

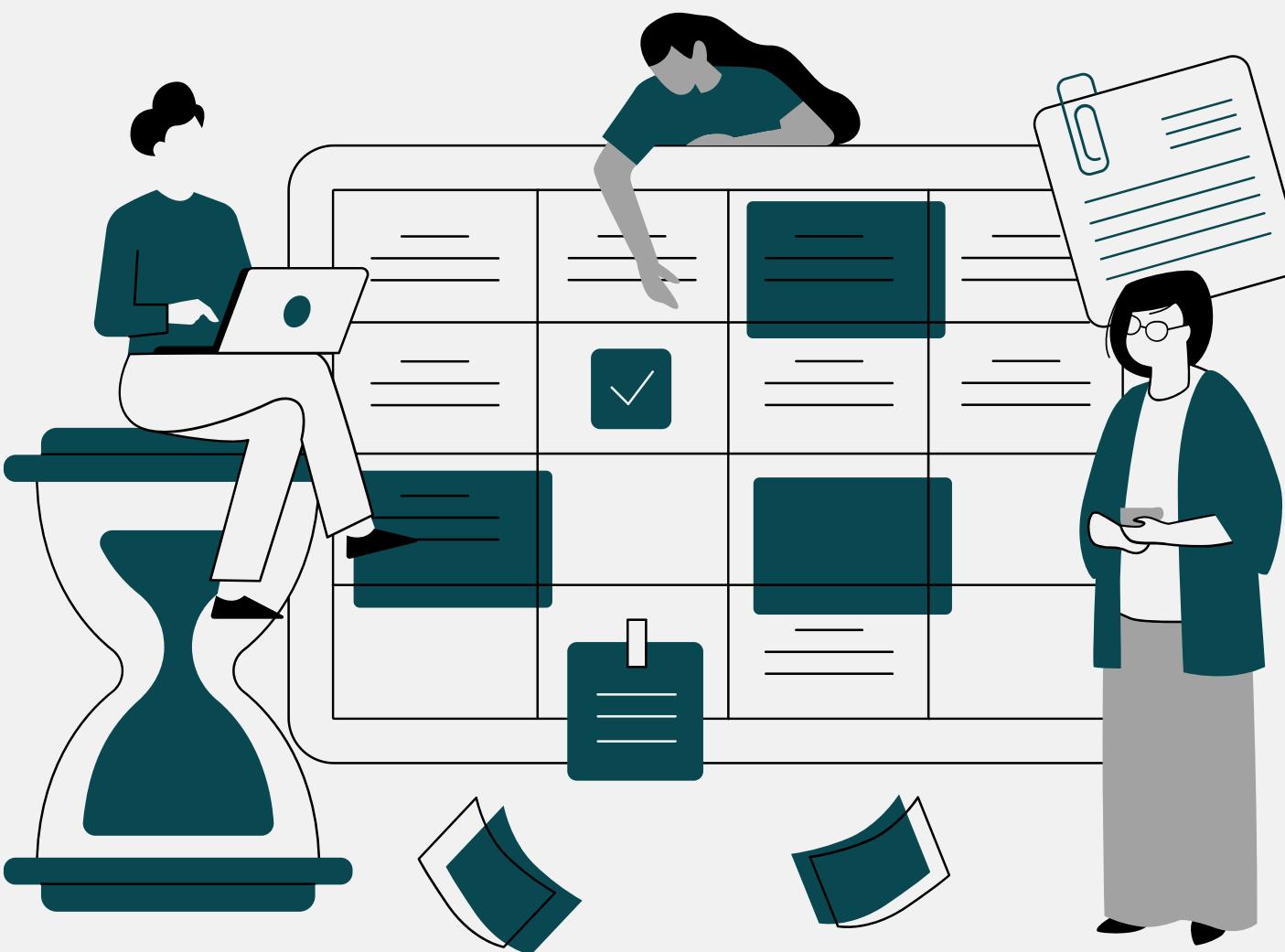
Company Performance from FY 20-23

# Valuation of Tech Mahindra

Prepared by  
**Group 12**

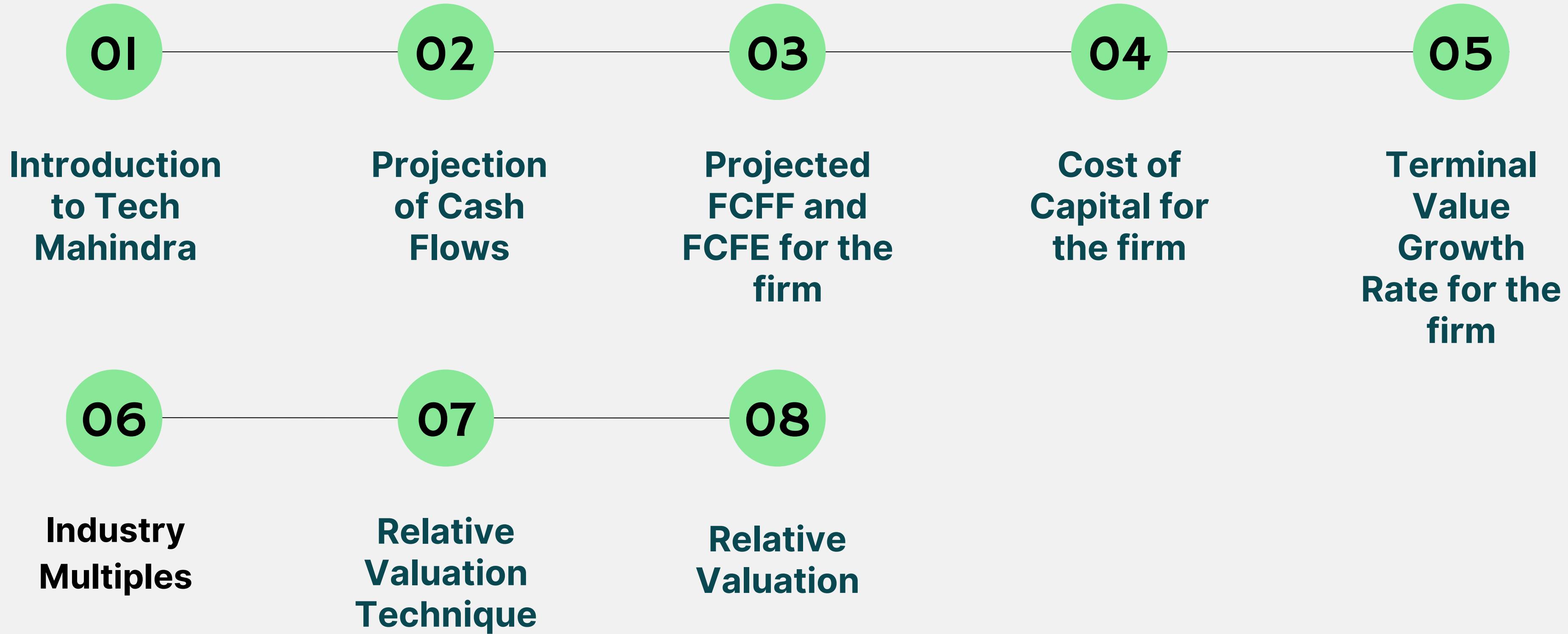


# Group I2 Members



- 
- 01** Tanmay Bhethanabhotla
- 
- 02** Parameswaran Saravanan
- 
- 03** Shubham Agrawal
- 
- 04** Hardik Mittal
- 
- 05** Ishan Singh
- 
- 06** Karun
- 
- 07** Shubham Gupta

# Contents



# Introduction to Tech Mahindra

- Tech Mahindra is an Indian multinational information technology services and consulting company.
- Part of the Mahindra Group, the company is headquartered in Pune and has its registered office in Mumbai.
- Tech Mahindra is a US \$6.0 billion company with over 148,000 employees across 90 countries.
- The company was ranked #5 in India's IT firms and overall No. 47 on Fortune India 500 list for 2019.
- Tech Mahindra has 1,262 active clients as of June 2022.



