dissertation submitted to**

**St. Teresa's College (Autonomous)**

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In partial fulfillment of the requirement of the degree of

MASTERS OF ARTS IN ECONOMICS

BY

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## CERTIFICATE

This is to certify that the dissertation that titled **"A STUDY ON PERFORMANCE OF PHARMACEUTICAL INDUSTRIES IN INDIAN ECONOMY"** submitted to partial fulfillment of the requirement of M A DEGREE IN ECONOMICS to **ST.TERESAS COLLEGE (AUTONOMOUS)** affiliated to MAHATMA GANDHI UNIVERSITY ,KOTTAYAM, is a true record completely done by the student under my supervision and guidance

**Head of the department** **Under the guidance of**

**Dr. Anupa Jacob** **Dr.Thushara Geoarge**

# DECLARATION

We hereby declare that this dissertation entitled, **"A STUDY ON PERFORMANCE OF PHARMACEUTICAL INDUSTRIES IN INDIAN ECONOMY "**, submitted by us in partial fulfillment of the requirements for the award of an M.A Degree in Economics is my original work. This work has not previously formed the basis for other academic qualifications.

Signature of the supervisor

Dr. THUSHARA GEORGE

Signature of the Candidates

FATHIMA ALI

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FATHIMA ALI

# CHAPTER 1
# INTRODUCTION

## 1.1 INTRODUCTION

The pharmaceutical industry is an important part of the Indian economy and contributes to the health and economic growth of the country. India is known as the "pharmacy capital of the world" due to its strong production and export of generic drugs. The sector has experienced significant growth in recent years, driven by factors such as increasing healthcare expenditures, population growth and government initiatives. The key points are as follows:

Business Size and Growth

The Indian pharmaceutical industry is estimated to be worth over $49 billion and is expected to reach $130 billion by 2030. The growing need for affordable healthcare, the increasing number of chronic diseases, and government regulations.

Generic drug production: India is the world's largest producer and exporter of generic drugs and accounts for more than 20% of the world's generic drug production. The industry has benefited from India's research and manufacturing capabilities.

Investment in R&D

The production of generic drugs still forms the basis of the industry, but the focus is on the development of new drugs. National and multinational companies invest in research and development to develop new solutions for various situations.
Government Support

National Pharmaceutical Pricing Authority (NPPA) and National Health Mission (NHM) are steps taken by the Government of India to support the pharmaceutical industry and ensure the availability of effective and affordable medicine for the people.

Export Potential

Indian pharmaceutical industry has a strong export potential, especially in developing countries. India is a major source of healthcare solutions, exporting generic medicines to over 200 countries.

The pharmaceutical industry in India is a large and growing industry that plays an important role in the country's economy and healthcare infrastructure. With a solid foundation in generic drug development and a strong focus on research and development, the business is poised for continued growth in the future. Government support and exports should enhance business success and ensure its position as a key player in the world pharmaceutical industry.

India has emerged as a major player in the global pharmaceutical industry, especially in the production of generic drugs and cheap vaccines. The Indian pharmaceutical industry has seen significant growth over the years and currently ranks third in terms of pharmaceutical production. This emerging industry has grown at a compound annual growth rate (CAGR) of 9.43% over the past nine years.

The Indian pharmaceutical industry spans many segments including generic drugs, over-the-counter drugs, bulk drugs, vaccines, research and development, biosimilars and biological products. More importantly, India has the largest number of pharmaceutical factories that comply with stringent standards set by the United States Food and Drug Administration (USFDA). Additionally, the country is home to 500 active pharmaceutical ingredient (API) manufacturers, accounting for approximately 8% of the global API market.

India has contributed greatly to the global pharmaceutical market. The country supplies more than 50% of the world's demand for various vaccines, 40% of the US's demand for generic drugs, and 25% of all medicines in the UK. The domestic pharmaceutical industry consists of 3,000 pharmaceutical companies and nearly 10,500 production facilities.

India's position in the global pharmaceutical industry is further strengthened with its resources and expertise. These experts have the ability to take the business to higher heights. Currently,

more than 80% of antiretroviral drugs used in the world to fight AIDS (acquired immunity) are supplied by Indian pharmaceutical companies.

Due to low cost and quality medicine, India has the right to earn the reputation of "world leader in the fight against AIDS". "World Pharmacy". The Indian pharmaceutical industry not only contributes to the country's GDP at a rate of approximately 1.72% but also plays a significant role in meeting healthcare needs worldwide.

The Indian pharmaceutical industry is expected to be worth US$ 130 billion by 2030, according to a recent study conducted by EY FICCI. This increase in value can be attributed to the agreement of all parties involved in providing medical care to patients. Additionally, the global pharmaceutical market is expected to exceed $1 trillion by 2023; this indicates significant growth and potential in the sector.

## 1.2 REVIEW OF LITERATURE

An o**verview of the Indian pharmaceutical industry** can be found in the annual report of pharmaceutical companies by **Pandey Shivanand (2010)**. Shivanand feels that the Indian pharmaceutical industry is expected to grow in the next five years due to a combination of factors such as rising incomes, aging population and improved healthcare infrastructure. All these factors have made India an important market for global pharmaceutical companies. But ongoing challenges such as power outages, inadequate transportation and inconsistencies in the application of India's new patents could hinder business growth.

**Aditya Bhatacharjea (2013)** - In his work titled **Competitive Challenges in the Indian Pharmaceutical Industry at the Global Frontier,** he focused on the competitive challenges of competitors in the Indian pharmaceutical industry. This study uses firm records of 616 pharmaceutical companies from 1990-2010 (CMIE capability database) and 1996-2011 export data from the Ministry of Commerce database (HS Chapter 30, 1996-2011). The study found that pharmaceutical imports increased, but the imported product increased faster than the product volume reached a certain growth during the holiday period. The study also revealed that although

imports from India affect competition in the domestic market, imports from India increase competition in the Indian market. The decrease in domestic consumption is due to imports, as domestic consumption adds imports to total sales and imports damage the economy.

**Manthan Janodia, Udupa Rao, Sureshwar Pandey and Venkata Rao (2009)** studied the development and capabilities of Indian pharmaceutical companies affected by the patent process. This study is based on primary data collected from 15 participants using a standardized questionnaire and an expert IP rater. The analysis of the study is given below.

According to business studies, India will play an important role in the pharmaceutical industry due to its ability to create and protect intellectual property rights. The analysis also showed that the Indian pharmaceutical industry has the potential to continue to thrive and survive post-TRIPS agreement.

**Indian Pharmaceutical Industry - According to the Developments - Nursing Discovery Report Published in 2008,** the fight for domestic pharmaceutical companies changed completely with the advent of product operating patent in January 2005. IPI now faces many new opportunities and dangers. This situation led local pharmaceutical companies to seek diversification between business and research and development and decided to achieve long-term business under the new management system. In addition to changes in patent laws, issues such as drug review and joint drug strategies will also affect the regulatory climate of the sector in the future. CARE Research confirms that the growth of Indian pharmaceutical companies in the local market is limited due to the launch of new vaccines by different companies in the country. He also acknowledged that the growth of Indian pharmaceutical companies in the domestic market has prevented many countries from developing new vaccines in India. In this case, it means that the growth of the organization can be from the purpose of the business units to the geographical extension of the overall time and semi/uncontrolled work. Interest in research and development is also increasing as it becomes important for Indian organizations to launch successful new drugs to drive long-term growth and bring the world under control.

**Padmashree Ghel Sampath (2006)** prepared a research paper in which he analyzed the research of 103 Indian pharmacists. The research was conducted between October 2004 and January 2005. His research focused on analyzing the strategies of Indian companies regarding the transition to product protection. Based on the evidence, the study divided companies into three broad groups: large companies (controlled by Indian and multinational companies), medium-sized companies specializing in niche areas such as pharmaceutical manufacturing or contract research, and small pharmaceutical companies as well as major companies in India. Each group has its own main ideas and reasons. Research shows that Indian companies are adopting a combination of collaborative and competitive strategies to adapt and enforce new patent laws. Additionally, the study found a positive relationship between export intensity and R&D investment in the Indian pharmaceutical industry. Companies that sell more revenue can allocate more money to R&D.

**Ravindra Jha (2007)** in his study tried to find out the factors influencing the structure and growth of the Indian pharmaceutical industry. These factors include export direction, import dependence, API and assembly volumes, etc. **Jha** used data from 15 industry majors, specifically the Indian Pharmaceutical Manufacturers Association (IDMA), Indian Medical Association (OPPI), Multi-Pharmaceutical Association (BDMA) and Pharmaceutical Manufacturers Association of India (BDMA). . Directorate General of Intelligence and Investigation (DGCIS). Research shows that large pharmaceutical companies are beginning to profit from illegal drug exports. The generic drug market offers many opportunities for developing countries because it requires less labor and raw materials and offers better prices. This study was conducted by Ranbaxy Laboratory, Cipla, and Dr. Reddy, Aurobindo and Lupine earn more than 50% of their income from exports. Additionally, the study found that dependence on API supply steadily increased over the study period as Indian companies became exporters to the pharmaceutical industry. Additionally, the study found that despite changes in the patent industry, the share of multiple companies in creating APIs and the volume of documentation are decreasing.

**According to a 2012 report by the Competition Council of India**, the Indian pharmaceutical industry meets nearly 70% of the country's demand for various pharmaceutical products. India has many advantages, including skilled workers and cost-effective chemicals, to develop and export advanced APIs. With production and general research, the business can achieve an annual

growth rate of 8-9%. The report also emphasizes that CCI should monitor issues such as patent infringements, pharmaceutical practices, drug price monitoring, and anti-competitive potential. The importance of increasing stakeholder awareness, compliance with new regulations, resolving licensing issues, and understanding the relationship between competition law and intellectual property rights is also emphasized. The report also recommends intervening in situations of excessive pricing and taking anti-competitive measures against mergers and acquisitions.

**Reji K Joseph (2012)** did another study that showed that the pharmaceutical industry is shifting towards more export channels due to policy changes. Interestingly, the focus is now on the formulation rather than the API. However, the study also noted a decline in API production, leading to an increase in its use. Worryingly, the research found that the industry is heavily reliant on Chinese APIs, with over 50% of APIs coming from China, posing a huge risk. The findings are based on detailed product-level information from the Indian pharmaceutical industry.

**Indian Pharmaceutical and Healthcare Companies First Quarter 2009** the report states that India remained eighth in BMI's business region in the first quarter of 2009. India's rapidly growing population is an important factor in the Asia-Pacific environment. Although it is seen as an attractive business for future business growth, there are still some hurdles to overcome in terms of generic drugs, such as the use of a small number of people, many bureaucratic processes, poor infrastructure, and inadequate legal systems. In December 2008, India's drug price regulator reduced the prices of 46 drugs and included 254 new drugs in the drug price checklist. The generic drug market is expanding both locally and internationally. Many pharmaceutical companies in India have faced problems in the past and Lupine was accused of poor manufacturing by the US FDA. Growth in India's pharmaceutical export market has slowed down due to increasing competition from the US and Europe and the appreciation of the rupee. Barack Obama's victory in the 2008 US elections should trigger a pharmaceutical shift in the US market; the patent gap in 2011 provided a significant opportunity for India's generic drug exports.

**Manjeet Kripalani (March 25, 2008) in his article titled "Indian Pharmaceuticals: Addicted to Hard Selling"** discusses the unethical marketing strategies adopted by Indian pharmaceutical companies. Some companies engage in intense marketing activities, such as giving gifts to doctors, pharmacists, and salespeople. Therefore, doctors will prescribe based on the company's incentives rather than the best interests of their patients. The authors emphasize the importance of establishing regulatory institutions to protect patient health in India. To address this issue, the Indian Medical Association has published an independent code of conduct to promote ethical standards in advertising. The law is expected to become law shortly. So, despite the significant growth of the Indian pharmaceutical industry and the introduction of new, effective, competitively priced drugs, the success story is not what it seems.

## 1.3 STATEMENT OF THE PROBLEM

The Indian pharmaceutical sector plays a crucial role in the nation's economy, but it faces various challenges and opportunities that impact growth, trends, sustainability, and global competitiveness. Financial performance is an indicator of growth and is largely governed by cost, revenue, and profit margin. Performance evaluation often reflects the effective utilization of assets, equity, revenue, and expenses. The performance of a company is affected by both internal and external factors. Internal factors include management decisions, manufacturing facilities, employees, etc. while external factors are governed by government policies, industrial growth, demand and supply of raw materials, etc. The Indian pharmaceutical industry is expected to grow by 5% annually and by 100 billion US$ by 2025.

Addressing the problem related to the trend pattern in the Indian pharmaceutical industry requires strategic initiatives to promote innovation, diversify product portfolios, strengthen regulatory compliance, enhance market competitiveness, and foster a culture of research and development. Balancing the benefits of generics with investments in innovation is crucial for unlocking new growth avenues, improving profitability, and ensuring the industry's resilience in a dynamic global healthcare landscape.

## 1.4 OBJECTIVES

The study has some specific objectives. They are the following

- To study the growth performance and trend pattern of leading pharmaceutical industries like CIPLA and Sun Pharmaceutical Industries Ltd in India.
- To analyse the profitability and liquidity of selected pharmaceutical companies in India.
- To confer findings, suggestions and conclusion of this study.

## 1.5 RESEARCH METHADOLOGY

The methodology mainly includes secondary data, comprehensive literature review, critical analysis of literature, especially literature from pharmaceutical journals and other publications that provide insights into industry growth rate, challenges and profitability. The study primarily focused on fiscal years 2018-2023, which was the data selected for the study.

Literature sources include websites of various organizations such as WHO, Department of Pharmacy, IBEF, and CIPLA, SUN PHARMA and publications and reports from various journals such as Indian Drug Journal, Indian Journal of Pharmaceutical Education and Research.

