

FINANCIAL DIAGNOSTICS AND FORECAST MODELLING OF SELECTED PHARMACEUTICAL COMPANIES

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ABSTRACT: *In an era where healthcare innovation and economic performance intersect, the pharmaceutical industry stands as both a public lifeline and a strategic growth engine. However, despite its growth, the industry shows financial ups and downs that need closer study and future planning. This study focuses on evaluating and forecasting the financial performance of ten major Indian pharmaceutical companies over an 11-year period (2013–2024). Addressing the need for consistent and forward-looking financial insights, it applies ratio analysis and ARIMA forecasting to measure key indicators such as profitability, liquidity, solvency, and efficiency. The methodology uses secondary data from audited financial reports. Statistical tools including ANOVA and Tukey HSD were employed to assess variations, while ARIMA models were used to project Net Profit Margin and Return on Equity up to 2027. Findings reveal Divis Labs as the most stable and high-performing firm across profitability, solvency, and liquidity. Zydus and Alembic also exhibit strong returns and operational efficiency, while Lupin consistently lags across metrics. Most companies showed significant differences in financial performance, except for efficiency ratios, which remained uniform. Based on these insights, companies like Cipla and Sun Pharma are encouraged to improve consistency, while Lupin and Aurobindo require urgent operational restructuring. The study concludes that while some firms are financially resilient and dignified for future growth, others must adopt more robust planning and forecasting mechanisms. This integrated evaluation offers valuable direction to investors and corporate strategists for enhancing financial sustainability in the evolving pharmaceutical landscape.*

KEYWORDS: *Financial Performance, Pharmaceutical Companies, Performance Evaluation, Forecasting Models, Ratio Analysis, ARIMA Forecasting*

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1. INTRODUCTION

The Indian pharmaceutical industry, often referred to as the "pharmacy of the world," has emerged as a pivotal player in the global healthcare landscape. With a robust manufacturing infrastructure, cost-effective production capabilities, and a vast talent pool, India has positioned itself as a leading supplier of generic medicines and vaccines worldwide. As of 2024, the industry is valued at approximately \$50 billion, with projections indicating a potential growth to \$130 billion by 2030 (TOI Business Desk, 2025). This study aims to delve into the financial health and future prospects of key players within this dynamic sector. By employing comprehensive financial analysis techniques, the research seeks to provide insights into the operational efficiency, profitability, and growth trajectories of these enterprises. Recent policy shifts, particularly from major markets like the United States, have introduced new challenges and opportunities for Indian pharmaceutical companies. For instance, proposed tariffs on pharmaceutical imports by the U.S. administration have the potential to impact export revenues significantly. Such developments necessitate a thorough financial analysis to assess resilience and adaptability (Rajeswaran & Kumar, 2025; Singh, 2025; TOI Business Desk, 2025).

Moreover, the global demand for affordable healthcare solutions continues to rise, offering Indian pharmaceutical firms avenues for expansion. The industry's emphasis on research and development, coupled with strategic partnerships, has facilitated the introduction of innovative products catering to diverse therapeutic areas. These advancements underscore the importance of forecasting models to predict market trends and inform strategic decision-making. The study also considers the domestic landscape, where government initiatives aim to bolster the pharmaceutical sector through policy support and infrastructure development. These measures are designed to enhance competitiveness and ensure the industry's sustainable growth. Analyzing financial indicators in this context provides a holistic view of the sector's trajectory (ANI, 2025). This research aims to provide a complete financial diagnosis and forecasting tool for selected pharmaceutical companies. By combining quantitative modeling with knowledge of macroeconomics and policy considerations, the study aims to provide insightful contributions for the players operating within the dynamic pharmaceutical industry environment.

2. STATEMENT OF THE PROBLEM

The pharmaceutical industry plays a crucial role in ensuring public health while also contributing significantly to a nation's economy. In recent years, this sector has experienced fluctuations in growth due to varying market demands, policy reforms, R&D investment pressures, and global health challenges. Amidst this dynamic landscape, companies exhibit diverse financial performances shaped by their operational efficiency, capital structure, and profitability strategies. While financial ratios such as Net Profit Margin and Return on Equity offer valuable insights into a firm's stability and profitability, there is often inconsistency in how these indicators perform across firms. Hence, there is a need to systematically evaluate and compare these indicators to understand which companies are maintaining sustained financial strength and which are showing signs of volatility. Moreover, decision-makers require more than just historical evaluations; they need forward-looking insights to plan investments, strategies, and risk management. However, forecasting financial performance using advanced models like ARIMA remains underutilized in many studies, particularly in the pharmaceutical sector. This creates a gap in predictive understanding of financial trends that could guide better planning and resource allocation. Thus, analyzing the variations in key financial indicators and forecasting their future behavior using robust time series models becomes essential. This study addresses this gap by evaluating the financial performance and projecting future trends of selected pharmaceutical companies using both traditional ratio analysis and ARIMA forecasting techniques.

3. OBJECTIVES OF THE STUDY

- I. To evaluate the financial performance of selected pharmaceutical companies.
- II. To analyze variations in key financial indicators among selected pharmaceutical companies and forecast future trends.

4. REVIEW OF LITERATURE

Several scholars have emphasized the critical role of profitability and financial ratio analysis in understanding the performance of pharmaceutical companies. Singh and Rao (2024) evaluated ROE and ROA using DuPont analysis for leading Indian pharma firms, highlighting its effectiveness in depicting operational strengths. Similarly, Bhambu et al. (2022) and Shah (2020) used multiple financial ratios and found Sun Pharma and Divis Labs showing strong profitability. Mahalakshmi and Vidhya (2024) pointed out that operational efficiency and resource optimization significantly impact profit margins, while Estiasih and Putra (2021) confirmed a positive association between profitability indicators and firm size in Indonesia's pharma sector. Murthy and Gowthamy (2017) added that profitability influences both economic contribution and future financial resilience of Indian pharma companies.

In terms of liquidity and solvency, Endri et al. (2020) and Kumar Bhambu et al. (2022) noted that Indian pharma firms generally maintained high liquidity but showed fluctuations in solvency indicators. Gautam and Madhavi (2024) and Kanchana and Verma (2022) affirmed the relevance of liquidity and solvency ratios to judge the financial health of BSE-listed pharma firms. Studies by Sushma (2020) and Daryanto & Daryanto (2019) underscored the effectiveness of tools like Z-score and national health index frameworks to validate financial well-being. Meanwhile, Abdulkareem (2020) analyzed operating and financial leverage, suggesting that variations in cost of capital also play a decisive role in comparative financial standing, especially in companies like Lupin, which underperformed.