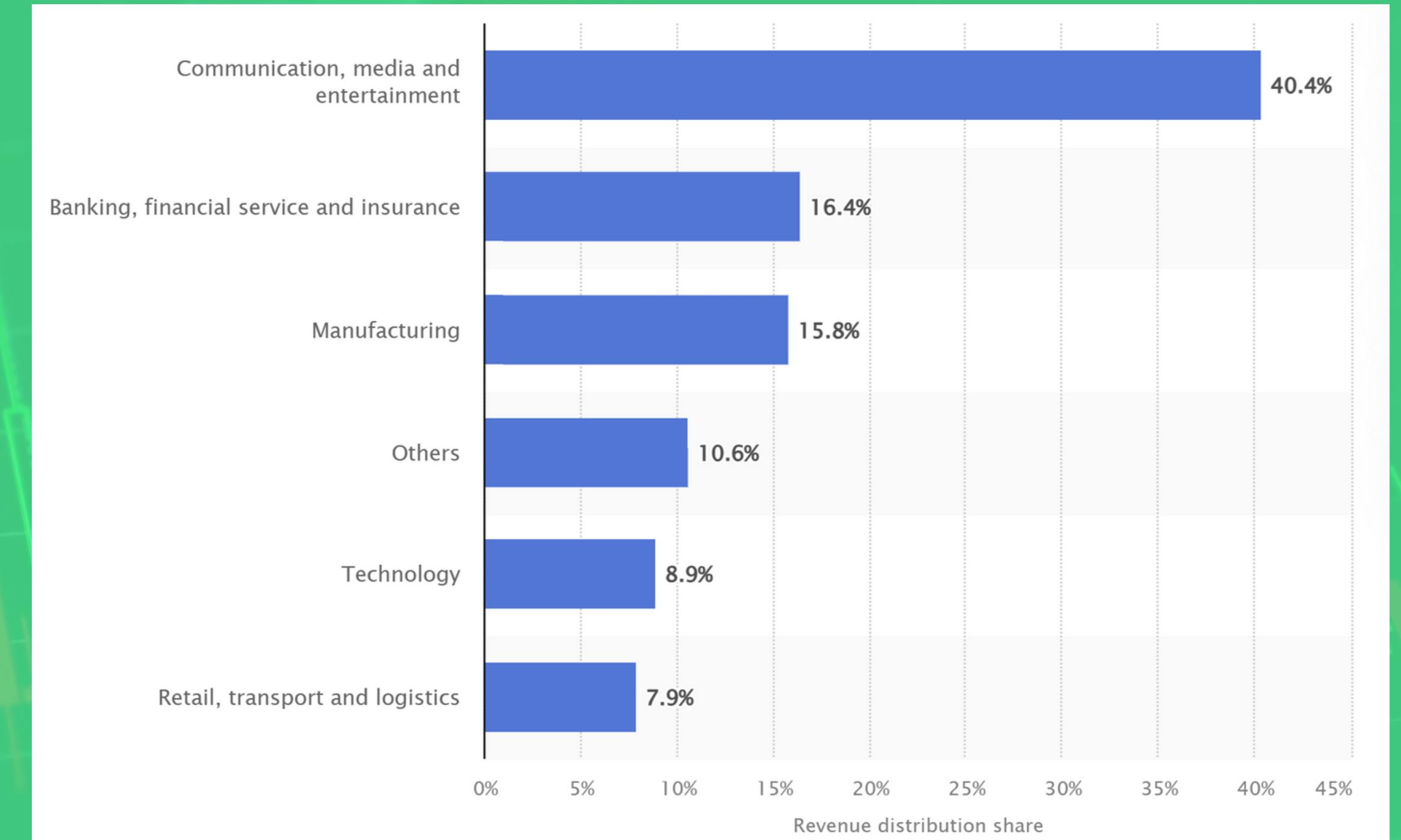
# Products and Services

Tech Mahindra creates aesthetic customer engaging products, smart devices and direct to customer equipment that provides insight into consumer's mind, driven by Technologies like IoT, AR, VR, MR, Artificial Intelligence and Computer vision. Some of the products and services offered include:

1. **Counterfeit Detection**: Spotting Counterfeits in supply chain and retail outlets through authentication of genuine products.
2. **Smart IOT Devices**: Understanding Consumer Preferences and Behaviour using smart, custom designed IOT devices authentication of genuine products.
3. **Smart D2C Equipment**: Serving consumers anytime anywhere using smart intuitive & interactive direct to consumer (D2C) equipments.
4. **Personalized Experiences**: Personalizing Products and Services to regain Consumer Loyalty and increase revenue.
5. **Artwork & Pack Management**: PLM platform driven end to end management of global artwork to help accelerate product launches.

# Sources of Revenue Generation

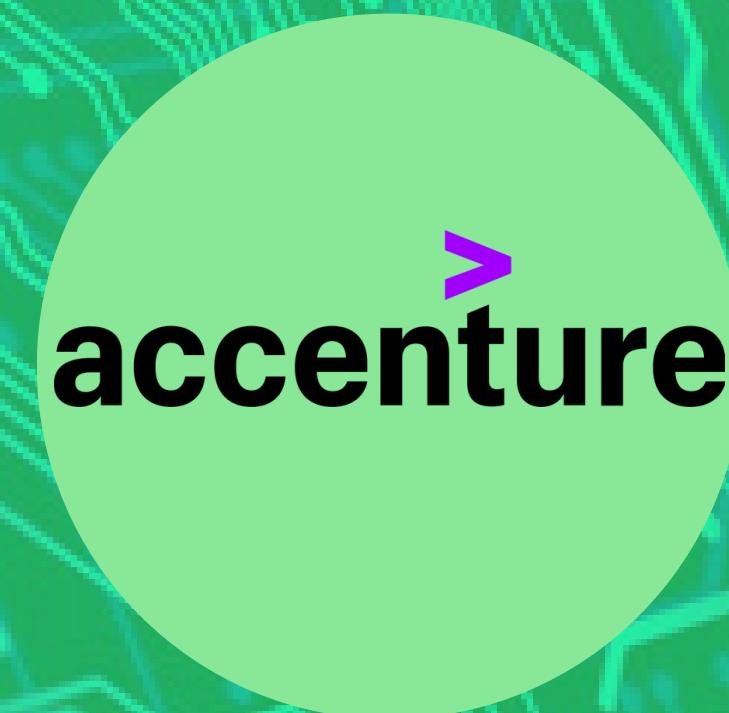
- Over 40 percent of the revenue for Tech Mahindra Limited was generated from the communications, media and entertainment sector in financial year 2022.
- This was followed by banking, financial service, and insurance sector with over 16 percent.
- The organization was involved in network modernization for the use of the upcoming 5G technology.
- This made them the preferred partner for leading telecommunication and cable providers.