## 1.6 SIGNIFICANCE OF THE STUDY.

The study focuses on the growth performance and trend pattern of selected Pharmaceutical Companies in India, which may be interesting not only to those manufacturing Pharmaceuticals or related products but also to others to see the process of change within the industry. The study also focuses on the major challenges of pharmaceutical industries in India. This study will be useful in its potential to contribute significant insights into a critical sector of the Indian economy, with wide-ranging implications for healthcare, economic development, policy formulation, innovation, and global competitiveness. The study has academic and practical significance.

## 1.7 SOURCE OF DATA

**Secondary data**

Magazines, previous research projects, E-books, websites.

## 1.8 SCHEME OF STUDY

The whole study is divided into four chapters. First chapter includes introduction and the design of the study consisting of statement of the problem, objectives of the study, scope of the study, significance of the study, methodology and the limitations of the study .The second chapter presents an overview of Pharmaceutical Companies, profile of selected Pharmaceutical Companies in India, merits of pharmaceutical industries, their challenges as well as government initiatives. The third chapter related to the growth and trend pattern of selected pharmaceutical companies in India and also includes its profitability and liquidity of these pharmacies .The

fourth chapter presents the major findings of pharmaceutical industries in India and suggestions to improve these companies' efficiency and profitability.

## 1.9 LIMITATONS OF THE STUDY

- The study covers only selected companies in the industry and therefore it implies that the conclusion drawn is tentative in nature and firm generalization should be avoided for entire undertakings.
- Lack of availability of proper data.
- Lack of Time.

## 1.10 CONCLUSION

The Indian pharmaceutical industry has grown at record levels in recent years, but now has an unprecedented opportunity to expand across multiple sectors. With patents on many blockbuster drugs expiring in the coming years, the domestic industry, which has long been a global leader in producing top drugs, is likely to benefit even more from this troubling news. Additionally, many governments around the world are trying to limit rising prescription drug prices by increasing consumption.

# CHAPTER -2

# AN OVERVIEW OF PHARMACEUTICAL COMPANIES IN INDIA

## 2.1 AN OVERVIEW OF INDIAN PHARMACEUTICAL INDUSTRY IN INDIA

The Indian pharmaceutical industry has become one of the most successful industries in the country. Since independence, state-owned enterprises, local private enterprises and large business conglomerates in various countries have experienced significant growth. The industry has grown rapidly and is now India's second largest economy, contributing significantly to India's economic prosperity. It is estimated that the Indian pharmaceutical industry will become the third largest economy in the world with a production value of up to US$ 20 billion by 2015. Additionally, the Indian government has implemented various programs to support the development of the pharmaceutical industry, such as tax incentives, treatment of medical procedures, and development of new drugs.

Despite challenges such as strict price controls, regulations and intellectual property that previously only recognized process patents, the industry has successfully acquired these skills in a smart way in both process and product technology. India has also emerged as a major exporter of APIs or active ingredients. The success of the industry can be attributed to the creation of organizations that train scientists and technicians to know the chemical processes for the production of good and effective medicines.

The economic organization of the pharmaceutical industry is important to move development forward. Over the past sixty-one years, companies in these sectors have contributed greatly to India's recognition in the global pharmaceutical industry. To understand how pharmaceutical companies can use multiple layers to leverage their financial markets for growth and profitability, we need to consider a simple model. This model will help us identify the main factors affecting the profitability and development of the company, show good work and how these factors contribute to the strength of the enterprise.

The Indian pharmaceutical industry has experienced significant growth in recent years and has reached unprecedented levels thanks to expansion in various sectors. The country has a reputation for producing effective medicines, making it a world leader. The domestic industry will benefit greatly as patents on many blockbuster drugs expire in the next few years. In addition, governments around the world are increasingly turning to prescription drugs as a way to control rising health care costs. These opportunities extend beyond India's rich economies such as the United States and the European Union to the emerging economies of Africa, South America, Asia, Eastern and Central Europe. In addition, India has established a position as the manufacturing industry of choice, with many pharmaceutical companies in the country expanding to other destinations. . With a population exceeding 1 billion, India has a huge business potential that multinational and local companies will benefit from. The growth in health insurance is expected to generate significant economic growth, especially given the country's current lack of development in this area. As the government takes measures to make life-saving medicines available to the majority of the population, the rise of new consumers in India is leading to more opportunities. This group, the middle class and the rich, live a fast Western-style life and as a result they begin to suffer from Western-style lifestyle diseases and they need and can afford new treatments.

Multinational pharmaceutical companies do not find India's products very profitable. Many people left when process patents were introduced in the early 1970s, but now many have returned. They began to cooperate with household chores to promote their good behavior and achieve good results. Foreign companies benefit from Indian companies' research and development capabilities and lower operating costs. They also have access to marketing and distribution across vast territories of India.

## 2.2 Challenges Discussed About Indian Pharmaceutical Industry

Every industry has its own strengths and weaknesses and they have to work within these strengths and weaknesses and the pharmaceutical industry is no exception. Listed below are some of the challenges faced by the industry.

## 1. Government Control of Drug Prices:

Other challenges that the Indian pharmaceutical industry is currently dealing with are the government's strict regulations on drug prices. While it benefited the public by providing cheap, quality drugs, it also hindered the innovation potential of pharmaceutical companies. If there is uncertainty about the return on R&D investment, these companies will not be willing to allocate significant funds to their R&D departments for the discovery of new drugs.

## 2. Fake Products/Fake Medicines:

According to a report by ASSOCHAM, nearly one-third of medicines in India are fake or substandard. According to the World Health Organization, India produces 35% of counterfeit medicines in the world. Many sources, including Wikipedia and newspapers, have covered this issue, which may have created a negative impression of the Indian pharmaceutical industry.

## 3. Lack of skills:

There are approximately 400,000 drug workers in India every year. Alumni appear every year, B. Master of Pharmacy. Pharmacy, pharmacy. D. Pharmaceutical MBA etc. However, there is a gap between the type of training offered and the actual needs of the business. Therefore, it cannot be used even if there is a worker. This situation causes many GMP problems in manufacturing. Although some commercial incentives have been developed, these seem small compared to the overall needs of the pharmaceutical industry.

## 4. USFDA is high and the number of inspections is increasing.

Indian pharmaceutical companies are facing constant pressure due to recent inspections by the United States Food and Drug Administration (USFDA). In 2018 alone, the FDA conducted 174 inspections; this accounted for 14% of all inspections worldwide. According to a US FDA report, India accounts for 12% of all drug manufacturers in the US and the number of approvals from Indian companies continues to rise. Therefore, FDA inspection is inevitable.
From 2013 to 2018, a total of 60 drug GMP warning letters were issued, 14 of which were in 2018.

Each report can have a significant impact on a pharmaceutical company's overall reputation for product value and manufacturing quality. The number of doctor-certified factories inspected by the US FDA in India increased in 2019 and a total of 239 inspections took place. However, this number dropped to 80 reviews between January and March 2020, and dropped further to five reviews in 2021.

But now, in 2023, USFDA review returns and regular inspections and audits of the manufacturing facilities of various pharmaceutical companies have been conducted. This has led to the introduction of voluntary work, employment, notification and import notification.

## 5. Intellectual Property Rights (IPR) Issues

Intellectual property rights, such as patents, protect valuable discoveries and inventions. Pharmaceutical companies have invested large amounts of money in the research and development of new drugs. Therefore, patents play an important role in preventing others from copying the design and making it profitable. But finding the middle ground between providing affordable healthcare and protecting patents and copyrights can be difficult. Patent expirations and disputes will impact the job market. By creating a unified licensing agreement and simplifying regulations, we can improve access to medicines and also support innovation through patents.

## 6. International Service Impact

The Indian pharmaceutical industry is dependent on imports of key ingredients and raw materials. Global supply chains pose a problem for businesses. The disruption in global supply has affected the production and availability of medicines in India. Businesses need to find other sources for construction materials. Authorities need to explore new ways to ensure there is a constant and reliable supply of medicines on the market.

7. No proper infrastructure
8. No qualified experts
9. Expensive research equipment
10. Distribution of business and academic classes
11. No participation in training

Indian pharmaceutical companies play an important role in the pharmaceutical world. India is important in pharmacy consolidation. The unique and diverse nature of the Indian pharmaceutical industry, healthcare and regulatory nature of the industry create challenges for the industry. Overcoming these challenges will require the courage of the Indian pharmaceutical industry to become a major player in the global market and advance in the field of healthcare.

## 2.3 Opportunities for Development and Expansion

Although facing many challenges, the Indian pharmaceutical industry has growth potential.

1 Rapid Progress in Technology

Today, various developments such as electronics and artificial intelligence have brought changes in many international markets. Indian pharmaceutical companies can also use this technology to improve manufacturing and overall pharmaceutical products. There are many digital tools that can speed up, simplify and make the entire process more efficient. With government support, Indian pharmaceutical companies can use advanced technology and compete globally.

2. Need for More Generic Drugs

Brand name drugs are the same as brand-name drugs, but are cheaper and still work well. As healthcare costs continue to rise, companies are trying to produce generic drugs that people can afford. India is best in producing these drugs because it has excellent manufacturing facilities and skilled workers. Many people are starting to use generic drugs instead of expensive ones. This is a great opportunity for the Indian pharmaceutical industry to achieve great results while helping more people get the treatment they need. This is an opportunity for Indian companies to play a key role in producing quality and affordable medicines for everyone around the world.

3. Biotechnology and Research Innovation

Biotechnology plays an important role in finding solutions to the biggest health challenges. India has the best laboratories and talented scientists who research biotechnology and develop new drugs. However, more investment in biotechnology research is needed to increase the growth of the pharmaceutical industry. Providing tax incentives and financial support will facilitate the advancement of biotechnology innovation. By encouraging research and development in this field, India can become self-sufficient in finding new medicines.

4. Global Partnerships and Collaborations

Global Partnerships and Collaborations are bringing brilliance to the Indian pharmaceutical industry. Indian pharmaceutical companies can share technology, ideas and personnel by collaborating with research groups and international pharmaceutical companies. The collaboration gives Indian companies access to new ways of discovering new drugs, while foreign companies also benefit from the cost of labor to conduct research. Thanks to this collaboration, exciting solutions and unexplored markets will be just around the corner.

## 2.4 GOVERNMENT INITIATIVES

Government Pharmaceuticals attach great importance to the promotion of medical products and improving the level of the pharmaceutical industry in our country. Therefore, a total of 10,006 Pradhan Mantri Bhartiya Janaushadhi Kendras were established across the country. Additionally, the product basket has been expanded to include 206 pharmaceutical products and 13 surgical products by 2023.

## 1. Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP)

Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP) is a unique scheme that aims to make medicines affordable for everyone. This is done through special centers called Pradhan Mantri Bhartiya Janaushadhi Kendras (PMBJK). The system is managed by the Pharmaceuticals and Medical Devices Bureau of India (PMBI), an independent agency under the Ministry of Drugs. As of November 30, 2023, there are 10,006 Pradhan Mantri Bhartiya Janaushadhi Kendras (PMBJKs) across the country.
The main purpose of this project is to provide affordable medicine and surgical supplies to everyone. This will help reduce the out-of-pocket costs that consumers and patients have to pay.

As of 2023, the product basket has been expanded to include 206 new drugs and 13 additional surgical products. This provides a variety of options to meet people's health needs.

## 2. Production Linked Incentive (PLI) scheme for promotion of domestic manufacturing of critical Key Starting Materials (KSMs), Drug Intermediates (DIs) and Active Pharmaceutical Ingredients (APIs) in India:

The main objective of India's Linkage Program (PLI) scheme is to promote domestic production of essential raw materials (KSM)/chemical intermediates and active pharmaceutical ingredients (API). This is done by supporting the production of 41 unique APIs that are currently distributed in large quantities. The total budget of the program is Rs 69.4 billion and will be implemented

from 2020-21 to 2029-30. Eligible API companies will receive financial support for six years based on their sales growth compared to the previous year.

The incentive for fermented products is 20% for the first four years, 15% for the next four years, 5% for the fifth year, and 5% for the sixth year. The incentive for combined products is 10% for all six years. Financial Markets Authority of India (IFCI) Ltd is the regulatory authority (PMA) overseeing the process.

Currently, a total of 249 applications have been received from four products. Of these, 48 applications were approved with an investment commitment of Rs 3,938.57 billion and estimated employment of approximately 9,618 people. Implementing the program will reduce the reliance on real-time delivery of APIs.

The development of the plan as of September 2023 is as follows: 27 of the 48 approved projects have been approved for implementation. The total investment is 30.63 billion rupees and creates employment for 2,777 people. Operations generated sales of Rupees 817.33 billion, of which exports were Rupees 252.62 billion.

For the financial year 2022-23, i.e. the first year of performance/sales, the incentive amount to be distributed to applicants who meet the three-month/six-month support requirements is Rs 434 billion. These documents have been verified by the project management organization.

## 3. Pharmaceutical Manufacturing Linked Incentive Scheme:

Pharmaceutical PLI aims to improve India's productive capacity in the sector through increased investment and production. It provides diversification of products that are also beneficial in the pharmaceutical industry. The total budget of the program is Rs 15,000 billion and will be implemented from 2020-2021 to 2028-29.

The program provides financial support for the production of three specific types of products. The first category includes biopharmaceuticals, complex generic drugs, patented drugs, orphan drugs, and drugs with expired patents. The second category includes active ingredients, starting materials and intermediates. The third category includes autoimmune drugs, anti-cancer drugs, anti-diabetic drugs, anti-inflammatory drugs, cardiovascular drugs, psychotropic drugs, anti-inflammatory drugs and accessories. These factors are expected to foster innovation, R&D and diversity in the Indian pharmaceutical industry. Additionally, investment in the core business of the pharmaceutical industry will help small, medium and micro enterprises grow in the future.