When examining efficiency and inventory metrics, Shah (2020), Endri et al. (2020), and Mohanty (2020) reported inconsistent trends in asset and inventory turnover ratios, indicating that even high-performing firms face operational inefficiencies. The literature also includes recent perspectives on the impact of mergers and acquisitions on financial performance, as evidenced by a study on Dr. Reddy's and Cipla which found no major post-acquisition improvement in financial indicators. Furthermore, Namitha and Shailaja (2021) emphasized how the pandemic stressed financial operations, urging firms to build long-term efficiency models to withstand crises. Kusena (2024), in a Zimbabwean context, stressed leveraging IT and marketing systems to improve financial outcomes, a view relevant to Indian firms looking to enhance internal performance drivers. While previous work has addressed profitability, liquidity, solvency, and efficiency across different companies and time periods, there is a lack of exhaustive comparative analysis incorporating financial assessment and prediction for Indian pharma companies over a long time horizon. Additionally, there are few studies that bring together both static and forecast models (such as ARIMA) for a complete suite of financial measures to inform future strategic management. This creates the requirement for a comprehensive, forecast-driven financial performance assessment, which is precisely what the present study addresses.

5. RESEARCH METHODOLOGY

This study adopts a descriptive and analytical research design to evaluate and forecast the financial performance of ten selected pharmaceutical companies in India. The research primarily relies on secondary data collected from the published annual reports and audited financial statements of the companies, covering a period of eleven years from 2013–2014 to 2023–2024. The companies included in the study—Sun Pharma, Cipla, Divis Labs, Dr. Reddy's Laboratories, Torrent Pharma,

Zydus Lifesciences, Lupin Ltd., Aurobindo Pharma, Biocon Ltd., and Alembic Pharmaceuticals—were chosen based on their consistent listing on Indian stock exchanges and industry relevance.

A comprehensive set of financial ratios was employed to assess company performance across multiple dimensions. These included profitability ratios (Net Profit Margin, Return on Capital Employed, Return on Equity, and Earnings Retention Ratio), liquidity ratios (Current Ratio and Quick Ratio), solvency ratios (Total Debt to Equity Ratio and Interest Coverage Ratio), and efficiency ratios (Asset Turnover Ratio and Inventory Turnover Ratio). The coefficient of variation (CV%) was used to evaluate the consistency of each company's performance. Descriptive statistics were used to compute averages and deviations, and inferential analysis was conducted using ANOVA to determine the statistical significance of performance differences across companies. Additionally, Post Hoc Tukey HSD analysis was applied to identify pairwise distinctions among firms for each financial metric.

To address future performance expectations, ARIMA time series models were employed to forecast Net Profit Margin and Return on Equity for the years 2025 to 2027. Model diagnostics, including Jarque-Bera and Ljung-Box tests, were conducted to validate normality and absence of autocorrelation in the residuals. Employment of ARIMA provides a statistically sound forecasting strategy with minimal error variances and AIC and BIC scores determining model choice. The hybrid method integrating ratio analysis with statistical testing and forecasting presents a comprehensive picture of the financial standing and future prognosis of the chosen pharmaceutical firms.

6. ANALYSIS AND INTERPRETATION

6.1 Profitability Ratios

**Table 1: Net Profit Margin of Selected Pharmaceutical Companies
from 2013–2014 to 2023–2024**

Company/ Year	Sun Pharma	Cipla	Divis	Dr.Redy	Torrent	Zydus	Lupin	Aurobindo	Biocon	Alembic
2013 -2014	24.12	14.02	30.54	14.69	15.86	11.57	16.56	14.43	14.97	12.63
2014 -2015	20	11.05	27.33	15.55	16.13	13.71	19.14	12.96	17.1	13.75
2015 -2016	19.85	10.11	29.81	13.53	25.92	20.38	16.02	14.65	17.54	22.74
2016 -2017	25.02	7.24	26.09	8.85	16.05	15.81	14.71	15.4	17.26	13.1
2017 -2018	9.97	9.36	22.53	6.38	11.33	14.67	1.61	14.69	10.47	13.44
2018 -2019	11.04	9.22	27.34	12.33	5.68	14.06	4.17	12.07	18.16	15.06
2019 -2020	12.75	9.02	25.51	11.24	12.9	8.24	-1.78	12.31	13.82	17.38
2020 -2021	6.82	12.5	28.5	9.99	15.6	14.8	8.08	21.8	12.9	20.7
2021 -2022	8.81	11.76	33.04	9.8	9.13	29.95	-9.2	11.41	11.95	9.71
2022 -2023	19.5	12.46	23.47	18.12	12.94	11.58	2.69	7.8	7.24	6.59
2023-2024	19.89	16.12	20.39	19.86	15.44	19.71	9.67	10.98	9.36	9.9
Average	16.16	11.17	26.78	12.76	14.27	15.86	7.42	13.50	13.71	14.09
St.Deviation	6.42	2.54	3.72	4.08	5.10	5.82	8.84	3.51	3.68	4.76
C.V.%	39.75	22.77	13.87	31.95	35.77	36.71	119.03	25.99	26.83	33.81

(Source: Computed from secondary data)

Inference: From Table No. 1.1, it is observed that Divis Labs recorded the highest average Net Profit Margin (26.78%) with the lowest variability (CV% = 13.87%), indicating consistent financial strength. In contrast, Lupin Ltd. showed the lowest average margin (7.42%) with the highest fluctuation (CV% = 119.03%), reflecting unstable profitability. Sun Pharma, Zydus, and Torrent displayed moderate average margins with varying consistency. Cipla and Dr. Reddy maintained steady but lower margins. Overall, Divis Labs outperformed other companies in terms of profitability and consistency over the 11-year period.

Table 2: Return on Capital Employed (ROCE) of Selected Pharmaceutical Companies from 2013–2014 to 2023–2024

Company/ Year	Sun Pharma	Cipla	Divis	Dr.Reddy	Torrent	Zydus	Lupin	Aurobindo	Biocon	Alembic
2013 -2014	13.43	12.8	25.08	19.17	22.93	15.53	24.23	22.25	9.46	30.58
2014 -2015	13.89	9.98	23.46	19.83	14.78	19.89	25.54	23.24	10.31	29.56
2015 -2016	18.35	14.48	25.68	15.17	47.13	27.27	19.26	25.06	8.8	42.82
2016 -2017	21.7	7.82	25.41	12.07	13.4	15	17.99	32.37	7.93	26.76
2017 -2018	11.13	9.78	20.1	9.13	7.5	14.82	10.42	26.66	4.74	14.64
2018 -2019	11.78	11.13	25.84	14.37	15.88	16.02	9.38	23.82	11.91	23.34
2019 -2020	10.6	12.32	23.99	12.04	19.13	14.27	11.85	23.31	11.61	25.26
2020 -2021	14.1	16.8	27.6	15.8	20.5	17.2	12	20.1	8.32	25.5
2021 -2022	17.44	17.04	30.25	15.44	22.63	14.29	-9.07	13.89	8.26	11.79
2022 -2023	16.02	17.78	17.76	25.95	22.79	16.43	7.23	9.73	4.07	9.58
2023-2024	17.26	21.79	15.26	25.13	27.16	20.48	17.64	14.84	6.37	12.78
Average	15.06	13.79	23.68	16.74	21.26	17.38	13.32	21.39	8.34	22.96
St.Deviation	3.43	4.20	4.37	5.32	10.19	3.89	9.54	6.42	2.53	10.00
C.V.%	22.74	30.46	18.46	31.79	47.93	22.38	71.66	30.02	30.33	43.52

(Source: Computed from secondary data)

Inference: From Table No. 1.2, Divis Labs achieved the highest average ROCE (23.68%) with the lowest variability (CV% = 18.46%), indicating strong and consistent capital efficiency. Alembic and Aurobindo also showed high ROCE values but with greater fluctuations. Lupin Ltd. had the lowest average ROCE (13.32%) and the highest instability (CV% = 71.66%). Sun Pharma, Torrent, and Zydus demonstrated moderate and stable performance. Overall, Divis Labs stood out as the most efficient company in generating returns from employed capital during the study period.

