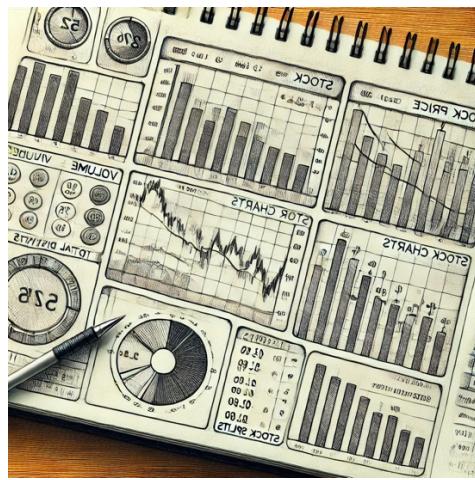


TCS Stock Analysis Dashboard - Project Report

1. Introduction

This project focuses on analyzing TCS stock performance using Power BI. The dashboard provides insights into stock trends, dividends, stock splits, and overall price movement over time. The goal is to create a dynamic and interactive visualization that helps users track stock performance efficiently.



2. Data Overview

The project consists of three datasets:

- **TCS_stock_action**: Contains data on **Dividends** and **Stock Splits** with corresponding **Dates**.
- **TCS_stock_history**: Includes stock **Open**, **High**, **Low**, **Close**, **Volume**, **Stock Splits**, and **Dividends** with dates.
- **TCS_stock_info**: Contains generic stock-related information with unnamed columns.

[Click here to download data set](#)

Column Importance

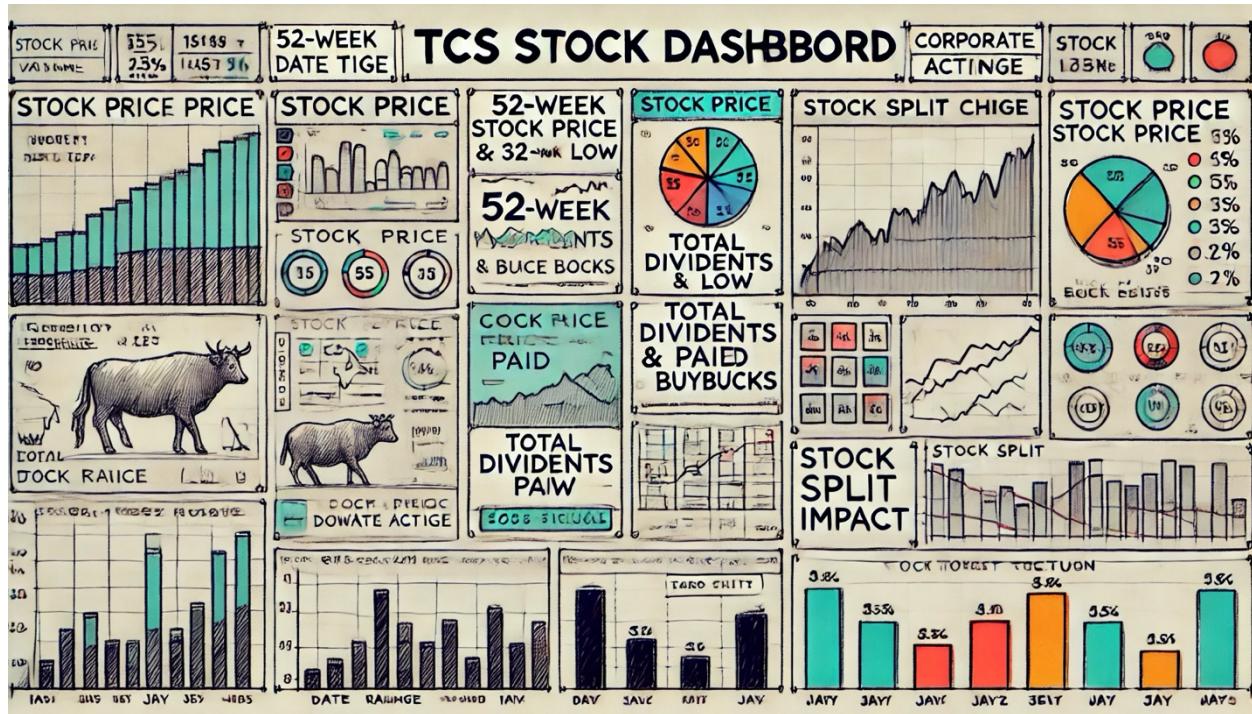
- **Date**: The primary time-based reference for analysis.
- **Open/Close/High/Low**: Essential for understanding stock price trends.
- **Volume**: Shows the number of shares traded, indicating market activity.
- **Dividends**: Represents earnings distributed to shareholders.