This program provides financial support based on the sale of pharmaceuticals and in vitro diagnostic medical equipment. These incentives are given to selected applicants who meet investment and sales requirements. The incentive for Category 1 and 2 products is 10% between FY 2022-23 and FY 2025-26, 8% for FY 2026-27 and 6% for FY 2027-28. For Category 3 products, the incentive is 5% for FY 2022-23 and FY 2025-26, 4% for FY 2026-27 and 3% for FY 2027-28. Small Industries Development Bank of India (SIDBI) is managing the project.

So far, 55 applicants, including 5 for in vitro diagnostics, have been selected for the program with an investment of Rs 17.275 billion.

**4. Strengthening the Pharmaceutical Industry (SPI):**

The Pharmaceutical Government is implementing a plan called Strengthening the Pharmaceutical Industry (SPI) with a budget of Rs 500 billion. The plan will be used from 21-22 to 25-26. Its main objective is to provide assistance to pharmaceutical groups and MSMEs across the country to increase their productivity, efficiency and sustainability. The aim is to strengthen the infrastructure for integrated pharmaceutical SMEs. The SPI program will be supervised by SIDBI appointed as Project Management Consultant (PMC).

**5. India Pharmaceuticals 2023 and India Medical Devices 2023:**

The 8th International Pharmaceutical and Medical Device Conference INDIA PHARMA 2023 and INDIA MEDICAL Device 2023 is organized by the Department of Chemicals and Fertilizers, Ministry of Pharmaceuticals, Government of India. India is collaborating with the Federation of Indian Chambers of Commerce and Industry (FICCI). The event was held on 26-27 May 2023 at Ashoka, New Delhi. Minister of Chemicals and Fertilizers Dr. Mansukh Mandaviya commenced the meeting with Minister of Chemicals and Fertilizers Shri Bhagwant Khuba. At the event, the Prime Minister of the Ministry of Chemicals and Fertilizers introduced the medical device policy of the 2023 National Health Plan and the Medical Device Export Promotion Council. Additionally, a new program called Community Healthcare Clusters (AMD-CF) was created to establish laboratories to improve or develop community infrastructure in healthcare facilities.

This two-day conference, to be held on May 26, 2023, will focus on the Indian device industry under the theme 'Sustainable Medical Technology 5.0: Expansion and Innovation of Indian Medical Technology'. On May 27, 2023, the focus will be on the pharmaceutical industry under the theme “Indian Pharmaceuticals”: Creating Value through Innovation”

The two-day conference, which was held on a variety of topics, attracted international attention with the attendance of more than 100 pharmaceutical and healthcare industry leaders. The event included industry representatives, NITI Aayog, Ministry of Pharmaceuticals, Ministry of Health, DPIIT and Minister of Higher Education, Chairman NPPA, senior staff of MeitY, MoEFCC, BIS, AERB, National Biopharmaceutical Board, and Drug Regulatory Authorities. Indian Industry Coordinator, IIT Delhi, IIT Kanpur, NIPER Mohali, BIRAC, Health Sector Skills Council.

India Medical Technology Expo (IMTE) 2023 was organized by the Faculty of Medicine at Heli from 17 to 19 August 2023.

**6. Medical Equipment Cluster Support for Public Facilities (AMD-CF):**

The Finance Committee approved a program to support the Medical Devices Cluster for Government Agencies (AMD-CF) on March 20, 2022. The program aims to provide financial support to 12 clusters and 12 research institutes. The total budget of the program is 5 million won. It is worth $3 billion and will be spent from FY 2023-24 to 2025-26.

The primary goal of the AMD-CF program is to improve medical equipment by supporting the development of new diagnostic capabilities, equipment. This helps ensure sustainable business growth while maintaining quality standards.

Project guidelines were published on May 9, 2023. Small Enterprise Development Bank of India (SIDBI) was selected as the Project Management Agency (PMA) to implement this idea.

**7. Large theater promotion ideas:**

On March 20, 2020, the Health Commission approved a project called “treatment of grand theaters” to promote construction of grand theaters in India. The goal is to provide government-owned public infrastructure for housing in parks, reduce API production costs and promote self-reliance in India. This bill will increase the competitiveness of local API markets and reduce the country's dependence on imports. Financial support is provided to build public infrastructure in newly opened cinemas with the support of the state or government agencies. The total budget of the program is Rs 3 trillion and the period is from FY 2020-21 to FY 2024-25. Financial assistance will cover 70% of the cost of preparing pharmacy parks in health centers and 90% in the Northeast and Hill States. The maximum subsidy to pharmaceutical companies is Rs 1,000 crores. Gujarat, Himachal Pradesh and Andhra Pradesh have been selected to receive support for building public infrastructure in Pharma hubs, with the top rankings for all three states announced.

## 2.5 Impact of GST on Pharmaceutical Industry.

The long-awaited introduction of Goods and Services Tax (GST) has caught the attention of many businesses in India. This is useful for most tasks and makes collecting taxes easier than traditional taxes. GST has had a positive impact on the Indian pharmaceutical industry by increasing production costs. Most of the medicines mentioned in the 5% Goods and Services Tax (GST) tax bracket were earlier included in the 4% Value Added Tax (VAT) tax bracket. This eliminates the impact of multiple taxes on a single product. Ayurvedic medicines may be more expensive under GST as they are subject to 12% tax, which falls within the 4% tax bracket of previous VAT. The MRP will need to be revised to absorb the full effect of the tax hike. GST rate on pharmaceuticals, impact of Indian GST on pharmaceuticals, GST on medical services, GST on medical supplies, GST on hospital charges, etc. GST on pharmaceuticals has various rates such as 0%, 5%, 12%, 18%, etc. is charged. Minimum prices are primarily used for life-saving medicines and vaccines, while 18% prices are used for products such as nicotine gum.

## Impact of GST on import of pharmaceuticals

- Imported medicines are subject to IGST and customs duty.
- Tax breakdown is as follows:
- Basic tariff: 10% of customs duty value
- Social welfare surcharge: 10% of BCD
- IGST: 5% / 12% based on customs assessment value / Value after adding tax value to 18% tariff and low cost and health support.

## Positive impact of GST on the pharmaceutical industry

GST eliminates the effect of the tax where there are many taxes on a single product. With only three accounts, cost accounting and tax systems will be easier. It will create an economy for everyone, ensuring equal growth across states.

Under GST, life-saving essential medicines such as oral saline solution, diagnostic kits for diagnosing all kinds of liver diseases, and many other life-saving medicines and medicines are in the 5% tax bracket.

Bonus/discount plans, free drug testing, status changes, etc. It is said to be costly for companies because it can be used at the point of delivery.

Pharmaceutical generics/branded formulations/dietary supplement companies have suffered due to high excise tax and will greatly benefit from centralized taxation and reduced industrial costs for all companies.

Maximum GST in API is 18% and maximum content in production is around 5% and 12%. This means service providers will pay more taxes through the Goods and Services Tax. Therefore you will pay less for samples. This means the entry points will be added up and reversed.

Marketing companies and business leaders will see that there are no limits to coming up with product marketing ideas and pipelines. CENVAT credit is an amount deposited in a bank account, which can be deducted/adjusted against interim tax on the purchase or payment of finished goods. Implementation of GST on goods and services seems to be the end of the pharmaceutical industry.

### Negative Impact of GST on the Pharmaceutical Industry

Although this is beneficial, it also has some drawbacks for the pharmaceutical industry.

More Ayurvedic products fall into the less than 12-15% category. Many Ayurvedic products fall under the cosmetics category. GST increases the direct tax paid by pharmaceutical companies by 60% and MRP by 4%, so medical tests are said to be taxed at 15%, or 18%. Other medicines, preparations, medicines and medical supplies. Taxes (including VAT) range from 5% to 12%. Typically it is 11.5% and 12.5% to 18%.

## 2.6. PROFILE OF SELECTED PHARMACEUTICAL COMPANIES IN INDIA

## PROFILE OF CIPLA Ltd

Cipla was founded in 1935 in Mumbai by Khwaja Abdul Hamied as Chemical, Industrial and Pharmaceutical Laboratories. In July 1984, the company's name was changed to "Cipla". Cipla as an organization has been built step by step on the foundation of care. Caring for life has been and will continue to be our guiding principle. Based on the same goal, we have expanded to more than 80 countries and offer more than 1,500 products in more than 50 forms and various types of treatments. We are increasing our presence in key markets such as India, South Africa, the United States and other global markets to make global healthcare more affordable.

Making a difference for patients has inspired all our work at Cipla for over eighty years. In 2001, we made triple antiretroviral therapy for HIV/AIDS available in Africa for less than a dollar a day; this is a paradigm-shifting program widely seen as bringing inclusivity, accessibility and access across the sexual potency and affordability of HIV. As a prominent citizen, Cipla is committed to providing humanitarian services to the healthcare sector, following its mission of caring for life and building healthy relationships within society wherever it goes, making it a favorite of healthcare organizations and stakeholders worldwide.

## PRODUCT AND SERVICES

Cipla sells active pharmaceutical ingredients, including the antibiotics escitalopram oxalate, lamivudine and fluticasone propionate, as well as pharmaceutical and personal care products to other companies. Cipla is the world's largest producer of antibiotics.

In July 2020, the company announced the launch of Gilead in India under the name CIPREMI after signing a licensing agreement with the parent company and received DCGI approval for "non-emergency use" for the treatment of COVID. -19 in critically ill patients.

## OPERATION

Cipla also partners with other companies in the areas of consulting, commissioning, engineering, project evaluation, quality management, technology transfer, support and equipment.

In the financial year 2013-14, the company's employee benefits expenditure was Rps 1.285 trillion (equivalent to Rps 2.1 trillion or US$ 260 million in 2023). According to Cipla's annual report for 2022-23, the company has more than 25,000 employees, 14.3% of whom are women.

The manufacturer is approved by international regulatory bodies such as the US FDA, UK MHRA and WHO.

## RESEARCH AND DEVELOPMENT OF CIPLA

Cipla Ltd has invested more than Rs 170 billion to set up a new Export Oriented Unit(EOU) at Patalganga for bulk and wholesale pharmaceutical manufacturing. The building began production in July 2006. New EOU projects are starting in Bangalore and Kurkumbh for manufacturing API and in Sikkim for design. The company is also setting up special regional projects in Indore (Madhya Pradesh) and Goa for prototype production.

## PROFILE OF SUN PHARMA Ltd

Founded in 1983 by Dilip Shanghvi in Vapi, Gujarat, Sun Pharmaceutical Industries Ltd. has five mental health products and a two-person marketing team. Today the company ranks Sun Pharmaceutical Industries Limited (d/b/a Sun Pharma) is an Indian multinational pharmaceutical company headquartered in Mumbai that manufactures and markets pharmaceutical preparations and active pharmaceutical ingredients (APIs) in over 100 countries worldwide. It is India's largest pharmaceutical company and the world’s fourth largest privately held generic pharmaceutical company. These products cover a wide range of medical fields such as psychiatry, immunology, neurology, cardiology, diabetes, gastroenterology, ophthalmology, nephrology, urology, dermatology, gynecology, respiratory, oncology, dental treatment and food.

## PRODUCT AND SERVICES.

The company produces a wide range of versatile and effective medicines aimed at treating a wide range of chronic and acute conditions. Our products include prescription drugs, brand-name drugs, specialty drugs, complex technology products, over-the-counter (OTC) products, antiretroviral drugs (ARVs), active pharmaceutical ingredients (APIs), and intermediates. Our presence in more than 100 countries helps us address local healthcare needs as we continue to develop our products globally.

Major products include Detroit (USA), ICN Caraco Pharm Labs in Hungary (now known as Alkaloida Chemical Company Exclusive Group) and Halol (India), Bryan

Ohio, US and international operations in Cranbury There are well-known facilities. On May 21, 2007, the Company entered into an agreement to acquire Taro Pharmaceutical Industries Ltd. (TAROF, Pink Sheets).

## OPERATION

The company is the largest Indian company in emerging markets, operating in more than 80 markets. Brazil, Mexico, Russia, Romania and South Africa are some of our main markets. Available in all major markets such as Western Europe, Canada, Australia, New Zealand, Japan and China.

## RESEARCH AND DEVELOPMENT OF SUN PHARMA

The company has one of the largest R&D expenditures in the country. It established Sun Pharma Ltd Advanced Research Center (SPARC) in Vadodara, Gujarat, as its first research center in 1993 to develop generic drugs that meet international development standards. SPARC's laboratory has the capacity to conduct organic synthesis, formulation development,

biotechnology, pharmacokinetics (absorption, distribution, metabolism and excretion monitoring studies (ADME)) and bioequivalence studies. It built a second research center, expanding to over 50,000 square meters. Ft. in Mumbai to produce generic drugs for established industry. New molecules and new delivery systems meet the challenges of entire new industries, including researchers, intellectual property, space and equipment research, and create a new company.

## 2.7 CONCLUSION

The review of literature in this chapter provide validity of research topic-performance of pharmaceutical industries in the Indian economy. The general profile of selected pharmaceutical industries gives an outlook for the study. Several government initiatives and how GST affect the Pharma industries were also discussed.