Table 3: Return on Equity (ROE) of Selected Pharmaceutical Companies from 2013–2014 to 2023–2024

Company/ Year	Sun Pharma	Cipla	Divis	Dr.Reddy	Torrent	Zydus	Lupin	Aurobindo	Biocon	Alembic
2013 -2014	16.95	13.82	26.09	24.96	34.89	23.36	26.49	31.27	13.67	35.60
2014 -2015	17.74	10.95	24.36	23.71	30.15	27.06	27.08	30.56	15.21	32.32
2015 -2016	13.78	11.80	26.22	16.95	49.60	33.93	20.25	27.78	13.64	45.07
2016 -2017	19.00	8.02	19.79	10.53	21.46	21.37	18.94	24.55	12.65	21.19
2017 -2018	5.67	9.91	14.80	7.53	14.67	20.30	1.85	20.74	7.18	18.58
2018 -2019	6.43	10.17	19.44	13.90	9.23	17.80	4.41	17.02	14.84	21.49
2019 -2020	8.31	9.81	18.83	12.98	21.24	11.33	-2.14	16.84	11.15	25.74
2020 -2021	6.24	13.10	21.30	11.10	21.40	16.40	8.81	24.30	9.83	23.00
2021 -2022	6.81	12.07	25.24	11.35	13.05	26.39	-12.57	10.77	7.69	9.94
2022 -2023	15.13	11.96	14.28	19.35	20.09	11.19	3.45	7.18	2.58	7.82
2023-2024	15.04	15.43	11.78	19.74	24.15	19.46	13.39	10.63	5.16	12.78
Average	11.92	11.55	20.19	15.65	23.63	20.78	10.00	20.15	10.33	23.05
St.Deviation	5.23	2.09	5.03	5.70	11.28	6.80	12.49	8.34	4.20	11.27
C.V.%	43.87	18.07	24.89	36.45	47.72	32.71	124.90	41.37	40.65	48.91

(Source: Computed from secondary data)

Inference: From Table No. 1.3, Torrent Pharmaceuticals recorded the highest average Return on Equity (23.63%) followed closely by Alembic (23.05%) and Zydus (20.78%), indicating strong returns to shareholders. Divis Labs and Aurobindo also maintained high ROE values with moderate consistency. Lupin Ltd. had the lowest average ROE (10.00%) with the highest variability (CV% = 124.90%), reflecting erratic performance. Cipla and Biocon showed relatively lower but stable ROEs. Overall, Torrent, Alembic, and Zydus emerged as the top performers in equity return efficiency during the study period.

Table 4: Earning Retention Ratio of Selected Pharmaceutical Companies from 2013–2014 to 2023–2024

Company/ Year	Sun Pharma	Cipla	Divis	Dr.Redy	Torrent	Zydus	Lupin	Aurobindo	Biocon	Alembic
2013 -2014	90.12	88.44	65.68	84.41	77.80	74.51	77.07	85.36	92.55	75.84
2014 -2015	84.10	86.40	68.83	85.42	69.46	74.65	78.65	85.98	91.67	79.90
2015 -2016	84.12	86.70	43.24	80.73	59.96	59.73	70.36	85.08	93.37	79.15
2016 -2017	96.55	80.77	0.00	73.77	80.20	81.88	77.98	86.78	95.05	0.00
2017 -2018	63.10	86.59	63.57	57.84	54.37	67.56	0.00	-34.84	90.94	80.54
2018 -2019	82.03	84.19	80.38	82.98	59.14	30.19	80.62	62.73	93.81	92.03
2019 -2020	63.38	63.52	25.61	80.68	35.09	40.55	39.10	184.00	93.80	91.58
2020 -2021	46.32	0.00	0.00	78.76	70.26	72.97	0.00	77.66	95.61	0.00
2021 -2022	34.04	0.00	82.07	81.01	31.73	12.91	91.71	119.31	90.05	0.00
2022 -2023	70.27	0.00	0.00	88.96	17.92	30.70	86.41	57.72	77.21	87.04
2023-2024	69.74	83.36	50.25	88.09	25.19	83.92	90.50	0.00	82.39	74.47
Average	71.25	60.00	43.60	80.24	52.83	57.23	62.95	73.62	90.59	60.05
St.Deviation	18.92	39.12	32.29	8.58	21.88	24.41	34.16	56.95	5.70	38.99
C.V.%	26.56	65.20	74.06	10.69	41.42	42.66	54.27	77.37	6.30	64.92

(Source : Computed from secondary data)

Inference: From Table No. 1.4, Biocon achieved the highest average Earning Retention Ratio (90.59%) with minimal variation (CV% = 6.30%), indicating strong and consistent reinvestment of profits. Dr. Reddy also showed a high and stable retention ratio (80.24%, CV% = 10.69%). In contrast, Divis Labs and Aurobindo had lower averages with high fluctuations, reflecting inconsistent profit retention. Cipla and Alembic recorded moderate averages but with high variability. Overall, Biocon and Dr. Reddy emerged as the most consistent in retaining earnings for future growth.

