Financial Model for Tata Motors

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Introduction

Tata Motors, part of Tata Group is one of India's largest automobile manufacturers, is at the forefront of this transformation, particularly with its increasing focus on electric vehicles (EVs) and sustainable mobility solutions.

This project focus on building a comprehensive financial model for Tata Motors, aimed at analysing the company's financial performance over the next five years. A well-structured financial model helps stakeholders make informed decisions by forecasting future revenues, costs, and profitability under different market scenarios.

Key Components of the Financial Model:

1. **Linked Financial Statements**
2. **Growth Projections**
3. **Scenario Analysis**
4. **Analytical Tools**

Objectives

1. **Develop a Comprehensive Financial Model**:
    - Construct an Excel-based financial model that accurately reflects the interconnections between revenue streams, costs, and profitability.
    - Ensure all assumptions are clearly documented and validated for accuracy.
2. **Analyse Scenarios**:
    - Implement a scenario analysis framework within the model to project financial outcomes based on three distinct growth scenarios:
        - **Base Case**: Conservative growth assumptions reflecting the current market conditions.
        - **Optimistic Case**: Aggressive growth, where growth rate is greater than base rates.
        - **Pessimistic Case**: Conservative estimates, where growth rate is lower that base rates.
3. **Visualize Financial Performance**:
    - Utilize Pivot Tables to summarize and consolidate financial data effectively, allowing for comparative analysis across different segments and scenarios.
    - Create compelling charts to visualize key financial metrics, making it easier to communicate findings to stakeholders.
    - The Net profits margin greater than 20% is highlighted using conditional formatting.
4. **Calculate Key Financial Metrics**:

- Derive critical financial metrics such as Gross Profit, EBIT (Earnings Before Interest and Taxes), EBT (Earnings Before Taxes), and Net Profit to assess the company's profitability.
- Calculate Net Present Value (NPV) to evaluate the viability of future cash flows from investments, based on the provided discount rate and expected performance across different scenarios, In this project NPV is Positive which means we can accept the investment of $10000 crores.

Conclusion

The financial model for Tata Motors has been developed successfully, meeting the project's outlined objectives and providing valuable insights into the company's future financial performance.

Key Outcomes:

Over the years, the **Passenger Vehicles** and **Commercial Vehicles** segments have been the backbone of profitability. Passenger Vehicles, in particular, have consistently grown, with profit margins increasing from **22.19% in 2023 to 24.26% in 2027**. Commercial Vehicles are also performing well, steadily improving their margins. These two segments are the clear winners and should remain a priority for future investments and expansion.

On the other hand, the **EV Segment** has struggled for several years, operating at a loss from **2023 to 2026**. However, 2027 finally showed a positive turn with a **3.20% profit margin**. This means the EV market is slowly becoming viable, but high costs are still a major challenge. If the company can reduce fixed costs or increase sales, this segment could become a strong revenue stream in the future, People who choose EV over other vehicles are comparatively low which we can expect to grow in future.

The **Other Segment** is the biggest concern. It has been deeply unprofitable every single year, with losses ranging from **-50% to -63% profit margins**. It's clear that this segment is dragging the company down, and serious decisions need to be made, either restructuring it or discontinuing it altogether. After consulting with the top management we can come to a conclusion of whether to continue this or not.

Key Analysis :-

- **Focus on Passenger & Commercial Vehicles** – They're consistently profitable and growing.
- **Keep pushing EV growth** – It's improving but needs cost control.
- **Rethink the Other Segment** – It's a financial drain and might not be worth the investment.