# CHAPTER 3

## GROWTH PERFORMACE AND TREND PATTERN OF SELECTED PHARMACEUTICAL INDUSTRIES IN INDIA

## PROFITABILITY AND LIQUIDITY OF SELECTED PHARMACEUTICAL INDUSTRIES IN INDIA

## 3.1 GROWTH PERFORMAMCE AND TREND PATTERN OF CIPLA Ltd AND SUN PHARMACUETICALS Ltd.

Driven by factors such as domestic demand, exports, technological advancements**,** and good environmental management, the Indian pharmaceutical industry has shown significant growth and is expected to continue growing. Pharmaceutical industry growth is often evaluated using key financial indicators and specific business indicators. These metrics provide insight into company's revenue, profitability, market share, innovation, and overall health. India's pharmaceutical industry, often referred to as the "pharmaceutical industry of the world", is growing. It is expected to grow from $40 billion in 2021 to $130 billion in 2030 and is expected to reach $450 billion in 2047. In the Indian economy, tobacco accounts for more than 20% of the world's pharmaceutical supply and accounts, as well as meeting domestic demand. About 60% of global vaccine demand. Meets 40% of US demand for generic drugs and supplies a quarter of the UK's medicines.

## 3.2 FINANCIAL HIFHLIGHTS OF CIPLA Ltd AND SUN PHARMACEUTICALS Ltd

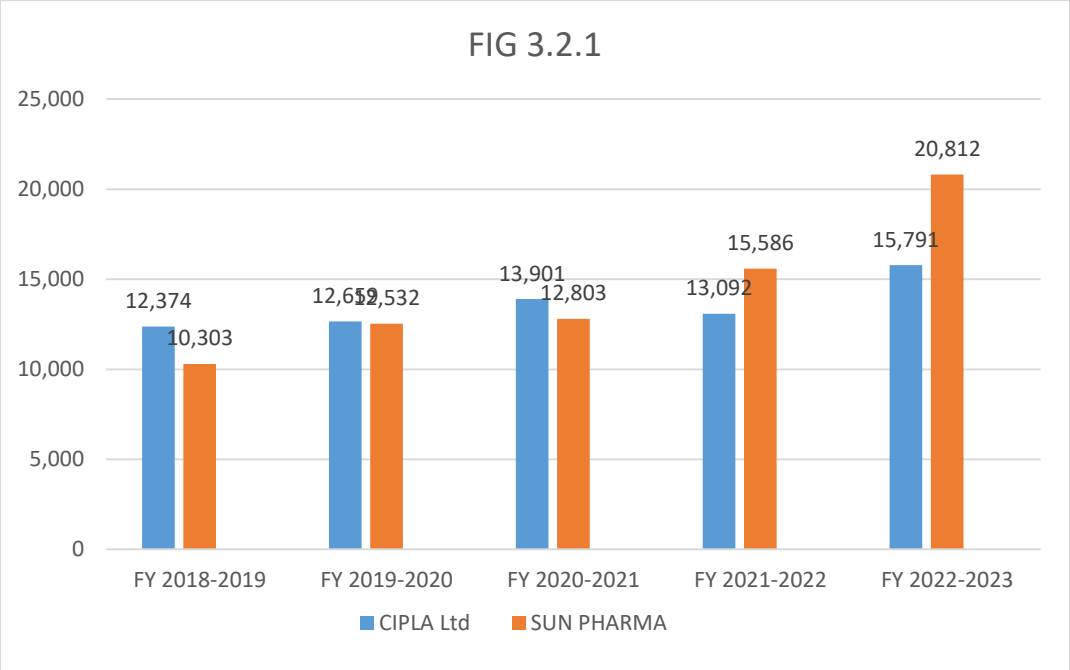
### 3.2.1 REVENUE FROM OPERATIONS.

**Table 3.2.1**

| FINANCIAL YEAR | REVENUE FROM OPERATIONS CIPLA (in crores) | REVENUE FROM OPERATIONS SUN PHARMA (in crores) |
|---|---|---|
| FY 2018-2019 | 12,374.01 | 10,303.21 |
| FY 2019-2020 | 12,659.15 | 12,531.93 |
| FY 2020-2021 | 13,900.58 | 12,803.21 |
| FY 2021-2022 | 13,091.79 | 15,585.98 |

| | | |
|---|---|---|
| FY 2022-2023 | 15,790.60 | 20,812.14 |

Source: data published in money control



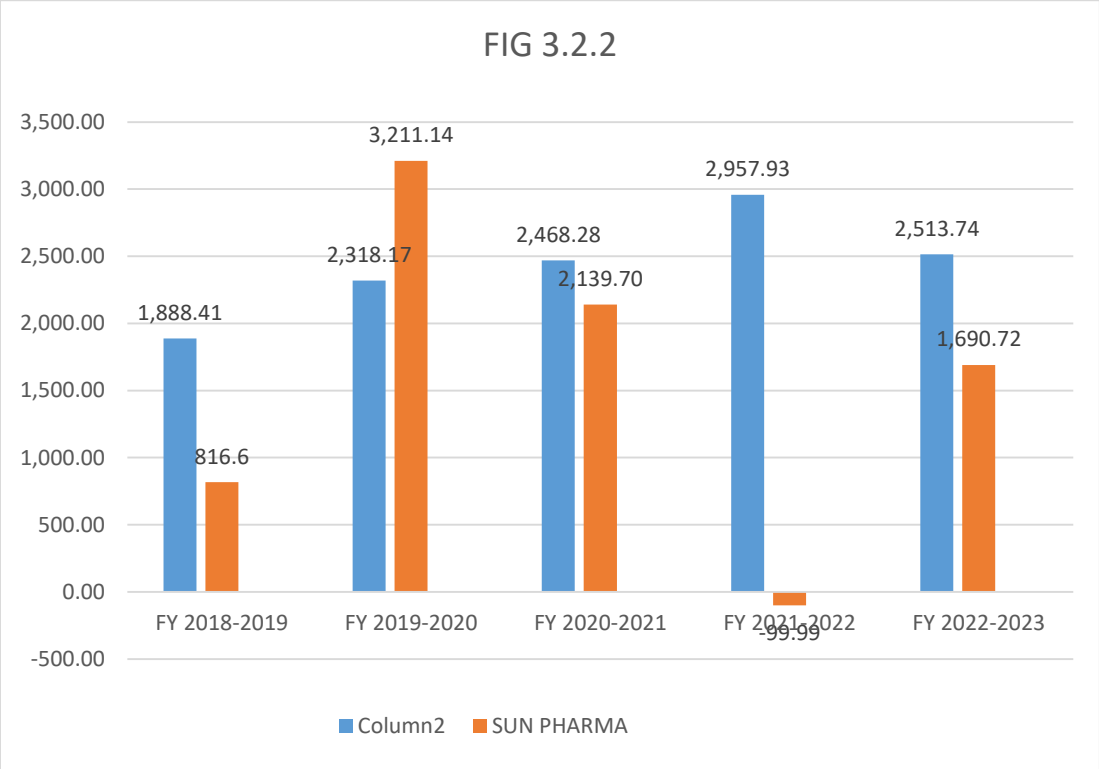

From above figure the company SUN PHARMA revenue grew by 12.6% to Rs 433 billion. For FY23, India formulation sales where at Rs 136 billion, up by 6.6% for about 32% of overall revenue. Cipla earned around 277 billion India rupees as income from operation in the fiscal year 2023.

### 3.2.2 NET PROFIT OF CIPLA AND SUN PHARMA

**Table 3.2.2**

| NET PROFIT | CIPLA Ltd ( in crores) | SUN PHARMA ( in crores) |
|---|---|---|
| FY 2018-2019 | 1,888.41 | 816.60 |
| FY 2019-2020 | 2,318.17 | 3,211.14 |
| FY 2020-2021 | 2,468.28 | 2,139.70 |
| FY 2021-2022 | 2,957.93 | -99.99 |

| | | |
|---|---|---|
| FY 2022-2023 | 2,513.74 | 1,690.72 |
| Source : data published in money control | | |




In FY 2023, Cipla had a total profit of around 28 billion, Indian rupees. This was increased to the profit from the previous years, when the company saw a profit margin of 25 billion Indian rupees. In fiscal year 2023, Sun Pharmaceutical Industries generated a consolidated income of about 445 billion Indian rupees.

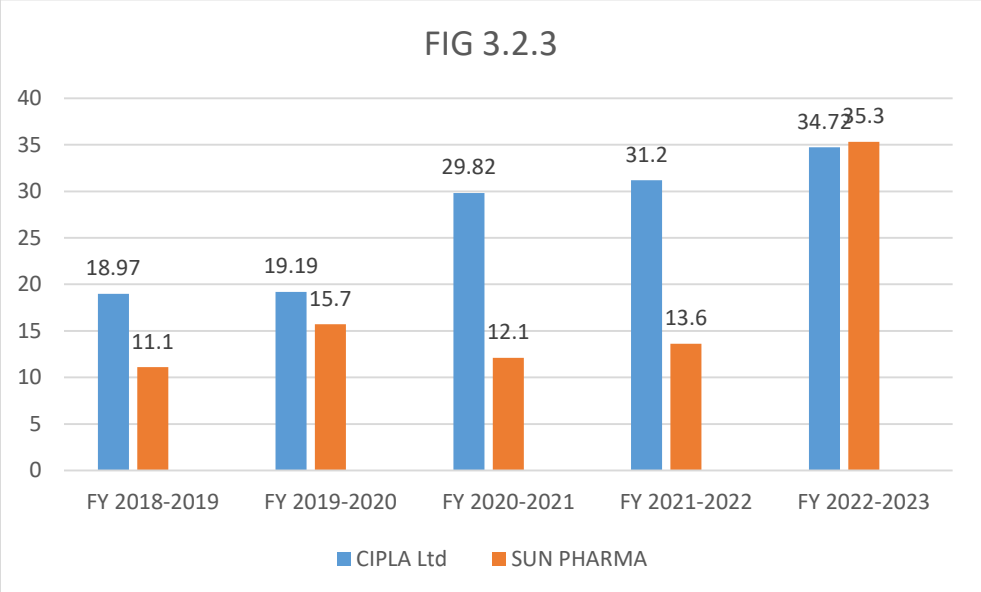
### 3.2.3 EARNING PER SHARE OF CIPLA Ltd and SUN PHARMA

**Table 3.2.3**

| EPS | CIPLA Ltd | SUN PHARMA |
|---|---|---|
| FY 2018-2019 | 18.97 | 11.10 |
| FY 2019-2020 | 19.19 | 15.70 |
| FY 2020-2021 | 29.82 | 12.10 |

| | | |
|---|---|---|
| FY 2021-2022 | 31.20 | 13.60 |
| FY 2022-2023 | 34.72 | 35.30 |

Source: data published in money control




From the fig above EPS Ratio of CIPLA has grown by 11.28 % Compared to previous Financial Year. EPS Ratio of CIPLA trending up for at least three Years. EPS Ratio with value of 18.97 was lowest in Year Mar-19 in last Five Years. Latest EPS Ratio with value of 34.72 is Greater than Average EPS of 26.78 in last five years. EPS Ratio of SUNPHARMA rose handsomely by 159.56 % this year. EPS Ratio with value of 35.30 was highest in Year Mar-23 in last Five Years. EPS Ratio with value of 11.10 was lowest in Year Mar-19 in last Five Years.

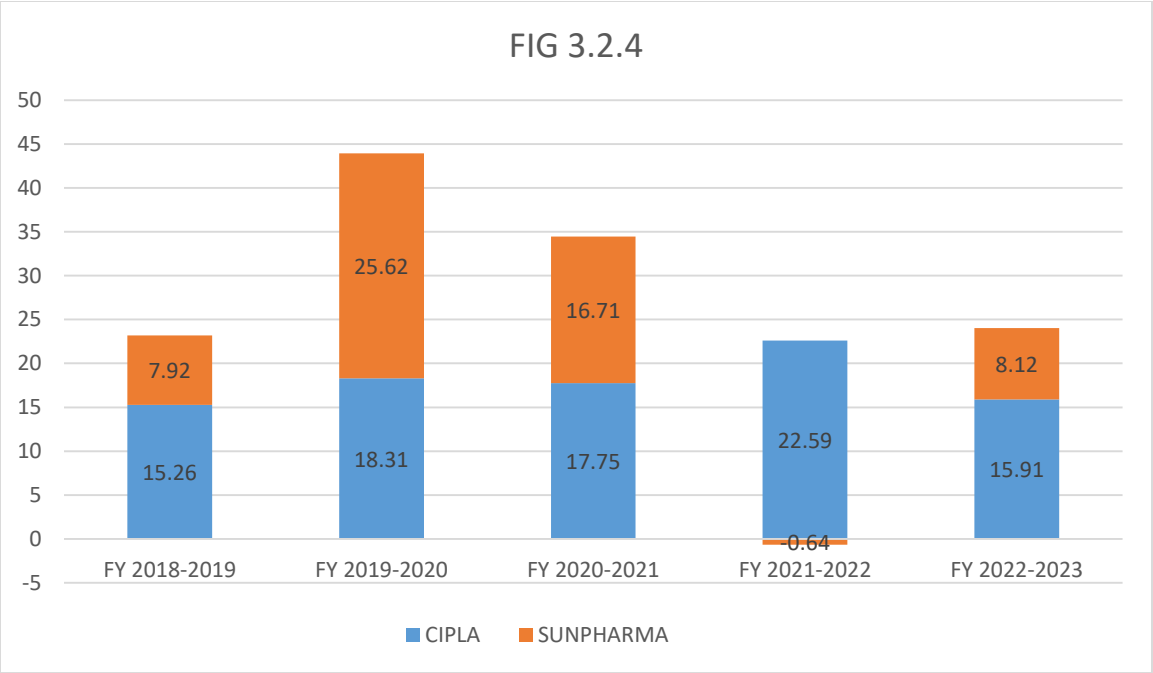
### 3.2.4 NET PROFIT MARGIN %

**Table 3.2.4**

| NET PROFIT MARGIN | CIPLA Ltd % | SUN PHARMA % |
|---|---|---|
| FY 2018-2019 | 15.26 | 7.92 |

| | | |
|---|---|---|
| FY 2019-2020 | 18.31 | 25.62 |
| FY 2020-2021 | 17.75 | 16.71 |
| FY 2021-2022 | 22.59 | -0.64 |
| FY 2022-2023 | 15.91 | 8.12 |

Source: data published in money control




From above figure the net profit margin of CIPLA has decreased when compared to the previous year and there is about 8 % growth in SUN PHARMA when compared to previous fiscal year.