6.2 Liquidity Ratios

Table 5: Current Ratio of Selected Pharmaceutical Companies from 2013–2014 to 2023–2024

Company/ Year	Sun Pharma	Cipla	Divis	Dr.Redy	Torrent	Zydus	Lupin	Aurobindo	Biocon	Alembic
2013 -2014	3.12	2.20	3.62	1.78	1.57	1.23	2.32	1.33	1.91	1.69
2014 -2015	1.78	1.95	3.57	1.74	1.43	1.29	2.10	1.35	1.65	1.30
2015 -2016	2.28	1.14	5.83	1.86	1.43	1.24	1.95	1.31	2.38	2.02
2016 -2017	1.84	2.61	6.08	1.15	1.78	1.14	1.95	1.39	2.41	1.98
2017 -2018	1.59	2.82	6.97	1.52	1.01	1.35	2.40	1.41	1.94	1.62
2018 -2019	1.79	3.29	5.49	1.88	0.98	1.16	2.26	1.28	1.61	1.31
2019 -2020	2.02	2.66	5.05	1.75	0.91	1.05	1.67	1.44	1.33	1.41
2020 -2021	1.89	2.88	5.55	1.80	1.13	1.11	1.66	1.86	1.81	2.01
2021 -2022	2.04	3.00	6.99	1.82	1.20	1.56	1.51	2.22	2.19	1.67
2022 -2023	2.00	3.38	8.46	2.38	0.98	1.81	1.34	1.87	1.45	1.78
2023-2024	2.56	3.71	7.57	2.59	1.03	2.15	1.58	1.98	0.99	2.12
Average	2.08	2.69	5.93	1.84	1.22	1.37	1.89	1.59	1.79	1.72
St.Deviation	0.43	0.72	1.53	0.38	0.29	0.34	0.36	0.33	0.44	0.29
C.V.%	20.77	26.82	25.79	20.72	23.48	24.70	18.96	20.87	24.69	17.05

(Source : Computed from secondary data)

Inference: From Table No. 1.5, Divis Labs maintained the highest average Current Ratio (5.93) with moderate variability, indicating strong short-term liquidity. Cipla and Sun Pharma also displayed healthy liquidity positions with averages of 2.69 and 2.08 respectively. Torrent and Zydus had the lowest averages (1.22 and 1.37), reflecting relatively weaker current asset coverage. Alembic showed the most consistent liquidity (CV% = 17.05%). Overall, Divis Labs demonstrated the strongest ability to meet short-term obligations among the selected pharmaceutical companies.

Table 6: Quick Ratio of Selected Pharmaceutical Companies from 2013–2014 to 2023–2024

Company/ Year	Sun Pharma	Cipla	Divis	Dr.Reddy	Torrent	Zydus	Lupin	Aurobindo	Biocon	Alembic
2013 -2014	2.60	1.08	2.14	1.37	1.10	0.74	1.51	0.77	1.64	0.99
2014 -2015	1.43	0.98	2.08	1.36	1.06	0.82	1.43	0.76	1.36	0.74
2015 -2016	1.79	0.65	3.50	1.46	1.01	0.85	1.31	0.80	2.06	1.26
2016 -2017	1.46	1.58	4.08	0.81	1.21	0.80	1.36	0.74	2.03	1.07
2017 -2018	1.25	1.77	4.89	1.10	0.63	0.96	1.68	0.73	1.60	0.97
2018 -2019	1.34	2.24	3.40	1.31	0.60	0.79	1.63	0.67	1.27	0.66
2019 -2020	1.51	1.67	3.04	1.26	0.52	0.72	1.30	0.77	0.97	0.73
2020 -2021	1.33	1.86	3.62	1.24	0.58	0.70	1.17	1.01	1.36	0.85
2021 -2022	1.51	1.91	4.62	1.30	0.64	1.09	0.95	1.30	1.59	0.73
2022 -2023	1.48	2.37	5.73	1.82	0.57	1.19	0.86	1.13	0.95	0.88
2023-2024	1.98	2.71	5.08	1.92	0.61	1.51	1.00	1.18	0.67	0.99
Average	1.61	1.71	3.83	1.36	0.78	0.92	1.29	0.90	1.41	0.90
St.Deviation	0.39	0.62	1.18	0.31	0.26	0.25	0.27	0.22	0.44	0.18
C.V.%	24.27	36.29	30.71	22.51	33.47	26.89	21.07	24.29	30.98	20.04

(Source : Computed from secondary data)

Inference: From Table No. 1.6, Divis Labs reported the highest average Quick Ratio (3.83) with moderate consistency, indicating excellent short-term liquidity without relying on inventory. Cipla and Sun Pharma also showed strong quick asset positions with averages above 1.5. In contrast, Torrent and Zydus recorded the lowest averages (0.78 and 0.92), reflecting tighter liquidity conditions. Alembic maintained the most stable quick ratio with the lowest variability (CV% = 20.04%). Overall, Divis Labs demonstrated superior financial readiness to meet immediate liabilities.

6.3 Solvency Ratios

Table 7: Total Debt to Equity Ratio of Selected Pharmaceutical Companies from 2013–2014 to 2023–2024

Company/ Year	Sun Pharma	Cipla	Divis	Dr.Reddy	Torrent	Zydus	Lupin	Aurobindo	Biocon	Alembic
2013 -2014	0.13	0.12	0.01	0.53	0.50	0.66	0.08	0.97	0.28	0.12
2014 -2015	0.30	0.16	0.01	0.37	1.01	0.55	0.05	0.75	0.32	0.27
2015 -2016	0.25	0.45	0.01	0.27	0.53	0.37	0.64	0.61	0.61	0.07
2016 -2017	0.22	0.33	0.01	0.40	0.52	0.71	0.59	0.33	0.46	0.05
2017 -2018	0.26	0.29	0.01	0.40	1.24	0.58	0.51	0.38	0.37	0.32
2018 -2019	0.24	0.29	0.02	0.24	1.03	0.69	0.60	0.49	0.29	0.34
2019 -2020	0.17	0.18	0.00	0.11	0.91	0.68	0.34	0.32	0.28	0.54
2020 -2021	0.07	0.08	0.00	0.15	0.83	0.35	0.22	0.23	0.47	0.04
2021 -2022	0.02	0.04	0.00	0.16	0.67	0.25	0.32	0.10	0.58	0.12
2022 -2023	0.11	0.02	0.00	0.05	0.85	0.07	0.34	0.18	0.99	0.15

2023-2024	0.04	0.01	0.00	0.06	0.57	0.04	0.19	0.21	0.80	0.09
Average	0.16	0.18	0.01	0.25	0.79	0.45	0.35	0.42	0.50	0.19
St.Deviation	0.10	0.14	0.01	0.16	0.25	0.25	0.21	0.27	0.23	0.16
C.V.%	58.63	80.47	105.95	63.74	31.51	55.24	59.21	64.23	46.95	81.79

(Source: Computed from secondary data)

Inference: From Table No. 1.7, Divis Labs maintained the lowest and most stable Total Debt to Equity Ratio (average = 0.01, CV% = 105.95%), indicating a highly conservative capital structure. In contrast, Torrent had the highest average ratio (0.79), reflecting greater reliance on debt financing. Biocon, Aurobindo, and Zydus also exhibited relatively high leverage levels. Cipla and Alembic had low average ratios but with higher variability, suggesting inconsistent borrowing trends. Overall, Divis Labs stood out for its strong solvency position, while Torrent indicated higher financial risk due to debt dependence.