- **Stock Splits:** Indicates stock split events impacting share count and pricing.

3. Data Processing

- **Data Cleaning:** Ensured correct data types (dates, numbers).
- **Handling Missing Values:** Replaced or removed missing data.
- **Creating Relationships:** Established links between tables using the **Date** column.

4. Dashboard Design

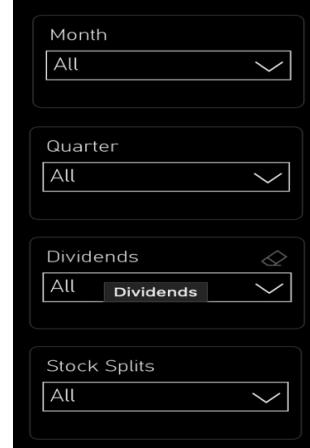


The dashboard includes:

- **KPIs (Cards):**
 - Total Stock Splits
 - Total Dividends Paid
 - Highest Stock Price
 - Lowest Stock Price
 - Average Volume Traded

KPI	DAX Query	Description
Current Stock Price	Current_Stock_Price	Shows the latest stock price.
52-Week High	52_Week_High	Highest price in last 52 weeks.
52-Week Low	52_Week_Low	Lowest price in last 52 weeks.
Total Dividend Paid	Total_Dividend	Total dividends issued.
Total Stock Splits	Total_Stock_Splits	Counts stock splits.
Total Buybacks	Total_Buybacks	Counts buybacks.
Trading Volume (30 Days)	Trading_Volume_30D	Total traded volume in 30 days.
Daily Price Change (%)	Daily_Change_Perc	Percentage change in closing price.
Market Capitalization	Market_Cap	Total market value of stock.

- **Visualizations:**
 - **Line Chart** – Stock Price Trends (Open, High, Low, Close over time)
 - **Bar Chart** – Volume of stocks traded
 - **Scatter Plot** – High vs. Low stock prices
 - **Pie Chart** – Dividend distribution over time
 - **Table View** – Detailed stock action data
- **Slicers:**



- Date Range Selector
- Stock Splits Filter
- Dividend Filter
- Volume Range Selector

5. DAX Calculations

Custom DAX measures were used for enhanced insights:

- **Total Dividends** = **SUM(TCS_stock_action[Dividends])**
- **Total Stock Splits** = **SUM(TCS_stock_action[Stock Splits])**
- **Average Volume** = **AVERAGE(TCS_stock_history[Volume])**
- **Max Price** = **MAX(TCS_stock_history[High])**
- **Min Price** = **MIN(TCS_stock_history[Low])**