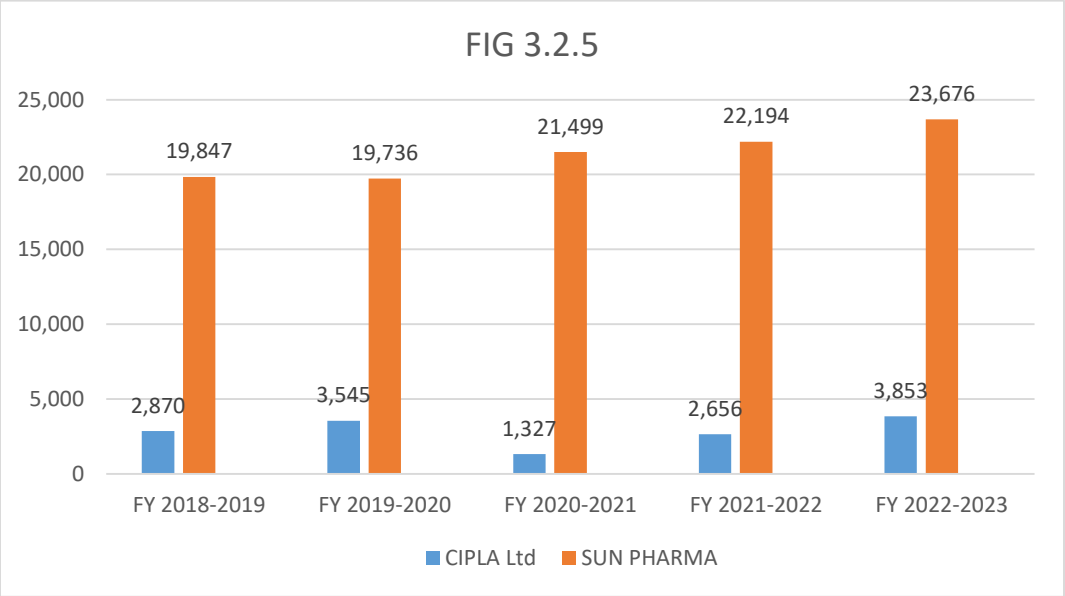
### 3.2.5 RESEARCH AND DEVELOPMENT

**Table 3.2.5**

| R&D | CIPLA Ltd | SUN PHARMA |
|---|---|---|
| FY 2018-2019 | 2,870 | 19,847 |
| FY 2019-2020 | 3,545 | 19,736 |
| FY 2020-2021 | 1,327 | 21,499 |

| | | |
|---|---|---|
| FY 2021-2022 | 2,656 | 22,194 |
| FY 2022-2023 | 3,853 | 23,676 |

Source: data published in money control



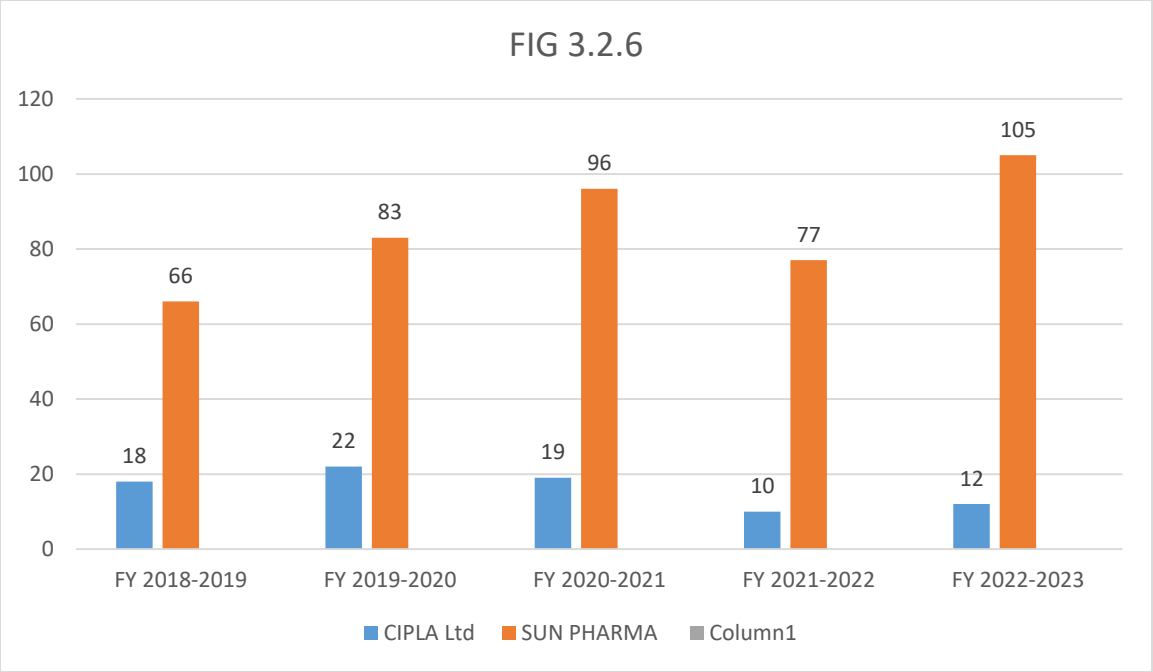

The R&D investment of CIPLA has increased from 2870 in FY 2018-19 to 3853 in FY 2022-23.The growth of R&D in SUN PHARMA has also increased from 19,847 to 23,676 in the FY 2022-23.

### 3.2.6 PRODUCT LAUNCH IN INDIA

**Table 3.2.6**

| PRODUCT LAUNCH | CIPLA Ltd | SUN PHARMA |
|---|---|---|
| FY 2018-2019 | 18 | 66 |
| FY 2019-2020 | 22 | 83 |
| FY 2020-2021 | 19 | 96 |
| FY 2021-2022 | 10 | 77 |
| FY 2022-2023 | 12 | 105 |

Source: data published in money control



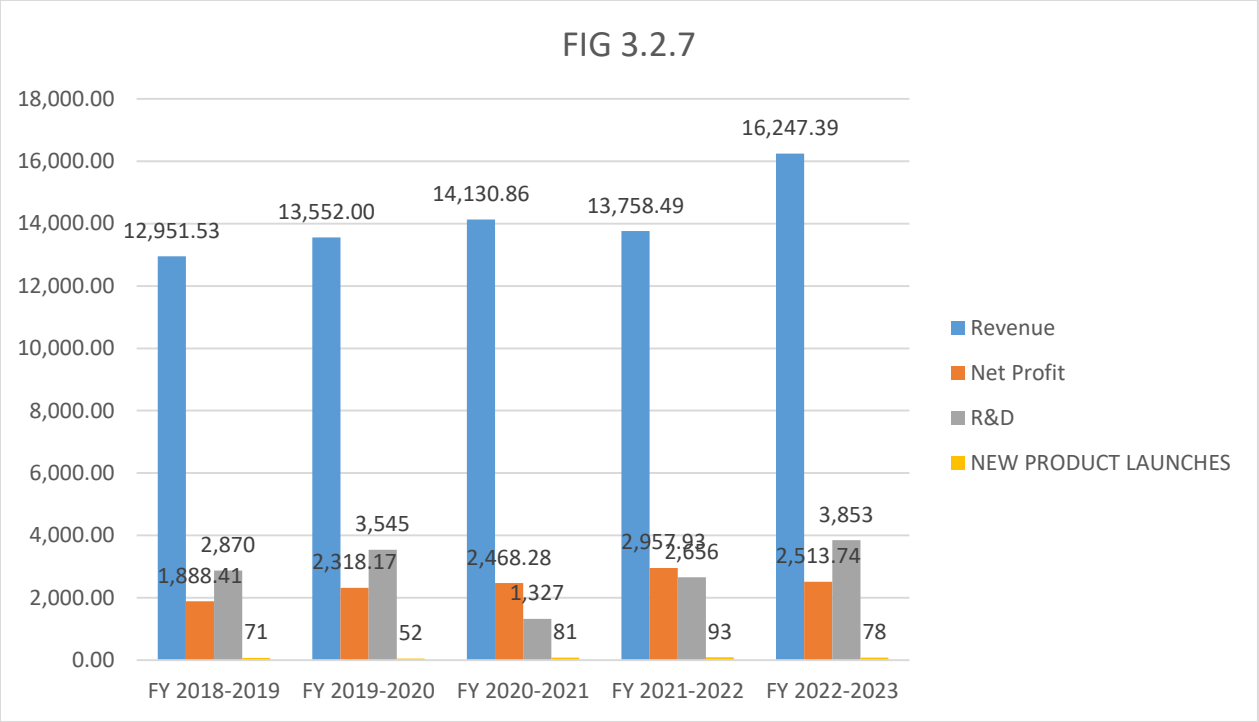

From the fig above it is clear that SUN PHARMA launches more number of new products in to the Indian market when compared to CIPLA.CIPLA also launches number of new products in to market, but the amount is less when compared to FY2019-2020.

### 3.2.7 OVERALL TREND ANAYSIS OF CIPLA Ltd

**TABLE 3.2.7**

| Year | Revenue | Net Profit | R&D | NEW PRODUCT LAUNCHES |
|---|---|---|---|---|
| FY 2018-2019 | 12,951.53 | 1,888.41 | 2,870 | 71 |
| FY 2019-2020 | 13,552.00 | 2,318.17 | 3,545 | 52 |
| FY 2020-2021 | 14,130.86 | 2,468.28 | 1,327 | 81 |
| FY 2021-2022 | 13,758.49 | 2,957.93 | 2,656 | 93 |
| FY 2022-2023 | 16,247.39 | 2,513.74 | 3,853 | 78 |

Source: data published in money control




From the figure given above the overall trend pattern of the company can be summarized as given below. The company Cipla has stated an income of INR 6,854.47 billion in the 2nd zone in comparison to INR 5,951.49 billion within the identical duration final year. Net earnings stood at INR 1,130.91 million in comparison to INR 7889 inside the previous year. Earnings in step with the percentage from continuing operations was INR 14.01 as compared to INR 9.78 a year ago. Diluted income according to proportion from persevering with operations changed to INR 14 as compared to INR 9.77a year ago. The growth in FY2021-2022 was very high when compared to other fiscal years. Over past 5 years company could able to launch about 375 new products in to Indian market. There is visible growth in R&D also.

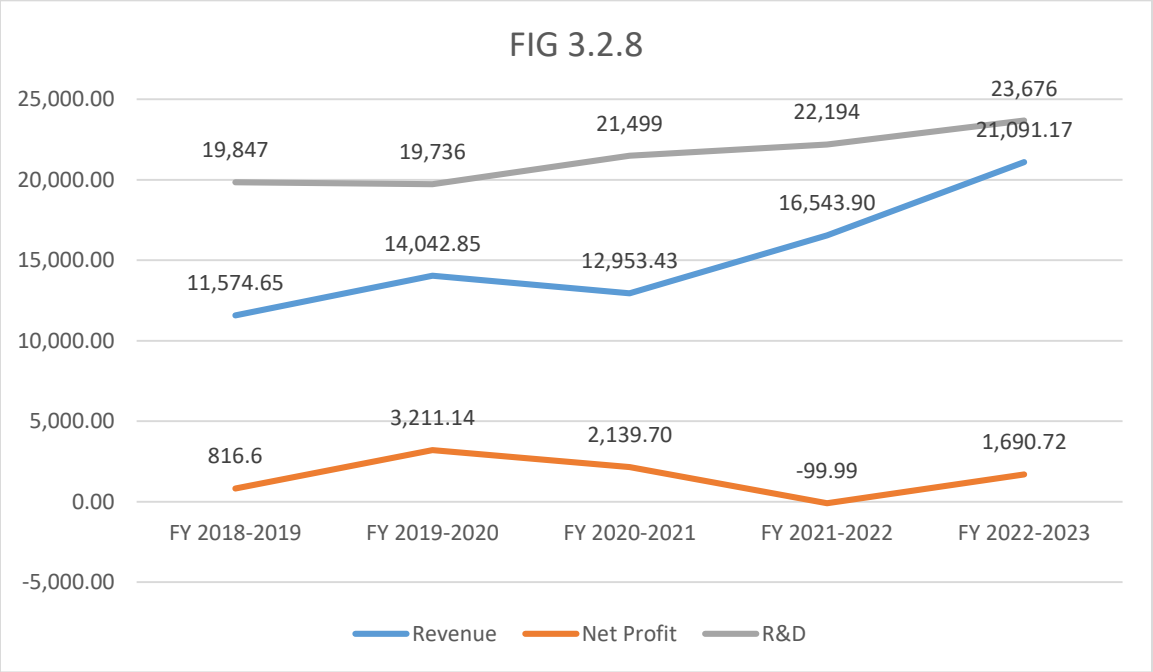
### 3.2.8 OVERALL TREND ANAYSIS OF SUN PHARMA

**TABLE 3.2.8**

| Year | Revenue | Net Profit | R&D |
|---|---|---|---|
| FY 2018-2019 | 11,574.65 | 816.60 | 19,847 |
| FY 2019-2020 | 14,042.85 | 3,211.14 | 19,736 |
| FY 2020-2021 | 12,953.43 | 2,139.70 | 21,499 |
| FY 2021-2022 | 16,543.90 | -99.99 | 22,194 |

| | | | |
|---|---|---|---|
| FY 2022-2023 | 21,091.17 | 1,690.72 | 23,676 |

Source: data published in money control




Sun Pharmaceutical Industries Ltd.'s share price has been *on an upward trend* over the past few years, Share Price: - The current share price of Sun Pharma Inds. Is Rs 1,611.75. One can use valuation calculators of ticker to know if Sun Pharma Inds. Share price is undervalued or overvalued. There is an upward growth in revenue and also in R&D

## 3.3 PROFITABILITY AND LIQUIDITY ANALYSIS OF SELECTED PHARMACEUTICAL COMPANIES IN INDIA

Profitability is used to measure the profit of the company and is very important in measuring the performance of the company. Profitability ratios are often used to determine a company's income from sales, net worth, and total assets. In this section, these examples are used to measure the pr ofitability of Indian pharmaceutical companies.

