



**ECON F355**

# **BUSINESS ANALYTICS AND VALUATION ASSIGNMENT**

**VALUATION OF COMPANY DR REDDY'S BY GROUP**

# GROUP MEMBERS

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2021B3A73042H

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# About the company

Dr. Reddy's Laboratories Ltd, based in Hyderabad, India, is a prominent multinational pharmaceutical company operating within the healthcare industry. The company is known for developing and distributing a diverse range of pharmaceutical products, including prescription and over-the-counter medications, active pharmaceutical ingredients (APIs), and biosimilars. Dr. Reddy's serves a variety of medical fields such as gastroenterology, oncology, pain management, and dermatology. It maintains a significant market presence in regions including North America, Europe, Latin America, and Asia



# Products and Revenue Sources

Dr. Reddy's product offerings encompass generic medications, branded generics, and new chemical entities (NCEs) targeted at conditions like metabolic disorders and bacterial infections. The company's revenue primarily stems from selling these products, with major contributions from the North American and Indian markets. Additionally, revenue is supplemented by strategic partnerships, licensing deals, and proprietary research

# Industry Position and Competition

Dr. Reddy's operates in a highly competitive global pharmaceutical market. It faces competition from major Indian pharmaceutical firms such as Sun Pharmaceutical Industries and Cipla and international giants like Pfizer and Novartis. This sector is marked by stringent regulatory requirements and the complexities of patent management, which contribute to an environment of intense competition.



# Stakeholders and Financial Overview

The company's primary stakeholders include regulatory bodies, raw material suppliers, healthcare professionals, and patients. Suppliers are essential for sourcing APIs and other critical materials. Creditors often comprise financial institutions providing funding. The governance of Dr. Reddy's is managed by its board of directors, which guides the company's strategic direction

# Industry Insights

The Indian pharmaceutical industry is projected for robust growth, buoyed by the rising demand for affordable generic drugs and biosimilars. The sector benefits from government initiatives that promote local manufacturing and R&D, positioning India as a leader in cost-effective pharmaceutical production. Dr. Reddy's, with its comprehensive supply chain and global distribution network, is well-placed to capitalize on these trends



# Board of Directors



**K Satish Reddy**  
Chairman

SRC SCSRC BAC



**G V Prasad**  
Co-Chairman and  
Managing Director

SRC SCSRC BAC



**Penny Wan**  
Independent Director

RMC STOC



**Arun M Kumar**  
Independent Director

AC NGCC



**Kalpana Morparia**  
Independent Director

NGCC SRC SCSRC AC



**Leo Puri**  
Independent Director

NGCC STOC



**Dr. Claudio Albrecht**  
Independent Director

STOC RMC



**Dr. Alpna Seth**  
Independent Director

STOC RMC



**Shikha Sharma**  
Independent Director

RMC AC



**Dr. K P Krishnan**  
Independent Director

SCSRC AC NGCC



**Sanjiv Mehta**  
Independent Director

NGCC SCSRC STOC

## Our Board Committees

- Audit Committee (AC)
- Stakeholders Relationship Committee (SRC)
- Nomination, Governance and Compensation Committee (NGCC)
- Sustainability and CSR Committee (SCSRC)
- Risk Management Committee (RMC)
- Science, Technology and Operations Committee (STOC)
- Banking and Authorisation Committee (BAC)
- Chairperson