# Competitors

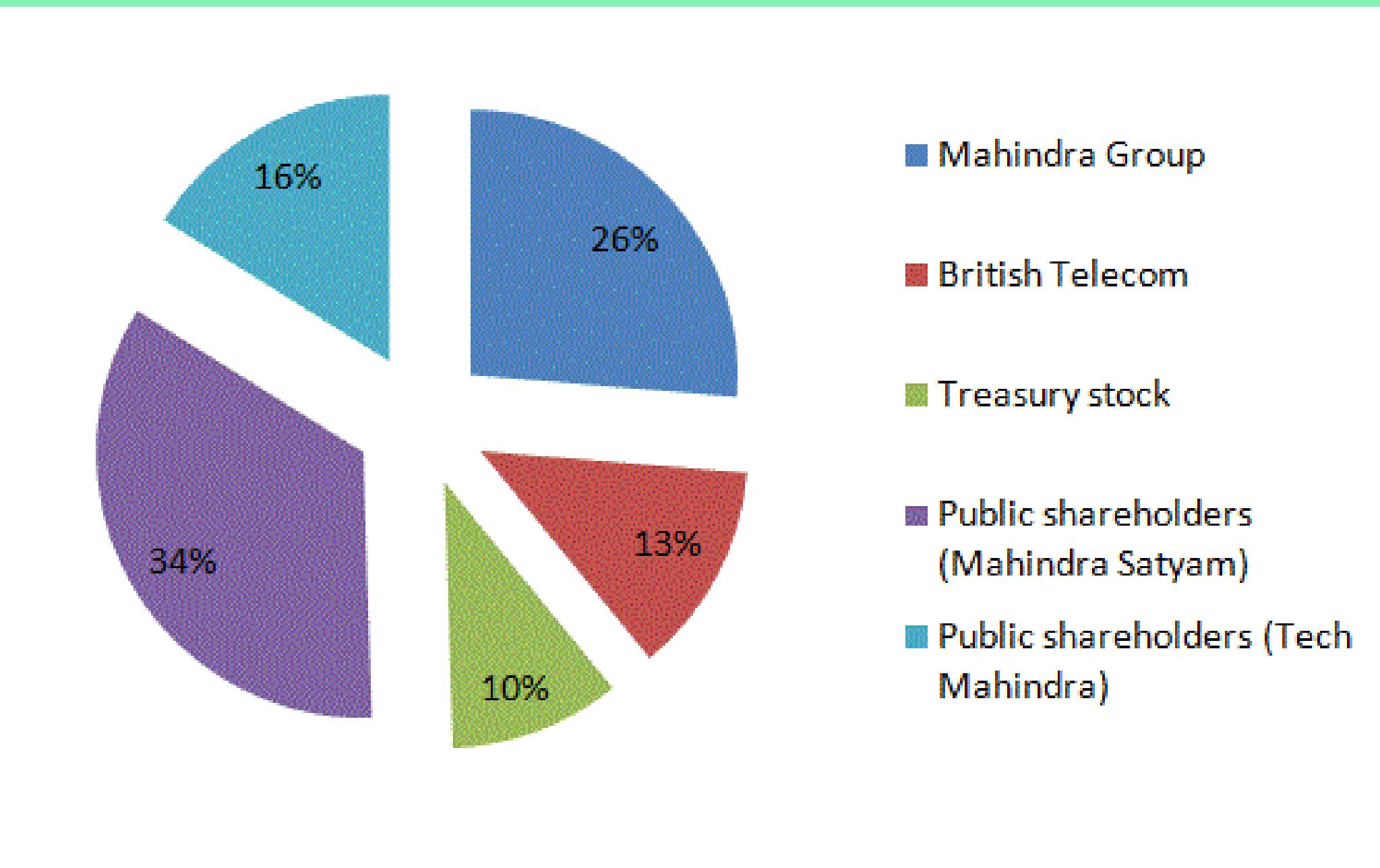
The top Tech Mahindra competitors are:

- Accenture
- Infosys
- Amdocs
- Capgemini
- Cognizant
- Ericsson
- Wipro
- TCS



# Suppliers, Creditors and Other Stakeholders

- The shareholding pattern of Tech Mahindra is described in the image on the left.
- Mahindra and Mahindra Limited have a 25.98% stake in the company, followed by Tech Mahindra Benefit Trust with 9.73%.
- Other prominent stakeholders include:
  1. First State Investments Icvc
  2. Government Pension Fund Global
  3. ICICI Prudential Bluechip Fund
  4. SBI-ETF Nifty 50



# Board Of Directors



**ANAND G. MAHINDRA**

**Chairman, Mahindra Group**

Mr. Anand Mahindra is the Chairman of the Mahindra Group. His tenure has seen the Group expand domestically and internationally into a range of major industrial sectors from automobiles and agriculture to IT and aerospace.



