

# Financial Analysis

## Milestone 3 – Infosys Internship

### TOPIC: Financial Analysis of a company using Power BI

## Introduction:

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Financial analysis is the process of evaluating financial data to understand the financial performance and position of a business, project, or investment. . With the help of an appropriate business intelligence solution, a company can play an active role in timely monitoring business performance, quickly responding to external business environment. By systematically examining financial data, businesses and stakeholders can uncover strengths, address weaknesses, and seize opportunities for improvement.

## Data preprocessing:

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1. **Loading Data:** Import from sources like Excel, SQL Server, or CSV using **Get Data**.
2. **Data Cleaning:**
  - Remove duplicates.
  - Handle missing values (replace or remove).
  - Trim spaces, standardize text, and correct errors.
3. **Data Transformation:**
  - Rename columns/tables and change data types.
  - Split/merge columns and reshape data with pivot/unpivot.
4. **Data Filtering:** Include/exclude rows or columns based on conditions.
5. **Data Enrichment:**

- Add calculated columns.
- Combine datasets using joins or append.

6. **Grouping & Aggregation:** Summarize data using sums, averages, or counts.

7. **Remove Unnecessary Data:** Delete irrelevant rows/columns for efficiency.

## DAX Measures And Calculations:

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### 1. Date Table

```
Date Table = ADDCOLUMNS (
    CALENDARAUTO(),
    "Year", YEAR([Date]),
    "Quarter", "Q" & FORMAT(CEILING(MONTH([Date])/3, 1), "#"),
    "Quarter No", CEILING(MONTH([Date])/3, 1),
    "Month No", MONTH([Date]),
    "Month Name", FORMAT([Date], "MMMM"),
    "Month Short Name", FORMAT([Date], "MMM"),
    "Month Short Name Plus Year", FORMAT([Date], "MMM,yy"),
    "DateSort", FORMAT([Date], "yyyyMMdd"),
    "Day Name", FORMAT([Date], "dddd"),
    "Details", FORMAT([Date], "dd-MMM-yyyy"),
    "Day Number", DAY ( [Date] )
)
```

This DAX code creates a DateTable with various date-related columns in Power BI. It uses CALENDARAUTO() to generate a date range based on the minimum and maximum dates in the data model. Each ADDCOLUMNS function adds useful date-related attributes:

1. **Year** - Extracts the year from each date.
2. **Quarter** - Adds a quarter label in "Q1," "Q2," format, using CEILING to calculate quarters.
3. **Quarter No** - Numeric value of the quarter.
4. **Month No** - Numeric value of the month.
5. **Month Name** - Full name of the month (e.g., "January").
6. **Month Short Name** - Abbreviated month name (e.g., "Jan").

7. **Month Short Name Plus Year** - Combination of month and year in "MMM,yy" format.
8. **DateSort** - Provides a sortable date format "yyyyMMdd."
9. **Day Name** - Full weekday name (e.g., "Monday").
10. **Details** - Displays full date in "dd-MMM-yyyy" format.
11. **Day Number** - Day of the month.

## 2. Current year units

Current\_Year Units = SUM(financials[Units Sold])

CY Units is a calculated measure that sums up the total number of units sold from the Units Sold column within the financials table.

## 3. Total Gross sales

Total Gross Sales = SUM(financials[Gross Sales])

It calculates the total gross Sales by Adding the ('financials'[Gross Sales]). The sum function adds up the all the values in the gross Sales Column.

## 4.Previous Year units

Previous\_Year Units = CALCULATE([Current\_Year Units], SAMEPERIODLASTYEAR(DateTable[Date]))

It calculates **units sold in the previous year** by using the CALCULATE function to evaluate [Current\_Year Units] with a shifted date range provided by SAMEPERIODLASTYEAR(DateTable[Date]). This shifts the filter context to the same period in the prior year, allowing for year-over-year comparisons of sales or performance.