# Shareholding Pattern as of 2024

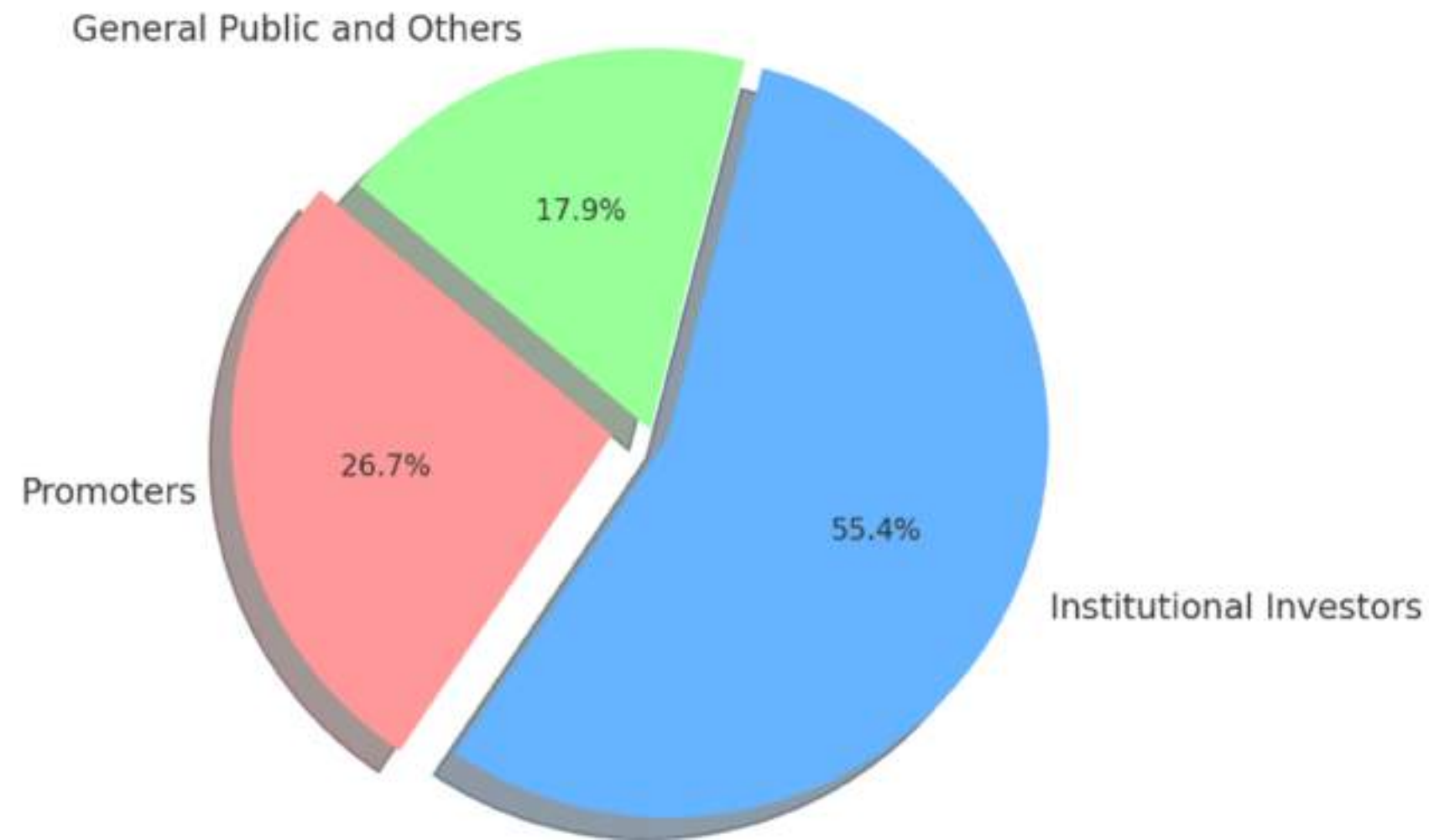
Dr Reddy's Laboratories' shareholding pattern as of 2024 is detailed as follows:

Promoters hold a significant portion, constituting approximately 26.7% of the total shareholding.

Institutional investors (including domestic and foreign institutions) collectively hold around 55.4%, with Foreign Portfolio Investors (FPIs) being major contributors.

The general public and others account for about 17.9% of the shareholding structure shows a balanced distribution with substantial institutional investment, indicating strong external confidence in the company's performance.

Shareholding Pattern of Dr. Reddy's Laboratories (2024)



# Income Statement

## Income Statement

	In Millions of INR		
	2024-23	2023-22	2022-21
<b>Total Revenue</b>	279164	245879	214391
Cost of Materials Consumed	115557	106536	100551
<b>Gross Profit</b>	163607	139343	113840
<b>Operating Expenses:</b>			
+ Selling & Marketing	77201	68026	62081
+ Research & Development	22873	19381	17482
+ Depreciation & Amortization	14856	12636	11824
+ Prov For Doubtful Accts	275	0	0
+ Other Operating Expense	-4199	-6230	-1365
<b>EBITDA</b>	79334	70802	47466
Depreciation and Amortization	14856	12636	11824
<b>Earnings before Interest and Tax (EBIT)</b>	64478	58166	35642
Interest expenses (finance costs)	171	169	380
<b>Total Expenses</b>	226734	186703	190953
<b>Earnings before Taxes and exceptional cases</b>	52034	59176	23438
Exceptional items (revenue)	0	0	0
Exceptional items (cost)	-2763	-3223	-2822
<b>Earnings before Tax</b>	72012	62399	26260
<b>Tax Expenses:</b>			
Current Tax	6340	8641	3962
Deferred Tax Credit	0	0	0
Deferred Tax Credit (+ve)	2442	3891	2080
<b>Profit for the year</b>	68114	57649	24378