**DR. ANISH SHAH**  
Managing  
Director and  
Chief Executive  
Officer, Mahindra  
Group



**CP GURNANI**  
Managing  
Director and  
Chief Executive  
Officer, Tech  
Mahindra

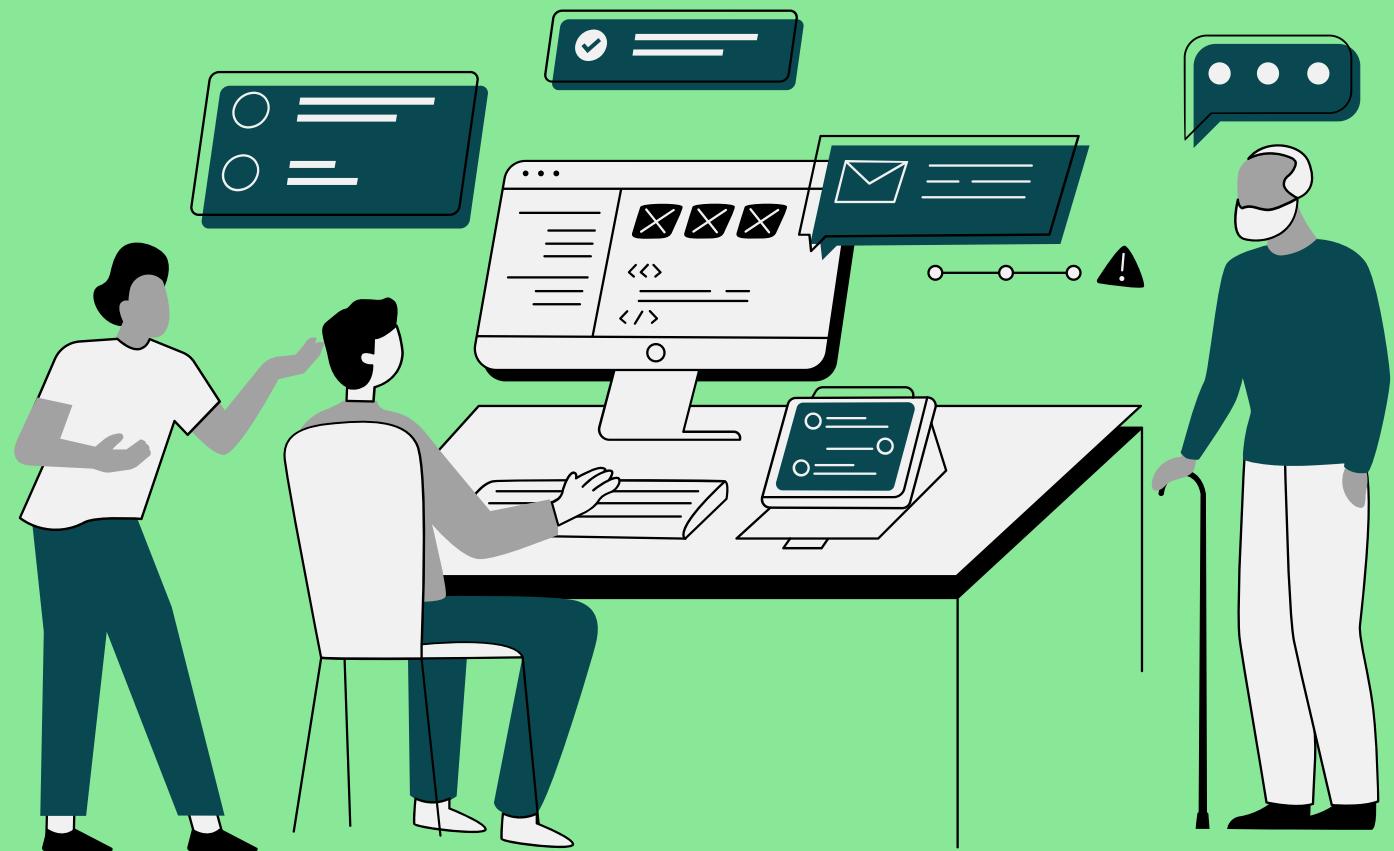


**MOHIT JOSHI**  
Managing  
Director and  
Chief Executive  
Officer  
Designate,  
Tech Mahindra

# Insights from the Industry Report

- India is the topmost offshoring destination for IT companies across the world. Having proven its capabilities in delivering both on-shore and off-shore services to global clients, emerging technologies now offer an entire new gamut of opportunities for top IT firms in India.
- The Indian IT & business services industry is expected to grow to US\$ 19.93 billion by 2025. Spending on information technology in India is expected to reach US\$ 144 billion in 2023. By 2026, widespread cloud utilization can provide employment opportunities to 14 million people and add US\$380 billion to India's GDP.
- IT spending in India is expected to increase to US\$ 110.3 billion in 2023 from an estimated US\$ 81.89 billion in 2021.
- In 2022, the Indian domestic IT & Business Services market was valued at US\$ 13.87 billion and recorded a 7.4% year-over-year (YoY) growth as compared to 7.2% in 2021.
- Exports from the Indian IT industry stood at US\$ 178 billion in FY22. Export of IT services was the major contributor, accounting for more than 51% of total IT export (including hardware).
- The IT industry added 2.9 lakh new jobs taking the industry's workforce tally to 5.4 million.
- Therefore, it is safe to assume that Tech Mahindra will also grow along with the Indian IT sector

# Balance Sheet and Income Statement



- Balance sheet is a snapshot of a company's financial position at a specific point in time. It lists assets, liabilities, and shareholders' equity.
- Income Statement reports a company's financial performance over a specific period. It provides details on the company's revenues, expenses, and profits.

Data from these statements underpin the FCFF and FCFE calculation.

To mention a few -

- Depreciation from the income statement is a non-cash charge, added back in cash flow calculations.
- Changes in working capital and CAPEX figures from the balance sheet impact cash flows.

Together, these financial statements provide the foundation for assessing a firm's financial health. They are crucial for investors and stakeholders to evaluate the company's capacity to generate free cash flows.

The total assets and total liabilities for Tech Mahindra for three years (from 2020 to 2023) were calculated from the balance sheet (values in Million INR)

Total Liabilities and shareholders equity		381510	375836	352040
Total Assets		381510	375834	352040

The working capital and change in working capital were calculated from these values and the balance sheet

Working Capital		92611	100835	131218
Change in Working Capital		-8224	-30383	

Some important financial ratios were calculated to help with the projections of Net PPE, WC, change in WC, and other long term liabilities

## Certain Important Ratios

	2023-22	2022-21	2021-20		Averages
Trade receivable turnover ratio	6.544778	5.978628	5.848335		6.1239134
Inventory turnover ratio	1821.525	859.9136	1207.041		1296.16011
Accounts Payable turnover ratio	5.522114	5.271551	5.520562		5.43807569
Cash ratio	0.96393	1.170052	1.62098		1.25165394
Working Capital Turnover ratio	5.754198	4.427629	2.884901		4.35557614
Net PPE turnover ratio	4.325047	3.974787	3.547375		3.94906953

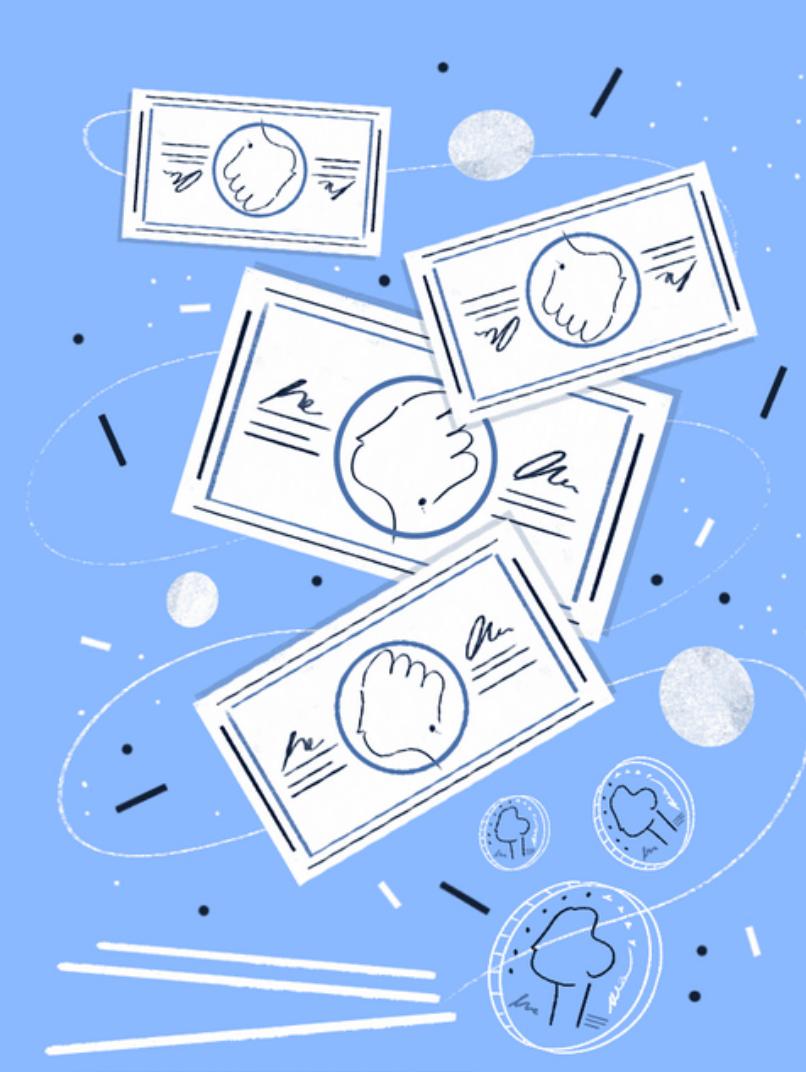
Finally, the future projections were calculated using the income statement, the balance sheet, and the growth rate of the company.