Table 8: Interest Coverage Ratio of Selected Pharmaceutical Companies from 2013–2014 to 2023–2024

Company/ Year	Sun Pharma	Cipla	Divis	Dr.Reddy	Torrent	Zydus	Lupin	Aurobindo	Biocon	Alembic
2013 -2014	161.64	13.90	483.15	21.89	15.40	15.40	11.64	107.25	5.94	317.29
2014 -2015	12.47	10.83	575.99	27.80	6.37	6.37	22.44	349.10	14.56	59.31
2015 -2016	14.87	9.36	369.20	35.61	14.79	14.79	40.80	56.89	11.69	20.42
2016 -2017	23.63	8.67	621.15	25.51	6.29	6.29	37.21	24.18	46.80	33.05
2017 -2018	9.56	16.29	926.81	18.14	4.02	4.02	26.59	10.82	42.66	10.57
2018 -2019	10.05	13.34	531.02	26.78	2.82	2.82	13.36	6.77	13.10	15.38
2019 -2020	18.41	12.04	299.27	19.61	3.63	3.63	6.44	5.15	13.40	18.68
2020 -2021	51.24	21.47	3065.41	42.90	7.19	7.19	21.62	12.91	76.71	20.66
2021 -2022	88.88	45.45	4994.76	44.39	10.30	10.30	28.07	3.00	96.77	32.29
2022 -2023	71.40	50.23	4048.48	51.85	8.66	8.66	31.15	6.82	28.54	6.89
2023-2024	60.29	78.30	848.00	51.59	9.69	69.81	12.61	22.09	4.27	17.11
Average	47.49	25.44	1523.93	33.28	8.11	13.57	22.90	55.00	32.22	50.15
St.Deviation	46.95	22.63	1680.04	12.57	4.21	19.11	11.09	102.38	30.67	89.74
C.V.%	98.84	88.94	110.24	37.77	51.95	140.85	48.43	186.16	95.18	178.95

(Source: Computed from secondary data)

Inference: From Table No. 1.8, Divis Labs recorded the highest average Interest Coverage Ratio (1523.93) but with very high variability (CV% = 110.24%), indicating exceptional yet inconsistent ability to cover interest expenses. Alembic and Sun Pharma also maintained strong averages of 50.15 and 47.49 respectively. Torrent had the lowest average ratio (8.11), reflecting greater pressure in meeting interest obligations. Aurobindo showed high fluctuation (CV% = 186.16%) despite a moderate average. Overall, Divis Labs and Alembic demonstrated superior interest-paying capacity, while Torrent and Zydus revealed weaker coverage stability.

6.4 Efficiency Ratios

Table 9: Asset Turnover Ratio of Selected Pharmaceutical Companies from 2013–2014 to 2023–2024

Company/ Year	Sun Pharma	Cipla	Divis	Dr.Reddy	Torrent	Zydus	Lupin	Aurobindo	Biocon	Alembic
2013 -2014	54.74	75.35	68.24	83.34	82.54	90.45	110.58	85.35	50.03	152.99
2014 -2015	55.95	72.18	70.71	80.77	58.82	95.62	97.20	93.85	48.46	125.28
2015 -2016	51.30	65.26	77.03	76.37	73.82	89.34	62.46	86.64	39.57	130.36
2016 -2017	50.98	68.42	65.99	65.07	59.94	61.60	65.27	91.75	41.42	115.46

2017 -2018	41.07	66.29	57.36	63.34	42.00	65.89	60.05	78.01	41.27	79.42
2018 -2019	44.92	68.28	61.53	68.76	54.33	56.06	52.46	73.95	45.22	82.35
2019 -2020	48.11	72.40	63.19	75.42	56.66	60.17	61.53	79.85	43.62	76.90
2020 -2021	49.50	76.17	64.68	0.60	0.50	0.37	64.22	0.61	38.36	80.38
2021 -2022	0.56	0.52	0.74	0.56	0.53	0.38	0.51	0.41	0.13	0.73
2022 -2023	0.58	0.58	0.56	0.62	0.59	0.36	0.51	0.43	0.12	0.78
2023-2024	0.58	0.83	0.52	0.79	0.71	0.71	12.61	0.68	0.27	0.90
Average	36.21	51.48	48.23	46.88	39.13	47.36	53.40	53.78	31.68	76.87
St.Deviation	23.25	32.83	31.00	37.14	32.25	39.41	35.91	42.59	20.53	54.68
C.V.%	64.22	63.77	64.27	79.23	82.41	83.22	67.25	79.20	64.81	71.13

(Source: Computed from secondary data)

Inference: From Table No. 9, Alembic Pharmaceuticals achieved the highest average Asset Turnover Ratio (76.87), indicating superior efficiency in utilizing assets to generate revenue. Lupin, Aurobindo, and Cipla also performed well with averages above 50. However, Biocon had the lowest average (31.68), reflecting weaker asset utilization. All companies showed high variability in their ratios, especially Torrent and Dr. Reddy, suggesting inconsistent operational efficiency over the years. Overall, Alembic demonstrated the most effective asset management among the selected pharmaceutical companies.

Table 10: Inventory Turnover Ratio of Selected Pharmaceutical Companies from 2013–2014 to 2023–2024

Company/ Year	Sun Pharma	Cipla	Divis	Dr.Reddy	Torrent	Zydus	Lupin	Aurobindo	Biocon	Alembic
2013 -2014	5.15	3.49	2.72	5.52	4.16	5.28	5.3	3.42	7.64	6
2014 -2015	4.84	3	2.68	5.85	4.36	5.63	5.1	3.36	6.83	5.37
2015 -2016	4.44	3.62	3.13	6.09	4.92	7.05	4.32	3.4	6.17	5.56
2016 -2017	4.58	4.13	3.08	4.98	3.73	5.2	4.77	3.44	6.12	4.91
2017 -2018	3.84	3.75	2.88	4.91	3.04	4.99	4.31	2.81	5.71	4.26
2018 -2019	3.69	4.13	2.79	4.6	3.96	4.9	3.82	2.7	5.35	4.07
2019 -2020	4.17	3.91	2.89	5	3.7	5.11	4.45	3	4.39	3.88
2020 -2021	3.72	4.1	3.25	1.03	0.7	1.03	3.71	1.15	3.81	3.63
2021 -2022	0.78	0.7	1.44	0.86	0.68	1.02	0.78	0.93	0.76	0.78
2022 -2023	0.8	0.81	1.07	0.78	0.73	0.98	0.82	1.24	0.68	0.87
2023-2024	0.68	1	1.05	0.8	0.74	1.34	0.88	1.18	1.1	0.9
Average	3.34	2.97	2.45	3.67	2.79	3.87	3.48	2.42	4.41	3.66
St.Deviation	1.72	1.41	0.84	2.27	1.71	2.28	1.77	1.06	2.52	1.95
C.V.%	51.55	47.49	34.12	61.68	61.28	58.84	50.81	43.74	57.05	53.19

(Source: Computed from secondary data)

Inference: From Table No. 1.10, Biocon recorded the highest average Inventory Turnover Ratio (4.41), indicating efficient inventory management, followed by Dr. Reddy and Alembic. Divis Labs and Aurobindo had the lowest averages (2.45 and 2.42), suggesting slower inventory movement. Cipla and Torrent also showed lower turnover with relatively high variability. Dr. Reddy experienced the highest inconsistency (CV% = 61.68%), while Divis Labs maintained the most consistent performance. Overall, Biocon and Alembic stood out for effective inventory utilization over the years.