# Common Sizing (Income Statement)

Income Statement Common Sizing on Total Revenue

	2024-23	2023-22	2022-21
<b>Total Revenue</b>	100.00%	100.00%	100.00%
Cost of Materials Consumed	41.39%	43.33%	46.90%
<b>Gross Profit</b>	58.61%	56.67%	53.10%
<b>Operating Expenses:</b>			
+ Selling & Marketing	27.65%	27.67%	28.96%
+ Research & Development	8.19%	7.88%	8.15%
+ Depreciation & Amortization	5.32%	5.14%	5.52%
+ Prov For Doubtful Accts	0.10%	0.00%	0.00%
+ Other Operating Expense	-1.50%	-2.53%	-0.64%
<b>EBITDA</b>	28.42%	28.80%	22.14%
Depreciation and Amortization	5.32%	5.14%	5.52%
<b>Earnings before Interest and Tax (EBIT)</b>	23.10%	23.66%	16.62%
Interest expenses (finance costs)	0.06%	0.07%	0.18%
<b>Total Expenses</b>	81.22%	75.93%	89.07%
<b>Earnings before Taxes and exceptional cases</b>	18.64%	24.07%	10.93%
Exceptional items (revenue)	0.00%	0.00%	0.00%
Exceptional items (cost)	-0.99%	-1.15%	-1.01%
<b>Earnings before Tax</b>	25.80%	25.38%	12.25%
<b>Tax Expenses:</b>			
Current Tax	2.27%	3.51%	1.85%
Deferred Tax Credit	0.00%	0.00%	0.00%
Deferred Tax Credit (+ve)	0.87%	1.58%	0.97%
<b>Profit for the year</b>	24.40%	23.45%	11.37%

# Horizontal Analysis (Income Statement)

**Horizontal analysis, also known as trend analysis, is a financial analysis method that compares financial statement data over a certain period of time**

**Income Statement Horizontal Analysis**

	2024-23	2023-22	2022-21
<b>Total Revenue</b>	13.54%	14.69%	
Cost of Materials Consumed	8.47%	5.95%	
<b>Gross Profit</b>	17.41%	22.40%	
<b>Operating Expenses:</b>			
+ Selling & Marketing	13.49%	9.58%	
+ Research & Development	18.02%	10.86%	
+ Depreciation & Amortization	17.57%	6.87%	
+ Prov For Doubtful Accts	-	-	
+ Other Operating Expense	-32.60%	356.41%	
<b>EBITDA</b>	12.05%	49.16%	
Depreciation and Amortization	17.57%	6.87%	
<b>Earnings before Interest and Tax (EBIT)</b>	10.85%	63.20%	
Interest expenses (finance costs)	1.18%	-55.53%	
<b>Total Expenses</b>	21.44%	-2.23%	
<b>Earnings before Taxes and exceptional cases</b>	-12.07%	152.48%	
Exceptional items (revenue)			
Exceptional items (cost)	-14.27%	14.21%	
<b>Earnings before Tax</b>	15.41%	137.62%	
<b>Tax Expenses:</b>			
Current Tax	-26.63%	118.10%	
Deferred Tax Credit			
Deferred Tax Credit (+ve)	-37.24%	87.07%	
<b>Profit for the year</b>	18.15%	136.48%	



# Income Statement Projections

Projecting the income statement involves multiplying averages of growth rates obtained by horizontal analysis to previous year's items for the consecutive year to project income statement items for future years

Certain Important Ratios		2024-23	2023-22	2022-21		Averages
Sales Growth Rate		13.54%	14.69%			14.11%
Gross Profit Margin		58.61%	56.67%	53.10%		56.13%
Operating Expenses/Sales Revenue		34.44%	33.02%	36.47%		34.64%
DA/Net PPE		19.55%	19.01%			19.28%
Interest/Long Term Borrowings		13.38%	2.94%			8.16%
Income tax		8.80%	13.85%	15.09%		12.58%