Projections	2028-27	2027-26	2026-25	2025-24	2024-23	2023-22
Net PPE	317321.1	267442	225403.4	189972.7	160111.3	123213
Working Capital	287705.5	242481.6	204366.4	172242.5	145168	92611
Change in Working Capital	45223.84	38115.2	32123.95	27074.45	52557.04	-8224
Other Long term Liabilities	14378.67	14378.67	14378.67	14378.67	14378.67	13418

# Projections of Cash Flows



# FCFF and FCFE Calculations



## Free Cash Flow to the Firm (FCFF)

[frē 'kash 'flō 'tü thə 'fərm]

The amount of cash flow from operations available for distribution after accounting for

- depreciation expenses, taxes, working capital, and investments.

Investopedia



## Free Cash Flow to Equity

[frē 'kash 'flō tə, 'e-kwə-tē ]

The quantity of cash available to the equity shareholders of a company after all expenses, reinvestment, and debt are paid.

Investopedia

# The Free Cash Flow to the Firm was calculated by using the values calculated beforehand:

Particulars		2028-27	2027-26	2026-25	2025-24	2024-23	2023-22	2022-21	2021-20
<b>Net Income</b>		177103.5	149139	125570.3	105706.2	90393.15	48313	55661	44280
<b>Depreciation</b>		40287.72	33954.98	28617.66	24119.31	18560.92	19567	15204	14577
<b>Interest Expense(1-T)</b>		801.0644	801.0644	801.0644	801.0644	747.5436	1438.021	394.5221	-1391.33
<b>Change in Working Capital</b>		45223.84	38115.2	32123.95	27074.45	52557.04	-8224	-30383	
<b>CAPEX</b>		90166.79	75993.65	64048.36	53980.73	55459.17	30457	20814	
<b>FCFF</b>		<b>82801.66</b>	<b>69786.23</b>	<b>58816.68</b>	<b>49571.4</b>	<b>1685.403</b>	<b>47085.02</b>	<b>80828.52</b>	

- Here, FCFF comes out to be positive, meaning the company has sufficient money to invest back into the business for growth or to distribute to shareholders.
- Tech Mahindra is an established, “Blue Chip” stock that is backed by one of India’s biggest multinational conglomerates. The highly positive FCFF shows us that Tech Mahindra has a bright future and is a good investment.

# The Free Cash Flow to the Firm was calculated by using the values calculated beforehand and the FCFF calculations:

Particulars		2028-27	2027-26	2026-25	2025-24	2024-23	2023-22	2022-21	2021-20
<b>Net Income</b>		177103.5	149139	125570.3	105706.2	90393.15	36457	36955	10532
<b>Depreciation</b>		40287.72	33954.98	28617.66	24119.31	18560.92	19567	15204	14577
<b>Change in Working Capital</b>		45223.84	38115.2	32123.95	27074.45	52557.04	-8224	-30383	
<b>CAPEX</b>		90166.79	75993.65	64048.36	53980.73	55459.17	30457	20814	
<b>Long Term Borrowings</b>		29113.29	29113.29	29113.29	29113.29	29113.29	9191	8620	9735
<b>FCFE</b>		111113.9	98098.46	87128.9	77883.63	30051.15	42982	70348	

- Analysts use FCFE to determine if dividend payments and stock repurchases are paid for with free cash flow to equity or some other form of financing. Investors want to see a dividend payment and share repurchase that is fully paid by FCFE.
- Like FCFF, the free cash flow to equity is positive for the company. Hence there is no concern that dividends are being paid using debt or existing capital

# Historical Weekly Data



The historical weekly data of stock prices has been collected from 26-3-2018 to 27-3-2023

We have chosen 4 comparable companies which belongs to same industry as in Tech Mahindra,

- WIPRO
- HCL
- INFOSYS
- TCS

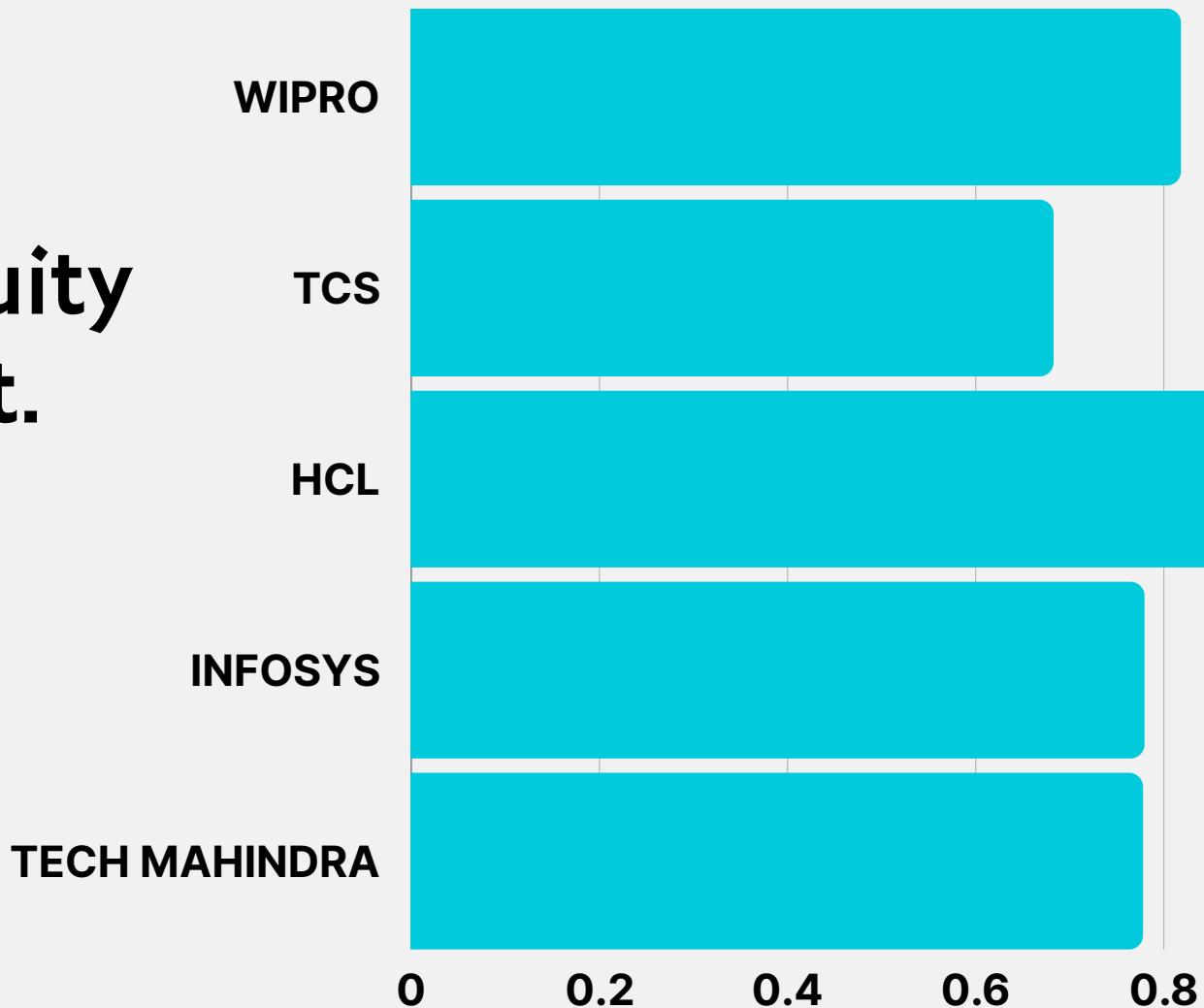
We have used the adjusted closing prices of each of the 5 comparable companies for our calculations.