6.5 Hypothesis Testing on Financial Ratios Using ANOVA and Post Hoc Analysis

Hypothesis No.1

Null Hypothesis (H_0): There is no significant difference in the key financial ratios among the selected pharmaceutical companies.

Alternative Hypothesis (H_a): There is a significant difference in the key financial ratios among the selected pharmaceutical companies.

Table 11: ANOVA Results for Key Financial Ratios among Selected Pharmaceutical Companies from 2013–2014 to 2023–2024

ANOVA							
		Sum of Squares	df	Mean Square	F	Sig.	Remarks
Net Profit Margin	Between Groups	2434.667	9	270.519	10.219	.000	S
	Within Groups	2647.309	100	26.473			
	Total	5081.976	109				
Return on Capital Employed (ROCE)	Between Groups	2406.162	9	267.351	6.155	.000	S
	Within Groups	4343.378	100	43.434			
	Total	6749.539	109				
Return on Equity (ROE)	Between Groups	2916.477	9	324.053	5.120	.000	S
	Within Groups	6329.111	100	63.291			
	Total	9245.589	109				
Earning Retention Ratio	Between Groups	18917.382	9	2101.931	2.093	.037	S
	Within Groups	100424.397	100	1004.244			
	Total	119341.779	109				
Current Ratio	Between Groups	184.602	9	20.511	52.524	.000	S
	Within Groups	39.051	100	.391			
	Total	223.653	109				
Quick Ratio	Between Groups	78.683	9	8.743	35.096	.000	S
	Within Groups	24.910	100	.249			
	Total	103.594	109				
Solvency Ratio	Between Groups	4.831	9	.537	14.422	.000	S
	Within Groups	3.722	100	.037			
	Total	8.554	109				
Interest Coverage Ratio	Between Groups	22058947.267	9	2450994.141	8.614	.000	S
	Within Groups	28454066.428	100	284540.664			
	Total	50513013.695	109				
Asset Turnover Ratio	Between Groups	15304.256	9	1700.473	1.301	.246	NS
	Within Groups	130668.049	100	1306.680			
	Total	145972.305	109				
Inventory Turnover Ratio	Between Groups	40.945	9	4.549	1.368	.213	NS
	Within Groups	332.566	100	3.326			
	Total	373.510	109				
S- Significant, NS – Not Significant							

(Source: Computed from secondary data)

Inference: The ANOVA results presented in Table No. 11 reveal that there is a statistically significant difference among the selected pharmaceutical companies in most of the key financial ratios during the period from 2013–2014 to 2023–2024. Ratios such as Net Profit Margin, Return on Capital Employed (ROCE), Return on Equity (ROE), Earning Retention Ratio, Current Ratio, Quick Ratio, Solvency Ratio, and Interest Coverage Ratio show significance at the 5% level ($p < 0.05$). This indicates that these financial indicators vary considerably across the companies, suggesting differences in operational efficiency, profitability, financial risk management, and liquidity management strategies within the pharmaceutical sector. However, the analysis shows that Asset Turnover Ratio and Inventory Turnover Ratio are not significantly different among the selected companies, as indicated by their p-values of 0.246 and 0.213 respectively. This implies that, despite differences in other financial areas, the efficiency in asset utilization and inventory management practices remain relatively consistent across the companies. Thus, the null hypothesis is rejected for most of the financial indicators, confirming significant differences, while for the efficiency ratios, the null hypothesis is retained, indicating uniformity in those operational aspects.

Table 12: Post Hoc Tukey HSD Results for Financial Ratio Differences Among Selected Pharmaceutical Companies from 2013–2014 to 2023–2024

Financial Ratios	Number of Homogeneous Subsets	Lowest Mean Company	Highest Mean Company
Net Profit Margin	3	Lupin Ltd.	Divis Labs
ROCE	3	Biocon Ltd.	Divis Labs
ROE	2	Lupin Ltd.	Torrent Pharmaceutical Ltd.
Earning Retention Ratio	2	Divis Labs	Biocon Ltd.
Current Ratio	3	Torrent Pharmaceutical Ltd.	Divis Labs
Quick Ratio	4	Torrent Pharmaceutical Ltd.	Divis Labs
Solvency Ratio	5	Divis Labs	Torrent Pharmaceutical Ltd.
Interest Coverage Ratio	2	Torrent Pharmaceutical Ltd.	Divis Labs
Asset Turnover Ratio	1	Biocon Ltd.	Alembic Pharmaceuticals Ltd.
Inventory Turnover Ratio	1	Aurobindo Pharma Ltd.	Biocon Ltd.

(Source: Computed from secondary data)

Inference: Based on the Post Hoc Tukey HSD analysis, it is evident that there are substantial differences in financial performance across the selected pharmaceutical companies. Divis Labs consistently ranks at the top across multiple indicators including Net Profit Margin, ROCE, Quick Ratio, Interest Coverage Ratio, and Solvency Ratio, reflecting strong profitability, capital efficiency, and financial stability. In contrast, Lupin Ltd. frequently appears in the lowest homogeneous subset for key ratios such as Net Profit Margin, ROCE, and ROE, indicating relatively weaker financial performance in terms of profitability and returns. Cipla, Dr. Reddy Laboratories, and Sun Pharma show moderate to high performance across profitability and liquidity indicators, though they exhibit variability in capital structure and solvency. Furthermore, Biocon Ltd. performs well in earning retention and interest coverage, signifying a strong reinvestment capacity and lower financial risk. Alembic Pharmaceuticals and Aurobindo Pharma also exhibit competitive positioning in ROE and liquidity, though Aurobindo shows relatively low inventory turnover. Torrent Pharma, despite showing moderate profitability, appears less favorable in terms of liquidity and solvency, suggesting higher leverage and tighter working capital conditions.