Income Statement projections	2029-28	2028-27	2027-26	2026-25	2025-24	2024-23
In Millions of INR						
Total Revenue	540155.9176	473355.2444	414815.7599	363515.8091	318560.0843	279164
Cost of Materials Consumed	236990.4071	207681.983	181998.1095	159490.5411	139766.4667	115557
Gross Profit	303165.5105	265673.2614	232817.6504	204025.2679	178793.6176	163607
All Operating Expenses	187130.9292	163988.5889	143708.2443	125935.9546	110361.5505	96150
Depreciation and Amortization	25300.96274	22172.01185	19430.01594	17027.12058	14652.41464	14856
Interest Expense	488.8276719	488.8276719	488.8276719	488.8276719	488.8276719	171
Exceptional cases	0	0	0	0	0	-2763
Earnings before Tax	90244.79085	79023.83298	69190.56247	60573.36507	53290.82478	
Tax expense	11352.69007	9941.10658	8704.092548	7620.059105	6703.92398	
Net income	78892.10078	69082.7264	60486.46992	52953.30596	46586.9008	



# Common Sizing (Balance Sheet)

Common sizing the balance sheet involves expressing every item in the balance sheet as a percentage of a base value which is the Total assets that is equivalent to Total liabilities and Shareholders equity

Common Sizing Balance Sheet

	2024-23	2023-22
<b>EQUITIES AND LIABILITIES:</b>		
Equity share capital	2.07%	2.87%
Other equity (reserves and surplus)	70.64%	70.45%
Total Shareholders funds	72.70%	73.33%
<b>NON-CURRENT LIABILITIES:</b>		
Long term borrowings	1.54%	0.40%
Deferred Tax liabilities	0.22%	0.26%
Other Long term liabilities	0.52%	0.90%
Long term provisions	0.00%	0.00%
Total Non-Current Liabilities	2.27%	1.56%
<b>CURRENT LIABILITIES</b>		
Short-term borrowings	3.27%	2.30%
Trade Payables	15.39%	8.88%
Other current liabilities	6.96%	15.49%
Short term provisions	0.00%	0.00%
Total Current Liabilities	25.62%	26.68%
<b>Total Liabilities and shareholders equity</b>	<b>100.60%</b>	<b>101.57%</b>

<b>ASSETS:</b>		
<b>NON-CURRENT ASSETS</b>		
Net PPE (tangible assets)	19.55%	20.65%
Intangible assets	10.92%	10.90%
Capital Work in Progress	3.48%	3.03%
Other Assets	0.00%	0.00%
Total fixed assets	33.95%	34.58%
Non-Current investments	1.35%	0.21%
Deferred Tax assets	2.72%	2.24%
Long term loans and advances	#VALUE!	0.00%
Other non-current Assets	1.85%	1.32%
Total Non-Current Assets	36.17%	35.70%
<b>CURRENT ASSETS</b>		
Current investments	10.37%	6.62%
Inventories	16.35%	15.12%
Trade Receivables	20.66%	22.52%
Cash and Cash Equivalents	15.78%	19.20%
Short term loans and Advancements	0.00%	0.00%
Other Current Assets	0.67%	0.83%
Total Current Assets	63.83%	64.30%
<b>Total Assets</b>	<b>100.00%</b>	<b>100.00%</b>



# Balance Sheet Items Projections

Projecting the Balance sheet involves using averages of historical efficiency ratios and projected income statement items to project future balance sheet items

## Certain Important Ratios

		2024-23	2023-22	2022-21		Averages
Trade receivable turnover ratio		3.476599666	3.392136304	3.211176682		3.359970884
Inventory turnover ratio		1.818306269	2.188945963	1.976082855		1.994445029
Accounts Payable turnover ratio		1.931745236	3.726598573	3.242116464		2.966820091
Cash ratio		0.6158423736	0.719674383	0.453435130		0.596317295
Working Capital Turnover ratio		1.880263244	2.153342992	2.17493392		2.069513385
Net PPE turnover ratio		3.673355527	3.699542596	3.448519359		3.60713916

Projections	2029-28	2028-27	2027-26	2026-25	2025-24	2024-23
In Millions of INR						
Net PPE	149746.3484	131227.331	114998.5463	100776.7632	88313.77725	75,997.0
Working Capital	261006.2449	228727.8003	200441.2065	175652.7943	153929.9463	148,470.7
Change in Working Capital	32278.4446	28286.59381	24788.41218	21722.84802	5,459.2	27,398.7
Long Term Borrowings	6,478.8	6,478.8	6,478.8	6,478.8	6,478.8	5,990.0