### 3.3 A  Profitability Ratio

The profitability can be measured with the help of the given ratios.

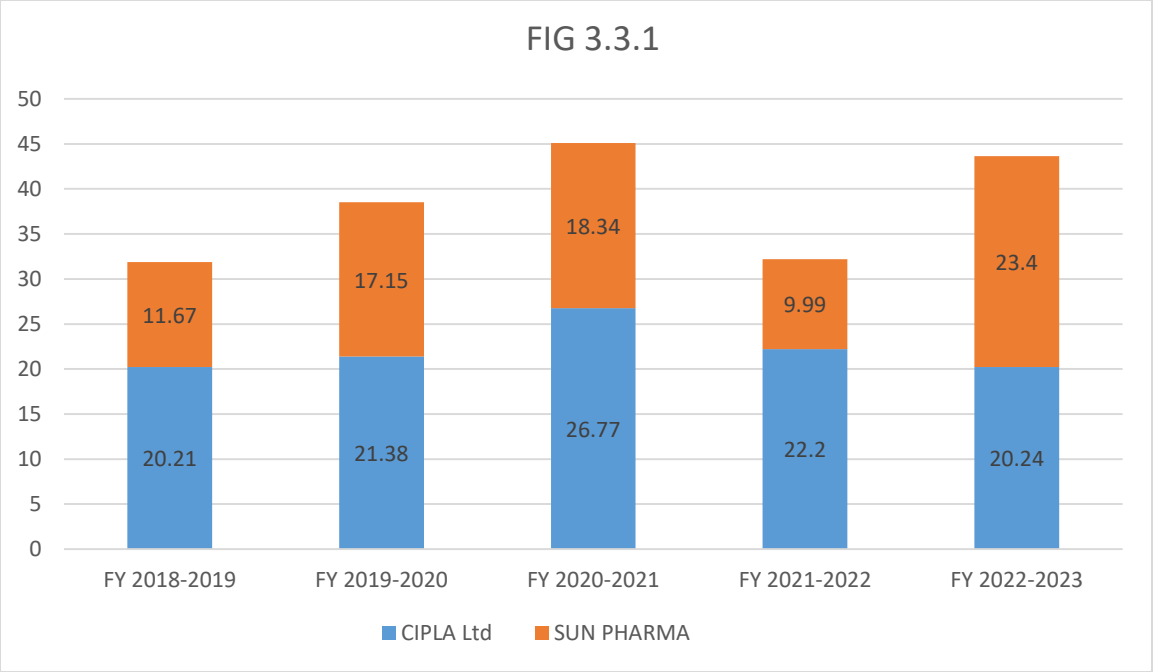
- Gross profit margin ratio
- Net profit margin ratio
- Operating Profit margin
- Earnings Per Share
- Return on Capital Employed
- Return on Asset

#### 3.3.1 GROSS PROFIT MARGIN

Gross profit is profit minus cost of goods sold (COGS). Simply put, a company's gross profit is t he money it makes after deducting operating costs. This measure is often expressed as a percenta ge of sales and is also known as gross profit margin**.**

**TABLE 3.3.1**

| GROSS PROFIT MARGIN | CIPLA Ltd | SUN PHARMA |
|---|---|---|
| FY 2018-2019 | 20.21 | 11.67 |
| FY 2019-2020 | 21.38 | 17.15 |
| FY 2020-2021 | 26.77 | 18.34 |
| FY 2021-2022 | 22.20 | 9.99 |
| FY 2022-2023 | 20.24 | 23.40 |
| Source : data published in money control | | |




From the above data the gross profit margin of Cipla has decreased when compared to the previous year. There is tremendous growth in Sun Pharma when compared to the previous fiscal year. It is increased to 23% from 9%.

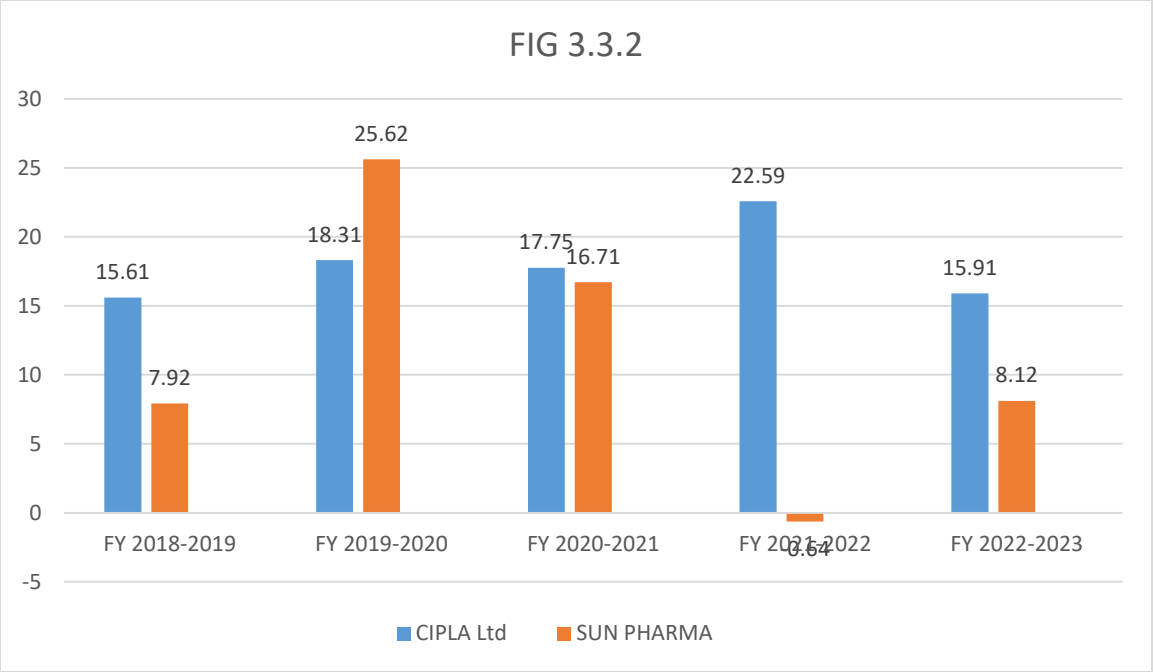
### 3.3.2 NET PROFIT MARGIN

The portion of your total income that remains after all costs and taxes are deducted is known as your net profit margin. You will need to pay for business expenses and pay the tax office with a significant portion of your money. Your net profit margin is the amount of income that remains after expenses are deducted.

**TABLE 3.3.2**

| NET PROFIT MARGIN | CIPLA Ltd | SUN PHARMA |
|---|---|---|
| FY 2018-2019 | 15.61 | 7.92 |
| FY 2019-2020 | 18.31 | 25.62 |
| FY 2020-2021 | 17.75 | 16.71 |
| FY 2021-2022 | 22.59 | -0.64 |
| FY 2022-2023 | 15.91 | 8.12 |

Source: data published in money control




From the above figure the net profit margin of CIPLA is decreased when compared to previous FY. It has decreased from 22 to 15. On other hand there is slight increase in net profit margin of SUN PHARMA when compared to the previous fiscal year.

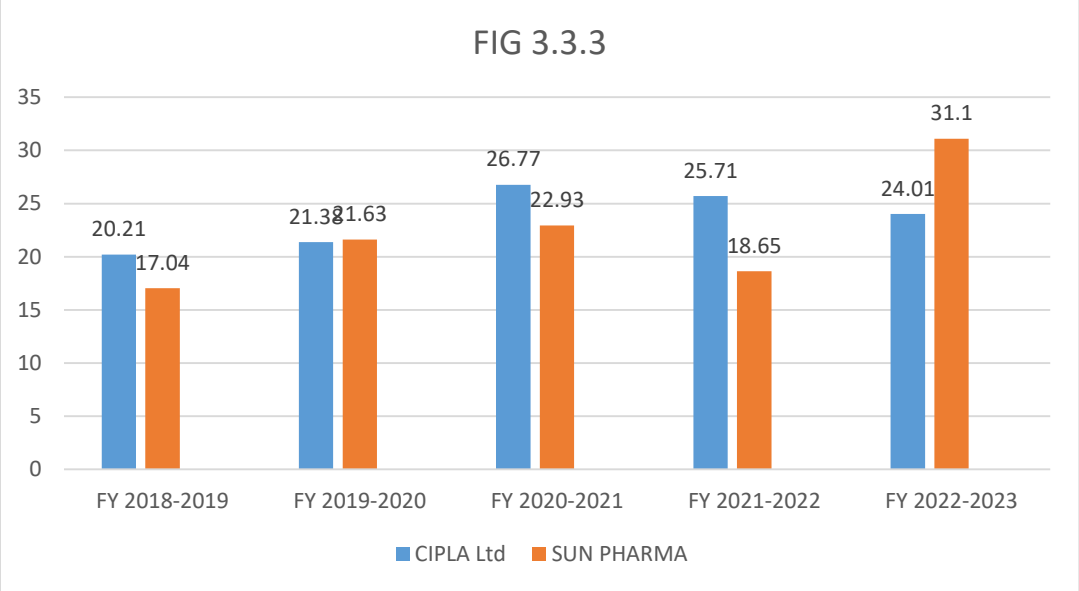
### 3.3.3 OPERATING PROFIT MARGIN

The operating margin calculates a company's profit on each dollar of sales, deducting variable costs of production (raw materials and labor) but not interest or taxes. It is computed by dividing operational income by net sales for a business. Depreciation and amortization, total revenues, and all pertinent operating expenditures are subtracted to arrive at operational profit. The expenditures incurred by a business beyond the direct costs of production, such as salaries and benefits, rent and associated overhead, costs for research and development, etc., are included in operating expenses. The percentage of operational profit that comes from total revenue is known as the operating profit margin.

**TABLE 3.3.3**

| OPERATING PROFIT MARGIN | CIPLA Ltd | SUN PHARMA |
|---|---|---|
| FY 2018-2019 | 20.21 | 17.04 |
| FY 2019-2020 | 21.38 | 21.63 |
| FY 2020-2021 | 26.77 | 22.93 |
| FY 2021-2022 | 25.71 | 18.65 |
| FY 2022-2023 | 24.01 | 31.10 |

Source: data published in money control




Operating profit margin of CIPLA shows a slight decrease according to the figure given above when we compared to the previous year. Whereas there is an upward growth in operating profit margin of SUN PHARMA.

### 3.3.4 EARNING PER SHARE

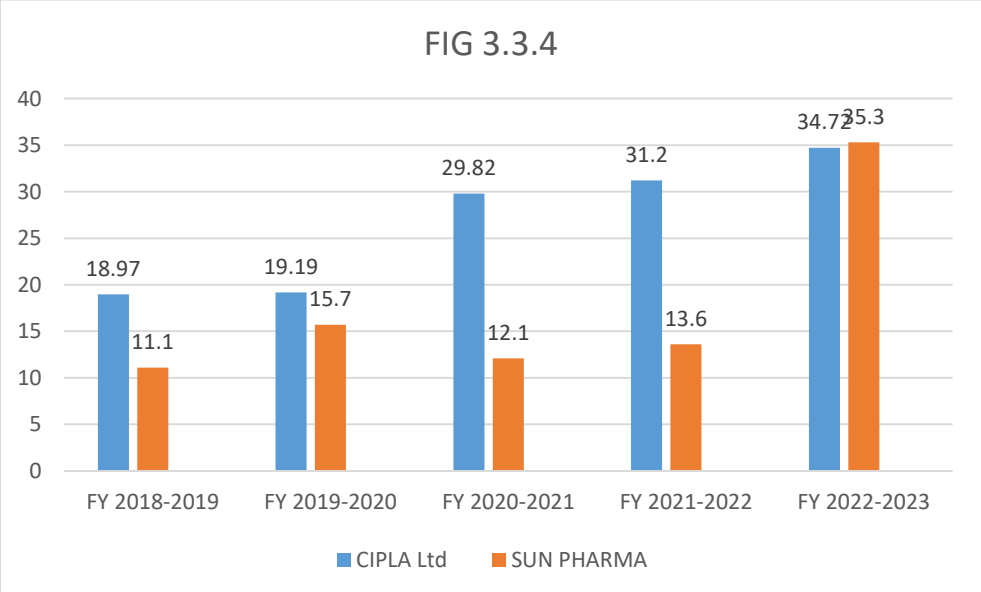
A company's net income less preferred dividends is its earnings per share (EPS), which is then divided by the total number of outstanding common shares. One commonly used statistic for determining corporate value is earnings per share (EPS), which shows how much money a firm

produces for each share of its stock. Because investors would pay more for a company's shares if they believe it has larger earnings relative to its share price, a higher EPS is indicative of greater value.