The historical weekly returns are calculated using respective company stock prices.

# COMPANY BETA

The beta of a company measures how the company's equity market value changes with changes in the overall market.

It is used in the capital asset pricing model (CAPM) to estimate the return of an asset.



## Calculation:

- Nifty 50 data is being used to obtain weekly market return
- We used the regression formula as shown on the right.

- Formula:  
$$y = \beta_0 + \beta * R_m$$
- $y$  = weekly company return
- $\beta_0$  = constant
- $\beta$  = Company beta
- $R_m$  = weekly Market return

# Cost of Capital (Tech Mahindra)



## Cost of Capital

$$\text{WACC (\%)} = (k_d \times \frac{D}{D+E}) + (k_e \times \frac{E}{D+E})$$

- WACC → Weighted Average Cost of Capital
- $k_d$  → After-Tax Cost of Debt
- $k_e$  → Cost of Equity
- $\frac{D}{D+E}$  → Debt Weight (%)
- $\frac{E}{D+E}$  → Equity Weight (%)

**Cost of capital represents the return a company needs to achieve in order to justify the cost of a capital project.**

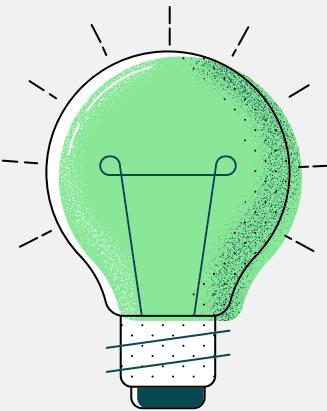
# LEVERING AND UNLEVERING BETA



## Levering and Unlevering of Beta:

- Levered beta measures the risk of a firm with debt and equity in its capital structure to the volatility of the market.
- Unlevering the beta removes any beneficial or detrimental effects gained by adding debt to the firm's capital structure

# Previously Calculated Values:



Risk free rate (Rf)	7.35%
Corporate Tax	22.18%
Beta from Regression	0.77792541
Total equity	283947
Total Liabilities	25870

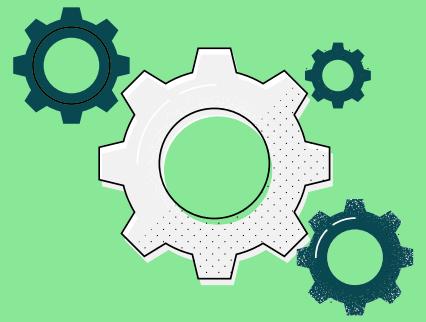
## Levering and Unlevering of Beta:

Particulars	Wipro	HCL	Infosys	TCS
Beta from Regression	0.8181755	0.859811	0.779528	0.682771
Total equity	627623	411040	6,77,450	7,45,380
Total non current Liabilities	37205	15890	61,500	59,650
D/E ratio	0.05927922	0.038658	0.090782	0.080026
E/V ratio	0.94403816	0.962781	0.916774	0.925903
Beta Unlevered	0.78209875	0.834701	0.728094	0.63218

- Average unlevered beta = 0.744268691

## Relevering beta for Tech M using D/E ratio:

D/E of Tech M	0.091108552
Beta equity for Tech M	0.797034463



# Cost of Equity Capital :

The cost of equity is the return that a company requires to decide if an investment meets capital return requirements.

$$E(R_i) = R_f + \beta_i(E(R_m) - R_f)$$

$E(R_i)$  = capital asset expected return

$R_f$  = risk-free rate of interest

$\beta_i$  = sensitivity

$E(R_m)$  = expected return of the market

# Cost of equity capital calculations and data:

Rm	11.35%
Rf	7.35%
Rm-Rf	4.00%
<b>Cost of equity capital</b>	<b>10.5381378521180000%</b>



The cost of debt is the total interest expense owed on a debt.

$$\text{Cost of debt} = \frac{\text{Interest expense}}{\text{Total debt}} \times \left( 1 - \frac{\text{tax rate}}{\text{rate}} \right)$$

Calculations for cost of debt:

Interest Coverage ratio	39.63906926
Spread	0.75%
Risk Free rate	7.35%
Cost of Debt	8.10%

# Cost of Debt



# Market Value of Equity



**Market value of equity is the total dollar value of a company's equity and is also known as market capitalization.**

$$\text{Market Value of Equity} = \frac{\text{Market Value Per Share}}{\text{Total Diluted Shares Outstanding}}$$

**Calculation of market value of equity:**

Share Price March 2023	1101.85
Share Outstanding	87,99,11,800
Market Value of Equity	96953.08168

The Market Value of Debt refers to the market price investors would be willing to buy a company's debt for, which differs from the book value on the balance sheet

Calculations for market value of debt:

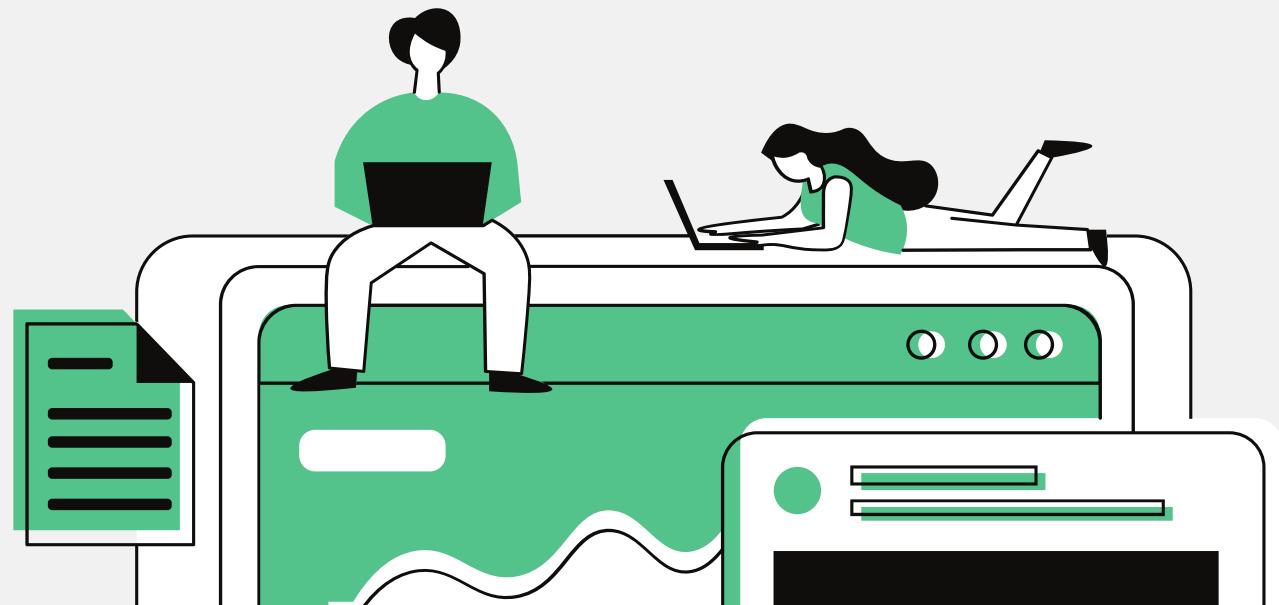
Book Value of Debt (other long term Liabilities)	9191
Maturity	5
Interest Expense	1848
Cost of debt	8.10%
Market Value of debt	13585.48296