# Free Cash Flows

## Free Cash Flow to Firm

Particulars		2028-27	2027-26	2026-25	2025-24	2024-23	2023-22	2022-21
Net Income		78892.10078	69082.7264	60486.46992	52953.30596	46586.9008	68114	57649
Depreciation		25300.96274	22172.01185	19430.01594	17027.12058	14652.41464	14856	12636
Interest Expense(1-T)		22118.13096	19382.79846	16985.74246	14885.12855	12809.15787	149,4883982	147.7399959
Change in Working Capital		32278.4446	28286.59381	24788.41218	21722.84802	5,459.2	27,398.7	37,808.0
CAPEX		43819.98022	38400.79646	33651.79905	29490.10655	26,969.2	24391	16929

FCFF		50212.76966	43950.14643	38462.01708	33652.60052	41,620.0	31330
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## Free Cash Flow to Equity

Particulars		2028-27	2027-26	2026-25	2025-24	2024-23	2023-22	2022-21
Net Income		78892.10078	69082.7264	60486.46992	52953.30596	46586.9008	68114	57649
Depreciation		25300.96274	22172.01185	19430.01594	17027.12058	14652.41464	14856	12636
Change in Working Capital		32278.4446	28286.59381	24788.41218	21722.84802	5,459.2	27,398.7	37,808.0
CAPEX		43819.98022	38400.79646	33651.79905	29490.10655	26,969.2	24391	16929
Long Term Borrowings		6,478.8	6,478.8	6,478.8	6,478.8	6,478.8	5,990.0	1,278.0

FCFE		34,573.5	31,046.2	27,955.1	25,246.3	35,289.7	37170
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# Cost of Capital

## DRREDDY

Risk free rate (Rf)	7.05%
Corporate Tax	25.30%
Beta from Regression	0.5266784725
Total equity	282,548.0
Total Liabilities	108,421.3

## Levering and Unlevering of Beta

### Competitive Firms

Particulars	ZYDUSLIFE	AUROPHARMA	TRNTPHARMA	CIPLA
Beta from Regression	0.5954350408	0.5411263861	0.3757990946	0.2363962846
Total equity	15,716.50	19,722.82	6,828.76	27,973.92
Total non current Liabilities	5,826.90	186.42	2,559.23	217.06
D/E ratio	0.3707504852	0.009451995201	0.3747722866	0.007759370156
E/V ratio	0.7295273727	0.9906365085	0.7273931907	0.9923003741
Beta Unlevered	0.4662944949	0.5373323952	0.293603388	0.2350339691

Average unlevered Beta 0.3830660618

### Relevering beta for DRREDDY using D/E ratio

D/E of DRREDDY	0.3837270128
Beta equity for DRREDDY	0.4928696801

# Cost of Capital

## Calculating cost of Equity Capital

Rm	14.34%
Rf	7.05%
Rm - Rf	7.28%
Cost of equity capital	10.64%

The Cost of Equity (10.64%) was calculated using the Capital Asset Pricing Model (CAPM), based on a market return of 14.34%, a risk free rate of 7.05%, and a market risk premium (Rm - Rf) of 7.28%.

This suggests that equity investors in DRREDDY expect a return of approximately 10.64% on their investment, aligning with the company's risk profile and market conditions.

## Cost of Debt Calculations

Interest Coverage ratio	377.0643275	AAA rated
Spread	0.09%	
Risk Free rate	7.05%	
Cost of Debt	8.04%	

The Cost of Debt (8.04%) was calculated using the interest coverage ratio and a risk free rate. The company's AAA credit rating contributes to a low spread (0.09%) over the risk free rate, reflecting strong creditworthiness and low borrowing costs.

## Market Value of Equity

Share Price March 2023	1239.5
Share Outstanding	838087938.7
Market Value of Equity	103881

The market value of equity represents the company's total equity value as perceived by the market. At ₹103,881 crore, this reflects investors' expectations of DRREDDY's future profitability and growth potential.

The large market cap suggests DRREDDY is a significant player in its industry and likely enjoys a high level of investor confidence.

## Market value of Debt

Book Value of Debt	5,990.0
Maturity	5
Interest Expense	171
Cost of debt	8.04%
Market Value of debt	4751.186529

The market value of debt (₹4,751 crore) is lower than the book value (₹5,990 crore). This indicates that the debt is currently trading at a discount, likely due to lower interest rates in the market compared to the company's cost of debt.

A cost of debt at 8.04% suggests that the company has been able to borrow at relatively favorable rates, aided by its strong credit rating and financial stability.