**TABLE 3.3.4**

| EPS | CIPLA Ltd | SUN PHARMA |
|---|---|---|
| FY 2018-2019 | 18.97 | 11.10 |
| FY 2019-2020 | 19.19 | 15.70 |
| FY 2020-2021 | 29.82 | 12.10 |
| FY 2021-2022 | 31.20 | 13.60 |
| FY 2022-2023 | 34.72 | 35.30 |

Source: data published in money control




From the fig above EPS Ratio of CIPLA has grown by 11.28 % Compared to previous Financial Year. EPS Ratio of CIPLA trending up for at least three Years. EPS Ratio with value of 18.97 was lowest in Year Mar-19 in last Five Years. Latest EPS Ratio with value of 34.72 is Greater than Average EPS of 26.78 in last five years. EPS Ratio of SUNPHARMA rose handsomely by

159.56 % this year. EPS Ratio with value of 35.30 was highest in Year Mar-23 in last Five Years. EPS Ratio with value of 11.10 was lowest in Year Mar-19 in last Five Years.

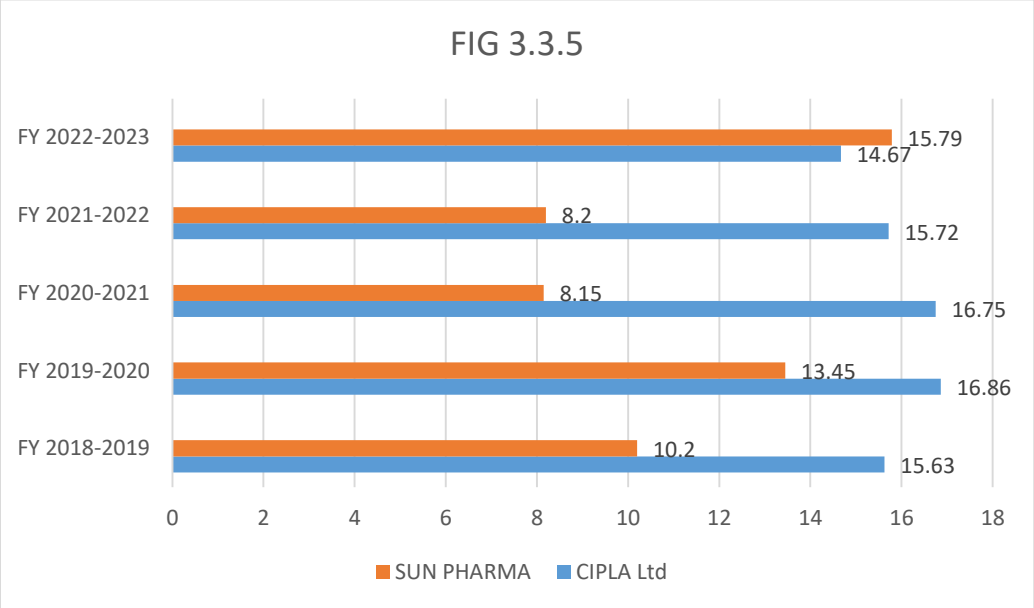
### 3.3.5 RETURN ON CAPITAL EMPLOYED %

Analysts use capital employed largely to calculate the return on capital employed (ROCE). Similar to return on assets (ROA), investors use return on capital employed (ROCE) to estimate their potential future return. One way to conceptualize a profitability ratio is as return on capital employed (ROCE). Investors can see how much earnings are created for every dollar of capital utilized by comparing net operating profit to capital employed.

**TABLE 3.3.5**

| ROCE | CIPLA Ltd | SUN PHARMA |
|---|---|---|
| FY 2018-2019 | 15.63 | 10.12 |
| FY 2019-2020 | 16.86 | 13.45 |
| FY 2020-2021 | 16.75 | 8.15 |
| FY 2021-2022 | 15.72 | 8.20 |
| FY 2022-2023 | 14.67 | 15.79 |

Source: data published in money control



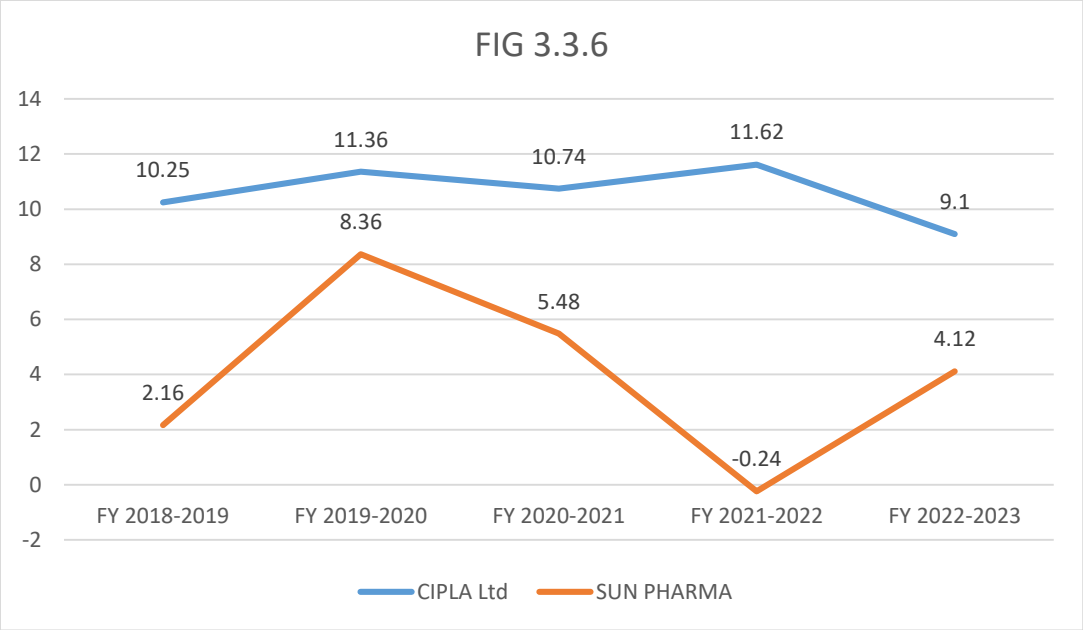
From the above figure the return on capital employed by the company CIPLA shows a decreasing trend. There was a decline from 15.63% to 14.67%.On other hand the return on capital employed by the company SUN PHARMA shows an increasing trend. There is a steady increase from 10.12 to 15.79 %.

### 3.3.6 Return on Assets (%)

A profitability ratio called return on assets shows how much money a business can make from its assets. Stated differently, return on assets (ROA) quantifies the effectiveness of a company's management in generating profits from the assets or financial resources listed on its balance sheet. The higher the number, which represents ROA as a percentage, the more effectively a company's management manages its balance sheet to produce profits.

**TABLE 3.3.6**

| ROA % | CIPLA Ltd | SUN PHARMA |
|---|---|---|
| FY 2018-2019 | 10.25 | 2.16 |
| FY 2019-2020 | 11.36 | 8.36 |
| FY 2020-2021 | 10.74 | 5.48 |
| FY 2021-2022 | 11.62 | -0.24 |
| FY 2022-2023 | 9.10 | 4.12 |
| Source: data published in money control | | |




From the above figure the return on asset of CIPLA has an up and down swing. The return on asset of CIPLA has decreased from 11.62 to 9.10 during the fiscal year 2021-2023. The return on asset of SUN PHARMA has increased when compared to the year 2021-22 to 2022-23 from -0.24 to 4.12

## 3.4 ANALYSIS OF LIQUIDITY

A profitability ratio called return on assets shows how much money a business can make from its assets. Stated differently, return on assets (ROA) quantifies the effectiveness of a company's management in generating profits from the assets or financial resources listed on its balance sheet. The higher the number, which represents ROA as a percentage, the more effectively a company's management manages its balance sheet to produce profits.

### 3.4.A LIQUIDITY RATIO

The liquidity ratio can be measured with the help of given ratios

- **Current ratio**
- **Liquid ratio**
- **Cash earning retention ratio**

❖ **Inventory turnover ratio**

### 3.4.1 Current ratio

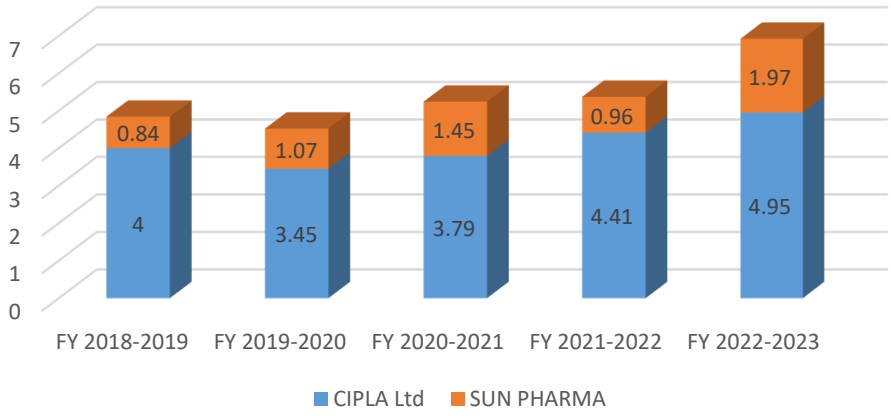
The working capital ratio, also known as the cash-to-asset ratio, is a financial metric that allows investors and shareholders to evaluate a company's ability to pay its immediate liabilities with its current assets. It is one of the few liquidity ratios that can be used to assess a company's ability to use cash and cash equivalents to meet its immediate working capital needs. If a company does not have access to a current ratio, it is still possible to determine its ability to do so by looking at the current assets and current liabilities listed on its balance sheet.

**TABLE 3.4.1**

| Current ratio | CIPLA Ltd | SUN PHARMA |
|---|---|---|
| FY 2018-2019 | 4.00 | 0.84 |
| FY 2019-2020 | 3.45 | 1.07 |
| FY 2020-2021 | 3.79 | 1.45 |
| FY 2021-2022 | 4.41 | 0.96 |
| FY 2022-2023 | 4.95 | 1.97 |

Source: data published in money control

FIG 3.4.1



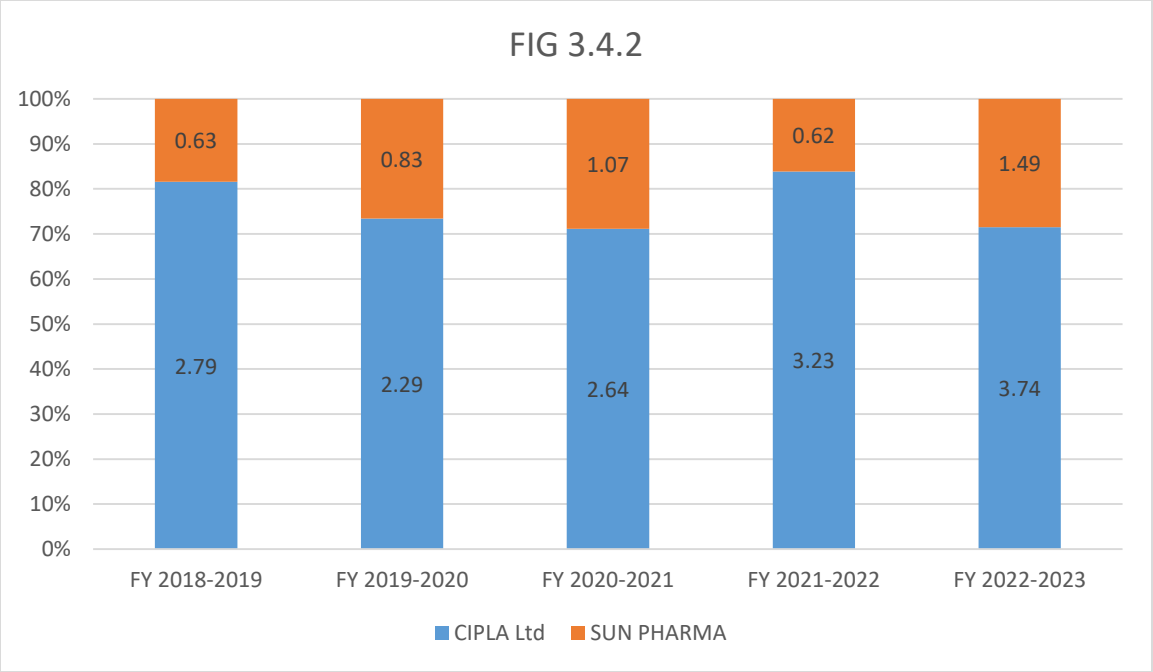
From the above graph the current ratio of both CIPLA and SUN PHARMA is increasing over the years. The ratio of CIPLA has increased from 4.41% to 4.95 whereas the current ratio of SUN PHARMA has increased from 0.96 to 1.97 during the fiscal year 2023.

### 3.4.2 Liquid ratio

The terms "quick ratio," "Acid test ratio," and "liquidity ratio" are other names for the liquid ratio. It is the proportion of current liabilities to liquid assets. The ability of a fund to settle its short-term debts when they fall due is referred to as genuine liquidity. All current assets are considered liquid assets, with the exception of stock, which may be converted into cash more slowly and often shows greater conversion price volatility. It is prudent to maintain liquid assets consistently at least equal to current liabilities.

**TABLE 3.4.2**

| Liquid ratio | CIPLA Ltd | SUN PHARMA |
|---|---|---|
| FY 2018-2019 | 2.79 | 0.63 |
| FY 2019-2020 | 2.29 | 0.83 |
| FY 2020-2021 | 2.64 | 1.07 |
| FY 2021-2022 | 3.23 | 0.62 |
| FY 2022-2023 | 3.74 | 1.49 |
| Source: data published in money control | | |




From the above data the liquid ratio of the company CIPLA is increasing from 2.79 to 3.74 over 5 fiscal years. The liquid ratio of the company SUN PHARMA is also increased from 0.63 to 1.49 from 2018 to 2023.