# Market value of Debt



# Calculations for cost of capital (WACC) :

Enterprise Value	110538.5646
D/V	0.122902654
E/V	0.877097346
Tax Rate	22.18%
<b>Cost of Capital</b>	<b>10.02%</b>

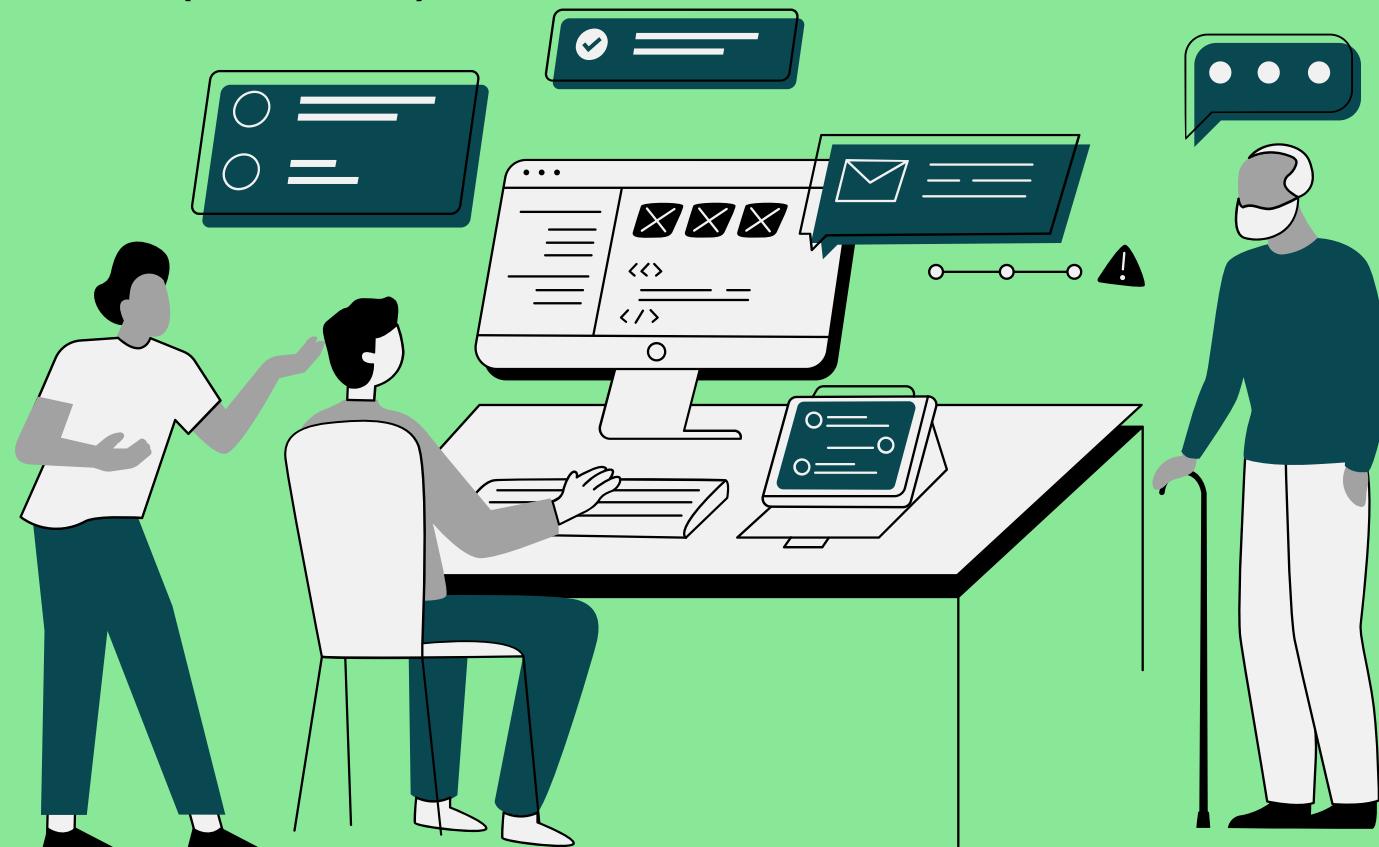


# Terminal Value Growth rate

**Retention Ratio** = 1- Dividends paid/Net Income

**Reinvestment Rate** = Avg Retention(20-23)

**Growth Rate** = Reinvestment Rate \* ROA (or ROE)



- Using Re-investment rate and ROA capital

ROA	17.83%
Reinvestment rate	86.62%
g	15.45%
Cost of Capital	10.02%
FCFF in 2028	82801.66031
Terminal value at end of 2028	-1761134.918
Terminal value at end of 2023	-1092650.325

- Using Re-investment rate and ROE capital

ROE	24.45%
Reinvestment rate	86.62%
g	21.175137170666500%
Cost of Capital	10.02%
FCFE in 2028	111113.8831

- We can't use the growing perpetuity condition since  $g > r$ , i.e firm cash flow will grow to infinity and can't be discounted to get terminal value