## WACC

Enterprise Value	108632.1865
D/V	0.04373645308
E/V	0.9562635469
Tax Rate	25.30%
Cost of Capital	10.44%

The WACC (10.44%) represents the company's average cost of financing its operations, combining both equity and debt. This is the hurdle rate for investment projects, and only those generating returns above 10.44% are value accretive.



# TERMINAL GROWTH RATE

Ratios Required		2024-23	2023-22	2022-21
Net Income		68114	57649	24378
Total Assets		388,638.0	321,854.0	296,654.0
Total shareholders equity		282,548.0	236,009.0	190,527.0
Dividends paid		4,977.9	4,145.6	3,313.4
Payout Ratio		0.0730825659	0.071911394	0.135917794
Retention ratio		0.926917434	0.928088605	0.864082205
ROA		0.1752633556	0.179115375	0.082176542
ROE		0.2410705438	0.244266108	0.127950369

1.3.a (i) Terminal Growth rate using reinvestment rate and ROA capital

ROA	14.55%
Reinvestment rate	90.64%
g	13.19%
Cost of Capital	10.44%
FCFF in 2029	50212.76966
Terminal value at end of 2029	2066451.215
Terminal value at end of 2024	1257811.648

1.3.a (ii) Terminal Growth rate using reinvestment rate and ROE capital

ROE	20.44%
Reinvestment rate	90.64%
g	18.53%
Cost of Capital	10.44%
FCFE in 2024	34,573.5

Terminal value in 2029	506335.747
Terminal value at end of 2024	308331.3627

# DCF ANALYSIS OF DR REDDYS

## 1.3.b DCF Analysis of UPL

	2025	2026	2027	2028	2029	PV of Terminal Value
FCFF	41,620.0	33652.60052	38462.01708	43950.14643	50212.76966	-1257811.648
NPV	-\$1,103,872.34					

	2025	2026	2027	2028	2029	PV of Terminal Value
FCFE	35,289.7	25,246.3	27,955.1	31,046.2	34,573.5	-308331.3627
NPV	-\$193,010.24					

This is a no-convergence case, which means NPV is infinite.

The value comes out to be negative since  $g > r$ .  
This is a no-convergence case, which means Terminal Value isn't finite.

The negative NPVs for both FCFF and FCFE highlight significant concerns regarding the firm's ability to create long-term value for stakeholders.  
The growth rate exceeding the cost of capital is a critical issue, suggesting that the firm's reinvestment and growth strategies are unsustainable under current assumptions.



# Relative Valuation (Pharma Industry)

Comparable Companies:	ZYDUS LIFE	AUROPHARMA	TORENTPHARMA	CIPLA
Outstanding shares (as of March 28th, 2024)	1,012,000,000	585,938,609	338,445,440	807,790,000
Share price (as of March 28th, 2024) in rupees	1,007.35	1,088.75	2,601.15	1,496.90
Market Capitalization (Billion) in rupees	1019.44	637.94	880.35	1209.18
Net income (billion) in rupees	39.73	31.73	16.56	41.22
P/E	25.66	20.11	53.16	29.33

Industry P/E ratio	32.065
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Relative valuation using the Price-to-Earnings (P/E) ratio involves comparing the P/E ratio of a specific company to that of its industry peers or comparable companies.

The P/E ratio is a widely used financial metric that represents the price investors are willing to pay for each unit of earnings generated by a company.

## Given data on Dr.Reddys Labs

	Dr Reddys Labs
Outstanding shares (as of March 28th, 2024)	166530000
Share price (as of March 28th, 2024) in rupees	6189.10
Market Capitalization (Billion) in rupees	1030.67
Net income (billion) in rupees	55.68
P/E	18.51

## Valuation of Dr.Reddys Lab using relative valuation

Industry P/E	32.065
Net income (billion) in rupees for UPL	55.68
Predicted MV of Equity	1785.401637
Offer price for 1 share (in rupees)	10721.2012

Thus using relative valuation we can see that the P/E value of Dr.Reddys lab is lower than the industry average and hence it has underpriced shares. Its current share price is 6189.1 rupees while using relative valuation it should be priced at 10721.20 rupees

# Final Conclusion

Thus using relative valuation we can see that the P/E value of Dr.Reddys lab is lower than the industry average and hence it has underpriced shares. Its current share price is 6189.1 rupees while using relative valuation it should be priced at 10721.20 rupees