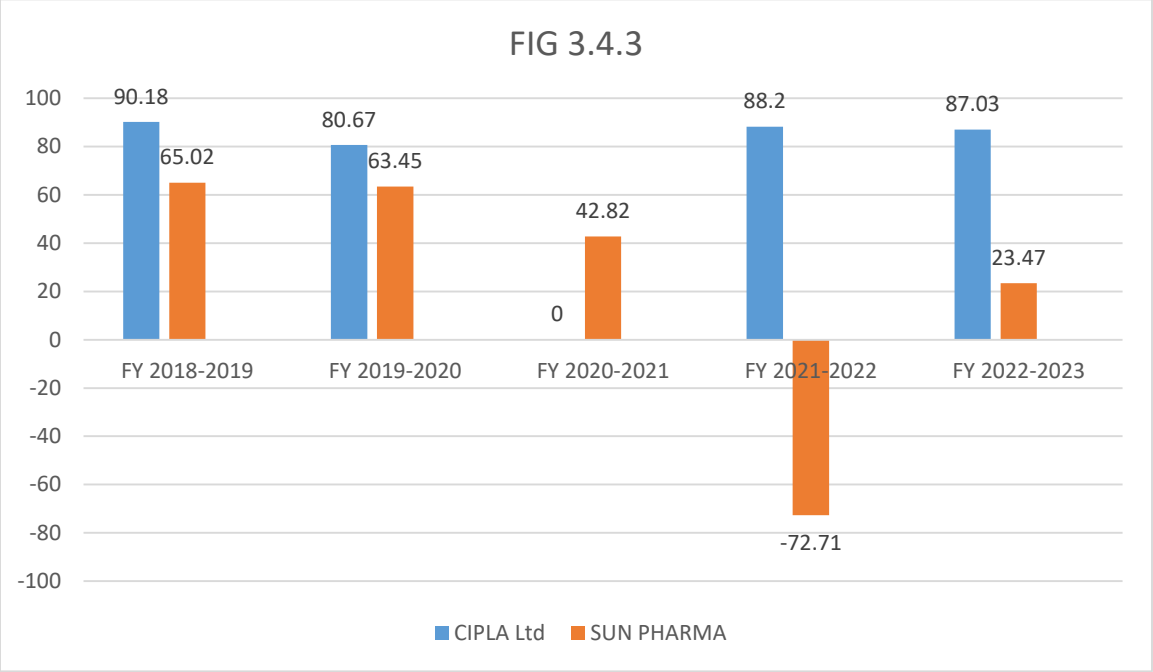
### 3.4.3 Cash earnings retention ratio

The percentage of profits retained by the company as retained earnings is known as the retention ratio. The percentage of net income that is kept in order to expand the company as opposed to being distributed as dividends is known as the retention ratio. It contrasts with the payout ratio, which expresses the percentage of profit distributed as dividends to shareholders. The plowback ratio is another name for the retention ratio.

**TABLE 3.4.3**

| Cash earnings retention ratio | CIPLA Ltd | SUN PHARMA |
|---|---|---|
| FY 2018-2019 | 90.18 | 65.02 |

| | | |
|---|---|---|
| FY 2019-2020 | 80.67 | 63.45 |
| FY 2020-2021 | 0.00 | 42.82 |
| FY 2021-2022 | 88.20 | -72.71 |
| FY 2022-2023 | 87.03 | 23.47 |
| Source: data published in money control | | |




From the above analysis the cash earnings retention ratio of CIPLA show an up and down swing over the past 5 years. When compared to the fiscal year 2021-22 with 2022-23 there is a slight decline from 88.2 to 87.03.The cash earnings retention ratio of SUN PHARMA shows a very huge increase when compared to the previous fiscal year as it increased from -72.71 to 23.47 which is considered as a great achievement.

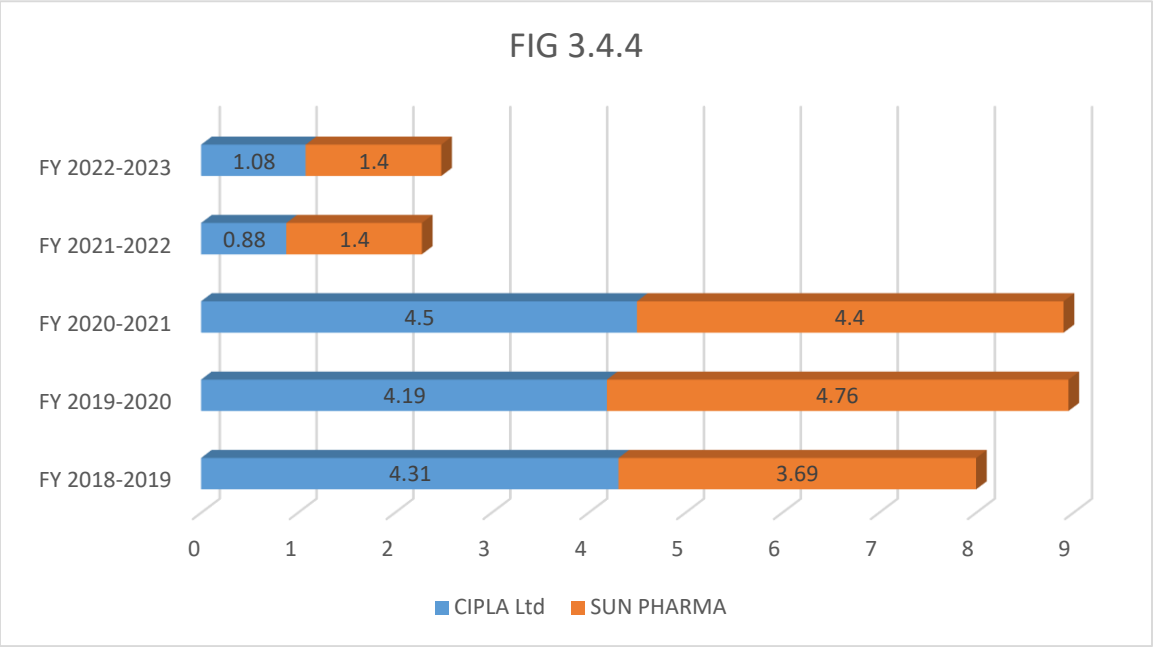
### 3.4.4 Inventory turnover ratio

A financial ratio called inventory turnover indicates how frequently a business rotates its stock in relation to its cost of goods sold (COGS) during a specific time frame. The number of days in the period, usually a fiscal year, can then be divided by the inventory turnover ratio by the company to determine the average number of days needed to sell its inventory. Businesses can make better

judgments about pricing, production, marketing, and purchasing by using the inventory turnover ratio. It's a ratio of efficiency that indicates how well a business uses its resources.

**TABLE 3.4.4**

| Inventory turnover ratio | CIPLA Ltd | SUN PHARMA |
|---|---|---|
| FY 2018-2019 | 4.31 | 3.69 |
| FY 2019-2020 | 4.19 | 4.76 |
| FY 2020-2021 | 4.50 | 4.40 |
| FY 2021-2022 | 0.88 | 1.40 |
| FY 2022-2023 | 1.08 | 1.40 |




From the above data the inventory turnover ratio of CIPLA has increased when compared to the previous fiscal year 2021-22 .whereas the inventory turnover ratio of SUN PHARMA shows a steady pace from the fiscal year 2021-23.

# Chapter 4

# SUMMARY OF FINDINGS, SUGGESTIONS AND CONCLUSIONS

## 4.1 INTRODUCTION

The study focuses on the trend pattern, growth performance, and financial performance of selected pharmaceutical companies such as CIPLA Ltd and SUN PHARMA INDUSTRIES. The study analysed growth performance, trend pattern, profitability, and liquidity position of the above mentioned industries for the period of 5 years from 2018 to 2023. Based on the analysis of data presented in the previous chapter, the major findings of the study, along with the important suggestions, are presented in this chapter.

### 4.2 FINDINGS OF CIPLA Ltd

- Gpr indicating that the company is making a profit regularly.
- Revenue from the operation of Cipla was in a positive trend showing that the company is more profitable means the company's management is generating more revenue while controlling expenses, production costs, and overhead.
- The net profit of the company is high means that the company can effectively control its cost/ or provide goods or services at a price significantly higher than its cost.
- The high R and D leads to improved productivity that increases margin.
- While considering the gross profit margin, the low GP shows inefficiencies and may also negatively affect financial stability.
- ROA is in a negative trend, which indicates that the management is struggling to handle the assets.
- Return on capital employed showed a negative trend, indicating the company is not efficiently using its capital.
- Liquid ratio was in a positive trend which shows that the company is efficient at converting assets to cash.
- Cash earnings retention ratio was in a negative trend indicating the weakness of the company in meeting the cash liabilities.
- Inventory turnover ratio was in a negative trend is a sign of weak sales or excessive inventory in the company.

### 4.3 FINDINGS OF SUN PHARMA

- Gpr indicating that the company is making a profit regularly.
- Revenue from the operation of SUN PHARMA was in a positive trend showing that the company is more profitable means the company's management is generating more revenue while controlling expenses, production costs, and overhead.
- The net profit of the company is high means that the company can effectively control its cost/ or provide goods or services at a price significantly higher than its cost.
- EPS trend shows that the company has a positive trend and it implies that the company is efficient at its profitability and investments.
- The high R and D leads to improved productivity that increases margin.
- ROA is in a positive trend, which indicates that the management is efficiently handling the assets.
- Return on capital employed showed a positive trend, indicating the company is efficiently using its capital.
- Liquid ratio was in a positive trend, which shows that the company is efficient at converting assets to cash.
- Cash earnings retention ratio was in a negative trend indicating the weakness of the company in meeting the cash liabilities.
- Inventory turnover ratio was in a negative trend is a sign of weak sales or excessive inventory in the company. The ratio remains stable over the previous 2 years.

## 4.4 SUGGESTIONS

### 4.4.1 SUGGESTIONS FOR CIPLA Ltd

The present study reveals that the profitability position of CIPLA is good and the liquidity ratio is also in a good wave. The gross profit margin should be improved to increase the financial stability of the company. The company should treat ROA and ROCE equally. The company should inspect the presence of pathogens in the product. The company needed to establish adequate written responsibilities and procedures for its quality control unit. There should be an eye on the inventory turnover of the company and also should focus on the cash ratios as well.

### 4.4.2 SUGGESTIONS FOR SUN PHARMA

The present study reveals that the profitability position of SN PHARMA is good. The liquidity ratio of the company is also growing. The inventory turnover ratio must be increased. According to several reports, there are certain challenges to the domestic industry in the product patent policy as well as microbial contamination was also reported. The company needs to focus on the quality check of the product. To maintain quality and the productivity in following ways such as reducing the paper and simplifying the operational workflows, maximizing efficiency and flexibility, and also improve the life of production assets.

## 4.5 SUGGESTIONS TO IMPROVE PROFITABILITY, EFFICIENCY, AND PRODUCTIVITY OF PHARMACEUTICAL INDUSTRIES IN INDIA

Various strategies can be employed to enhance profitability, efficiency, and productivity in the pharmaceutical sector in India.

1. Pharmaceutical businesses should devote more funds to research and development to produce new medications and technologies to promote innovation. The investment may result in additional revenue streams and competitive advantages.
2. Process optimisation, enhanced decision-making, and increased efficiency may be achieved by embracing digitalization and cutting-edge technologies such as artificial intelligence, machine learning, and data analytics.
3. Robust supply chain management techniques, such as optimal inventory control and effective distribution, may decrease costs and guarantee on-time product delivery.
4. Strict regulatory compliance preserves product safety and efficiency standards, prevents legal problems, and fosters consumer trust.
5. Investing in staff training and skill development greatly improves knowledge of pharmaceutical manufacture, research, and management, increasing output and quality.
6. Encouraging cooperation between the government, business, and academic institutions can promote financing access, information exchange, and innovation.

7. Green initiative: adopt eco-friendly procedures and green technologies to cut expenses, improve company image, and lessen environmental effects. Initiatives like eco-friendly packaging and water conservation might also fall under this category.
8. Client focus: To create services and solutions that are client-centric and give priority to customer needs and input. Demand and loyalty may be increased by fostering excellent relationships with healthcare professionals, patients, and other stakeholders.
9. Risk management: Put strong risk management techniques into place to recognise and reduce the risk posed by regulatory changes and market volatility disruptions to the supply chain and risks to cyber security.

The pharmaceutical companies in India have the potential to increase their profitability, efficiency, and productivity while also making a significant worldwide contribution to healthcare developments by implementing these tactics and cultivating a culture of invention, cooperation, and continuous improvement. For the effective growth of the companies, these strategies should be implemented wisely.

## 4.6 CONCLUSION

The nation's pharmaceutical sector is expanding quickly and significantly contributes to the nation's economic expansion. The firm's total performance has a significant role in both economic development and corporate growth. Additionally, the pharmaceutical sector is under increasing pressure to provide better results and solid corporate operations in every department. The study includes empirical research using financial data from each of the two pharmaceutical companies, Cipla and Sun Pharma, who are leaders in the sector. Using ratio analysis, the investigation determines the financial statements' indicators. Regression analysis is used to find the correlations and affecting factors. The study determines the interaction effect of the indicators on the overall performance of the business using multivariate analysis.
The study concludes by presenting the findings and making recommendations for enhancing the indicators to enhance the company's overall performance. It is reasoned that productivity, liquidity, and dissolvability are the vital signs of the monetary

presentation. The general presentation of the organization is to a great extent affected by these markers and further developing pointers doesn't have a profound effect to defeat this. We used multivariate investigation to preclude the connection between the pointers. The various extents of association and effects on execution are talked about for each organization. Based on the financial policies and business strategies of each company, our research revealed that there is no common proportion of indicators affecting performance. Instead, performances and proportions of indicators significantly differ from company to company.

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