Terminal value in 2028	-1206742.69
Terminal value at end of 2023	-748692.0954

# DCF Analysis

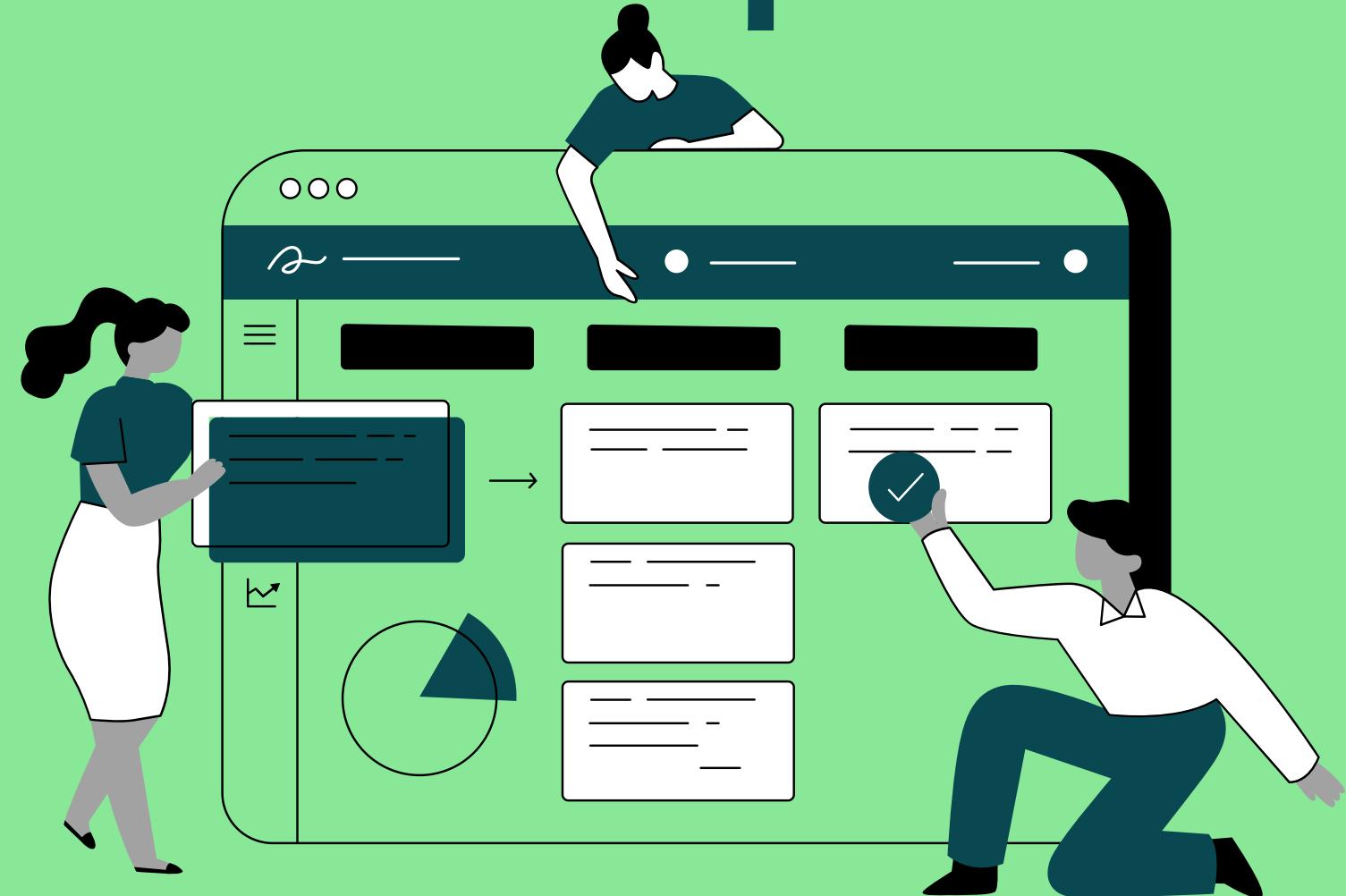


- Applying discounted cash flow analysis, the value of the firm can be determined by considering its forthcoming cash flows.
- In order to determine the present value of anticipated future financial flows, a projected discount rate is applied.
- The opportunity may be beneficial if the DCF is greater than the current cost of the investment, as it may generate positive returns.
- The weighted average cost of capital (WACC) is commonly employed by corporations as the discount rate, as it takes into consideration the expected rate of return for shareholders.

	2023	2024	2025	2026	2027	Terminal Value
FCFF	1685.4033	49571.4	58816.68	69786.235	82801.66	-1092650.325
NPV	-906988.3					

	2023	2024	2025	2026	2027	Terminal Value
FCFE	30051.147	77883.63	87128.9	98098.457	111113.9	-748692.0954
NPV	-455704.1					

# Relative Valuation Technique



- A relative valuation model ascertains the financial worth of a company by comparing its value to that of its competitors.
- A widely utilized relative valuation metric is the price-to-earnings (P/E) ratio
- In contrast to an absolute valuation model, which does not account for industry or other company averages, a relative valuation model does.
- An industry norm or the value of a company's stock price relative to other firms can be determined using a relative valuation model.

# COMPARABLE COMPANIES DATA ( TELECOMMUNICATIONS INDUSTRY) :

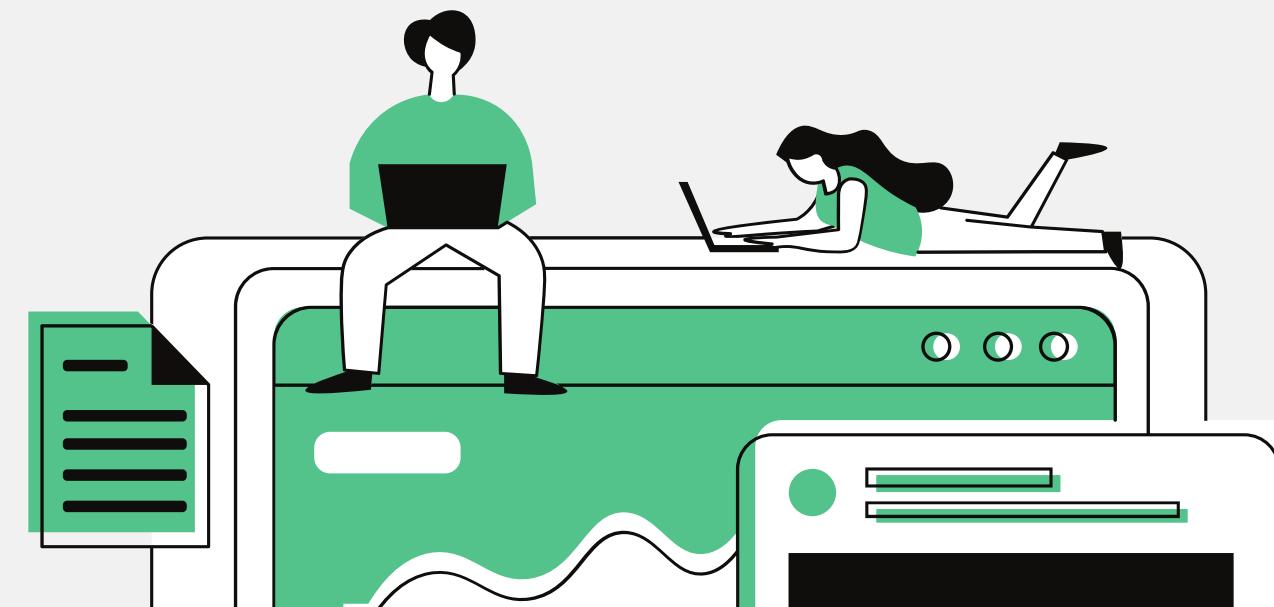
Comparable Companies:	WIPRO	HCL	INFOSYS	TCS
Outstanding shares (as of March 27th, 2023)	5,482,733,329	2,708,045,977	4,258,823,529	3,659,616,656
Share price (as of March 27th, 2023) in rupees	361.25	1,051.50	1,388.95	3,122.30
Market Capitalization (Billion) in rupees	1980.64	2847.51	5915.29	11426.42
Net income (billion) in rupees	26.46	38.32	62.12	113.42
P/E	74.85	74.31	95.22	100.74

$$\text{P/E ratio} = \frac{\text{Stock Price}}{\text{Earnings per share}}$$

- Investors utilize the P/E ratio to assess the relationship between the market value of a stock and its corresponding earnings. It signifies the valuation of a stock by the market, which is determined by its anticipated or current earnings.
- It reveals whether the stock price of a company is undervalued or overvalued and can compare the valuation of a stock to that of its industry group.
- A high price-to-earnings (P/E) ratio may indicate that the price of a stock is disproportionately high in comparison to its earnings, potentially indicating overvaluation.
- A low price-to-earnings (P/E) ratio could potentially signify that the present value of the stock is inadequate in comparison to its earnings.

Industry P/E ratio based on data from Comparable Companies:

Industry P/E ratio      81.46213121



# Information on Tech Mahindra :

	TECHM
Outstanding shares (as of March 27th, 2023)	879911800
Share price (as of March 27th, 2023) in rupees	1103
Market Capitalization (Billion) in rupees	970.5427154
Net income (billion) in rupees	48.313
P/E	20.0886452

## Valuation Of Tech Mahindra ( Using Relative Valuation )

Industry P/E	81.46213121
Net income (billion) in rupees for HUL	48.313
Predicted MV of Equity	3935.679945
Offer price for 1 share (in rupees)	4472.811872

Thus, relative valuation indicates that Tech M's P/E ratio is below the industry average; hence, the company's shares are underpriced. The current market value of its shares is 1103 rupees, whereas a relative valuation indicates that it is worth 4472.81 rupees:

# Thank you

**Group 12**