6.6 Forecasting Financial Performance Using ARIMA Model for Net Profit Margin and ROE

Table 13: ARIMA Model Diagnostic Summary for Net Profit Margin for the year 2013-2014 to 2023-2024

Pharma Companies	AR (Lag 1)	MA (Lag 1)	Sigma ² (Error Variance)	AIC	BIC	HQIC	Log-Likelihood	Jarque-Bera Statistic	Jarque-Bera p-value	Jarque-Bera Test Remarks	Ljung-Box p-value	Ljung-Box Test Remarks
Sun Pharma	-0.67	0.46	81.31	71.78	72.99	70.45	-31.89	2.98	0.23	Normal	0.7669	No Autocorrelation
Cipla	0.36	-0.39	19.59	51.72	52.93	50.39	-21.86	9.94	0.01	Not Normal	0.4123	No Autocorrelation
Divis	-0.78	1.00	91.02	60.86	62.07	59.53	-26.43	19.40	0.00	Not Normal	0.7402	No Autocorrelation
Dr.Reddy	0.23	-0.17	27.84	61.38	62.59	60.05	-26.69	3.45	0.18	Normal	0.9276	No Autocorrelation
Torrent	0.41	-1.00	49.27	69.70	70.91	68.37	-30.85	1.26	0.53	Normal	0.9838	No Autocorrelation
Zydus	-0.80	0.15	43.95	74.59	75.80	73.26	-33.29	0.71	0.70	Normal	0.8415	No Autocorrelation
Lupin	-0.17	-0.29	81.56	77.93	79.14	76.60	-34.97	0.32	0.85	Normal	0.9137	No Autocorrelation
Aurobindo	-0.02	-0.82	28.17	61.76	62.97	60.43	-26.88	5.35	0.07	Normal	0.6497	No Autocorrelation
Biocon	-1.45	1.00	29.87	60.22	61.43	58.89	-26.11	5.51	0.06	Normal	0.7394	No Autocorrelation
Alembic	0.22	-0.75	37.06	68.33	69.54	67.00	-30.16	0.66	0.72	Normal	0.9148	No Autocorrelation

(Source : Computed from secondary data)

Table 14: Net Profit Margin Forecast Table (2025–2027)

Year	Sun Pharma	Cipla	Divis	Dr.Reddy	Torrent	Zydus	Lupin	Aurobindo	Biocon	Alembic
2025	18.68	17.32	23.68	14.49	14.45	15.59	8.08	14.52	8.97	14.19
2026	18.79	17.74	21.81	15.87	14.3	19.79	7.4	11.96	7.94	12.78
2027	17.85	18.17	24.86	16.96	14.31	23.12	7.72	12.83	8.65	12.48

(Source : Computed from secondary data)

Inference: The ARIMA model diagnostics for Net Profit Margin and Return on Equity, as presented in Table No. 4.13 and Table No. 4.14, confirm that the models are well-suited for forecasting in most pharmaceutical companies. Residuals for companies such as Sun Pharma, Dr. Reddy, Torrent, and Biocon pass both the Jarque-Bera and Ljung-Box tests, ensuring model accuracy and no autocorrelation. Although Cipla and Divis Labs show some non-normality in residuals, their overall model consistency is retained. Companies like Cipla, Aurobindo, and Biocon demonstrate lower error variance and better AIC/BIC scores, suggesting tighter and more reliable forecasts. The forecasted Net Profit Margin for 2025–2027 shows Divis Labs maintaining the highest profitability, followed by Sun Pharma and Cipla with steady performance. Zydus Lifesciences is expected to rise significantly, indicating strong future returns. Meanwhile, Lupin's margins remain low and erratic, and Biocon and Alembic are predicted to deliver moderate yet stable profits.

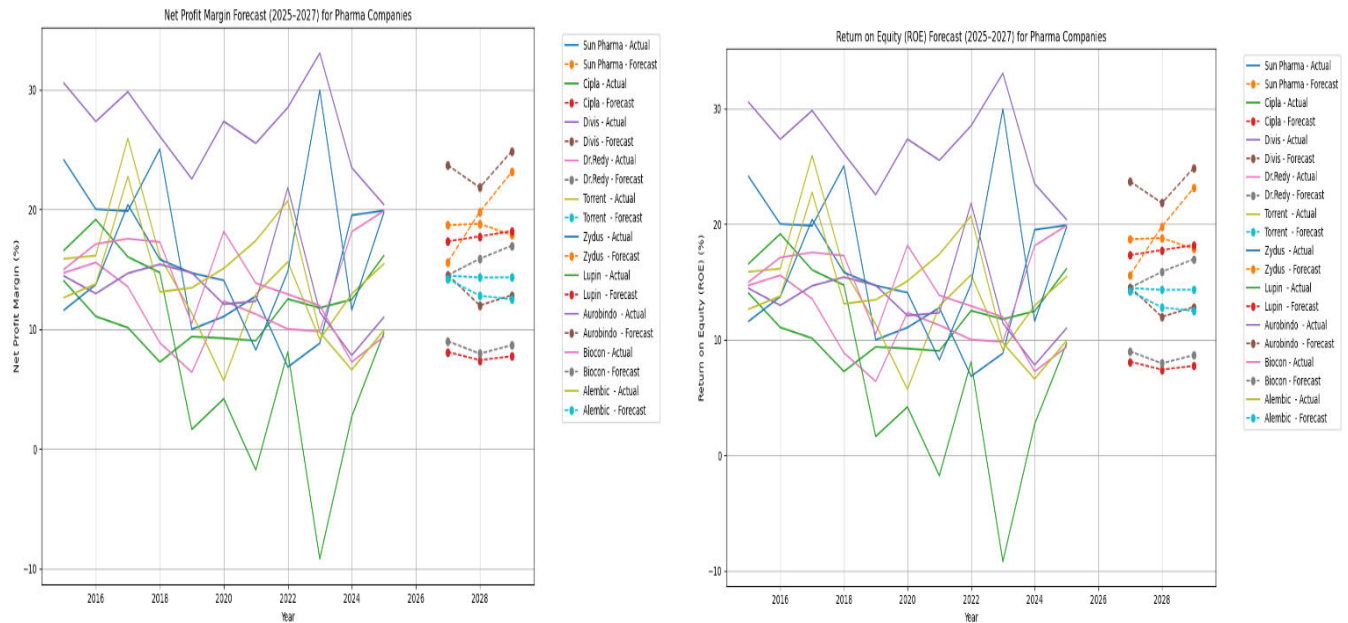


Chart.1: ARIMA Model Diagnostics and Forecast Summary for Net Profit Margin and Return on Equity (2013–2014 to 2023–2024) with Projections (2025–2027) for Selected Pharmaceutical Companies

Table 15: ARIMA Model Diagnostic Summary for Return on Equity (ROE) for the year 2013-2014 to 2023-2024