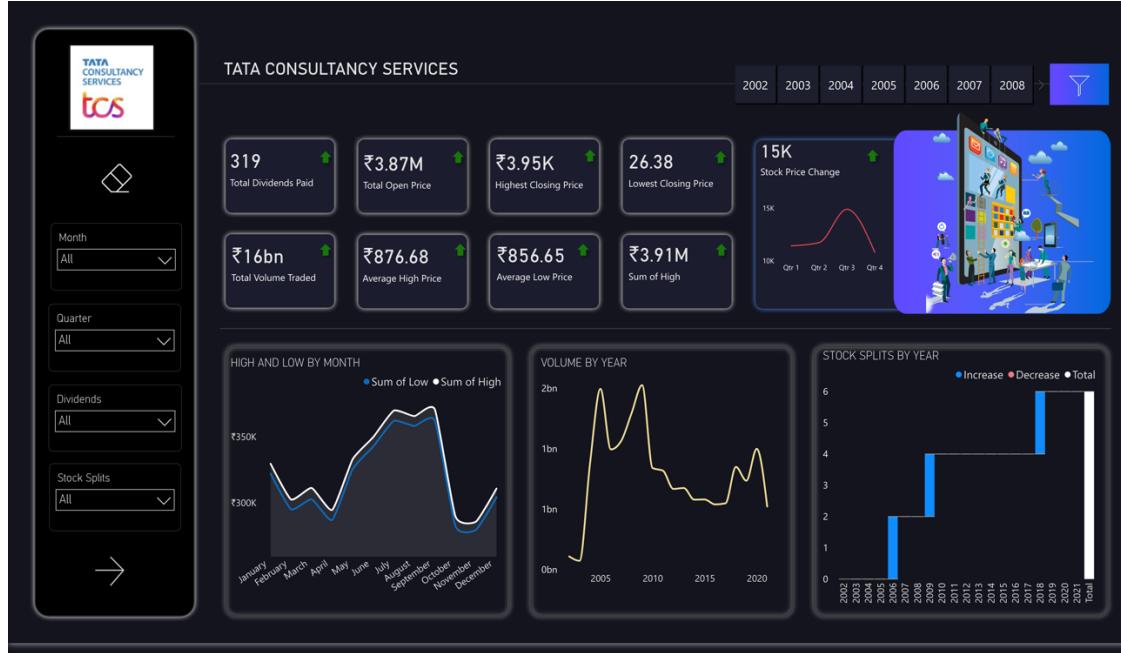
6. Insights & Findings

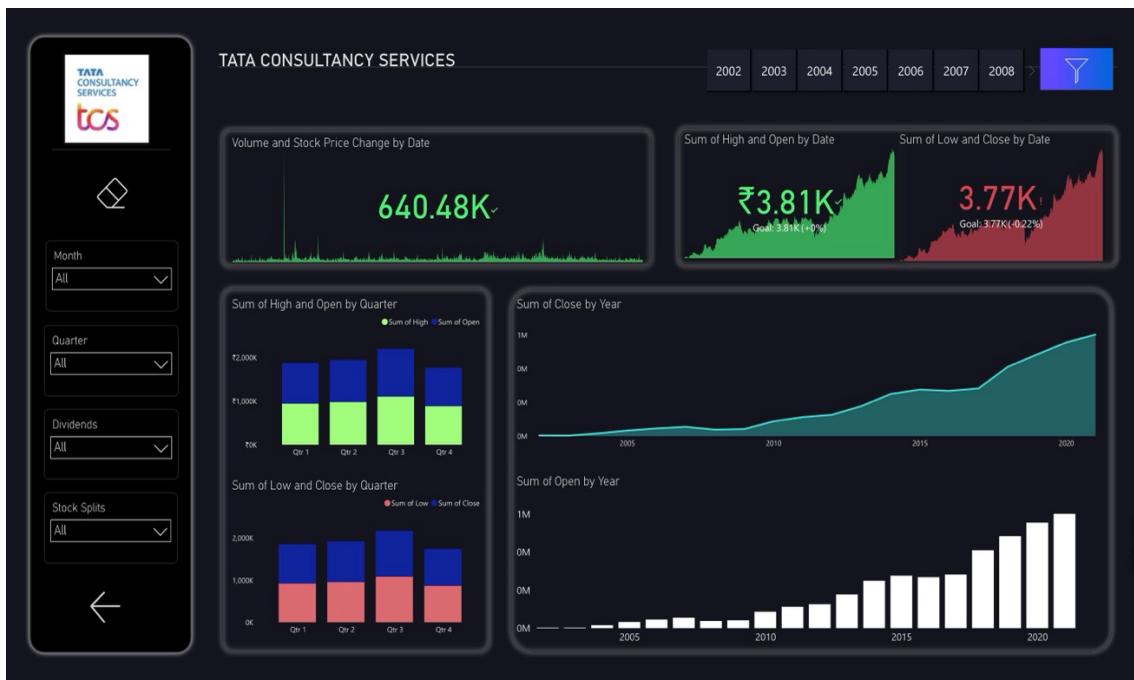
- **Stock Price Trends:** TCS stock shows significant growth over time.
- **Trading Volume:** Higher trading volumes are seen near stock split events.
- **Dividend Impact:** Dividend distribution influences price movement.
- **Stock Split Effects:** Price adjustments are evident after splits.

7. Conclusion & Future Improvements

- This dashboard effectively visualizes TCS stock performance.
- Future enhancements could include:
 - **Live Data Integration**
 - **Predictive Analytics** using machine learning
 - **Comparative Analysis** with other stocks

Screenshots





This report provides a structured approach to analyzing stock data using Power BI, offering valuable insights for investors and analysts.

Dashboard link: [Power BI Report](#)