Pharma Companies	AR (Lag 1)	MA (Lag 1)	Sigma ² (Error Variance)	AIC	BIC	HQIC	Log-Likelihood	Jarque-Bera Statistic	Jarque-Bera p-value	Jarque-Bera Test Remarks	Ljung-Box p-value	Ljung-Box Test Remarks
Sun Pharma	-0.67	0.46	81.31	71.78	72.99	70.45	-31.89	2.98	0.23	Normal	0.77	No Autocorrelation
Cipla	0.36	-0.39	19.59	51.72	52.93	50.39	-21.86	9.94	0.01	Not Normal	0.41	No Autocorrelation
Divis	-0.78	1.00	91.02	60.86	62.07	59.53	-26.43	19.40	0.00	Not Normal	0.74	No Autocorrelation
Dr.Reddy	0.23	-0.17	27.84	61.38	62.59	60.05	-26.69	3.45	0.18	Normal	0.93	No Autocorrelation
Torrent	0.41	-1.00	49.27	69.70	70.91	68.37	-30.85	1.26	0.53	Normal	0.98	No Autocorrelation
Zydus	-0.80	0.15	43.95	74.59	75.80	73.26	-33.29	0.71	0.70	Normal	0.84	No Autocorrelation
Lupin	-0.17	-0.29	81.56	77.93	79.14	76.60	-34.97	0.32	0.85	Normal	0.91	No Autocorrelation
Aurobindo	-0.02	-0.82	28.17	61.76	62.97	60.43	-26.88	5.35	0.07	Normal	0.65	No Autocorrelation
Biocon	-1.45	1.00	29.87	60.22	61.43	58.89	-26.11	5.51	0.06	Normal	0.74	No Autocorrelation
Alembic	0.22	-0.75	37.06	68.33	69.54	67.00	-30.16	0.66	0.72	Normal	0.91	No Autocorrelation

(Source: Computed from secondary data)

Table 16: Return on Equity (ROE) Forecast Table (2025–2027)

Year	Sun Pharma	Cipla	Divis	Dr.Reddy	Torrent	Zydus	Lupin	Aurobindo	Biocon	Alembic
2025	18.68	17.32	23.68	14.49	14.45	15.59	8.08	14.52	8.97	14.19
2026	18.79	17.74	21.81	15.87	14.3	19.79	7.4	11.96	7.94	12.78

2027	17.85	18.17	24.86	16.96	14.31	23.12	7.72	12.83	8.65	12.48
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(Source: Computed from secondary data)

Inference : The ARIMA diagnostic results for Return on Equity (ROE), as shown in Table No. 4.15 and Table No. 4.16, reveal that most pharmaceutical companies have well-fitted models. Residuals for Sun Pharma, Dr. Reddy, Torrent, Zydus, Lupin, Aurobindo, Biocon, and Alembic follow a normal distribution and show no autocorrelation, validating the accuracy of their forecasts. Although Cipla and Divis Labs exhibit non-normal residuals, their models remain statistically consistent due to the absence of autocorrelation. In terms of model quality, Cipla, Biocon, and Aurobindo demonstrate stronger model stability with lower error variances and better AIC/BIC values, while Divis and Lupin show more volatility. Forecasts for 2025 to 2027 predict Divis Labs to lead in ROE, with Sun Pharma and Cipla maintaining stable returns. Zydus shows rapid growth potential, whereas Lupin and Biocon are expected to yield modest returns.

7. FINDINGS

The analysis of profitability, liquidity, and solvency ratios reveals that Divis Labs consistently outperforms other pharmaceutical companies in Net Profit Margin, Return on Capital Employed, and Quick Ratio, demonstrating strong profitability, capital efficiency, and short-term financial stability. Torrent, Alembic, and Zydus lead in Return on Equity, while Biocon and Dr. Reddy exhibit high and stable earnings retention, indicating sound reinvestment strategies. Lupin shows the weakest performance with low profitability and high variability across key financial metrics.

In terms of liquidity, Divis Labs holds the highest average Current and Quick Ratios, suggesting robust capacity to meet short-term obligations. Alembic exhibits the most consistent liquidity performance. Regarding solvency, Divis maintains a conservative capital structure with minimal debt, whereas Torrent shows the highest debt dependency and lowest interest coverage, reflecting elevated financial risk. Alembic and Biocon emerge as strong in interest-paying capacity, supported by higher average coverage ratios.

Hypothesis testing confirms significant differences across companies in most financial indicators such as profitability, liquidity, and solvency ratios, while efficiency ratios like Asset and Inventory Turnover remain consistent. ARIMA model diagnostics validate the reliability of forecasts for most firms, with Divis Labs projected to maintain leadership in Net Profit Margin and ROE through 2027. Zydus is forecasted to rise rapidly, while Cipla and Sun Pharma are expected to remain stable. In contrast, Lupin and Biocon are likely to experience lower and fluctuating returns.

8. SUGGESTIONS

Based on the overall analysis of financial performance and forecasting, several actionable suggestions can be drawn for the selected pharmaceutical companies. Divis Labs, with its consistently strong profitability, capital efficiency, and liquidity, should maintain its conservative capital structure and continue investing in innovation and international expansion. Sun Pharma and Cipla, having demonstrated moderate and stable financial performance, can focus on improving operational efficiency and cost optimization to enhance their ROE and profitability further. Cipla, in particular, should aim to reduce variability in residual performance and stabilize forecast models through tighter financial control.

Dr. Reddy's and Biocon, with strong earnings retention but fluctuating profitability, are advised to align their reinvestment strategies more closely with profitability goals to yield stronger returns. Torrent Pharmaceuticals must address its heavy debt reliance and low interest coverage by improving cash flow management and reducing financing risks. Zydus Lifesciences, with positive growth projections, should focus on strengthening liquidity and maintaining financial discipline to support its upward trend. Alembic, performing well in ROE and liquidity, should aim to reduce variability in its solvency and earnings retention to ensure long-term financial balance.

Lupin Ltd., showing the weakest and most inconsistent financial performance, requires immediate strategic intervention in both profitability and capital management. The company must re-evaluate its operational costs, improve its asset and inventory turnover, and strengthen its short- and long-term financial stability. Aurobindo Pharma should work on enhancing inventory management and stabilizing its earnings retention while gradually reducing its exposure to financial volatility. Across all companies, maintaining strong liquidity, minimizing debt dependency, and adopting data-driven financial planning based on forecasting models like ARIMA can collectively enhance long-term sustainability and investor confidence in the pharmaceutical sector.

9. CONCLUSION

Financial performance of the top ten pharma companies presents a varied picture of strengths and weaknesses across the industry. Divis Labs is the strongest financial company with unyielding profitability, effective capital management, and sound liquidity, leading the way on stability and prudence. Sun Pharma and Cipla present a balanced but consistent financial condition, showing a balanced strategy for profitability as well as asset management. Torrent Pharmaceuticals, with its sound equity returns, is a concern where it is highly dependent on debt and has weak interest coverage. Alembic Pharmaceuticals, with good asset turnover and liquidity, presents a picture of effective management of operations with other areas of variability that require attention.

Zydus Lifesciences indicates healthy growth with improving returns and a balanced positioning across most of the indicators, pointing to near-future leadership. Dr. Reddy's and Biocon indicate high earnings retention levels, implying reinvestment orientation, but their overall profitability and consistency require further harmonization. Aurobindo Pharma, remaining steady with asset usage, has room for improvement where liquidity and earnings management are involved. Lupin Ltd., the most challenged within the group, needs strategic refocusing on profitability, debt management, and efficiency. The study as a whole finds that although some companies are poised for long-term financial growth, some need aggressive restructuring and integration of forecasting to stay competitive in the new pharmaceutical era.

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