## 5. Sales Classification:

Sales Classification =

```
SWITCH(
    TRUE(),
    'financials'[Gross Sales] > 10000, "High",
    'financials'[Gross Sales] > 5000, "Medium",
    "Low"
)
```

It classifies sales as **High**, **Medium**, or **Low** based on the value of 'financials'[Gross Sales]. Using the SWITCH function with TRUE(), it evaluates conditions in order: if gross sales are greater than 10,000, it returns "High"; if greater than 5,000 but not over 10,000, it returns "Medium"; otherwise, it returns "Low".

## 6. Profit for Top Discount

Profit for Top Discount =  
CALCULATE(  
Financials[Profit Margin],  
Financials[Country]="Top"  
)

It calculates the **profit for Top Discount** based on their individual profitability. It uses CALCULATE the 'financials'[Profit Margin] for the countries which are top on profit.

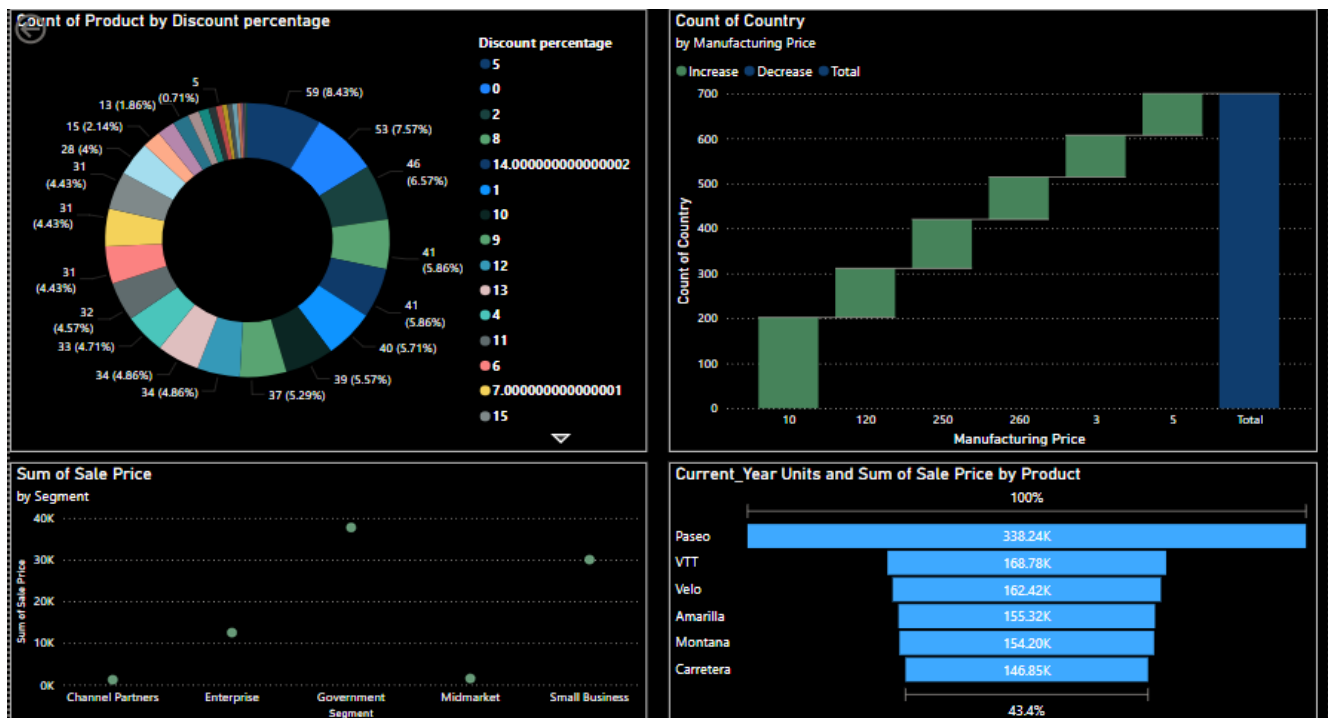
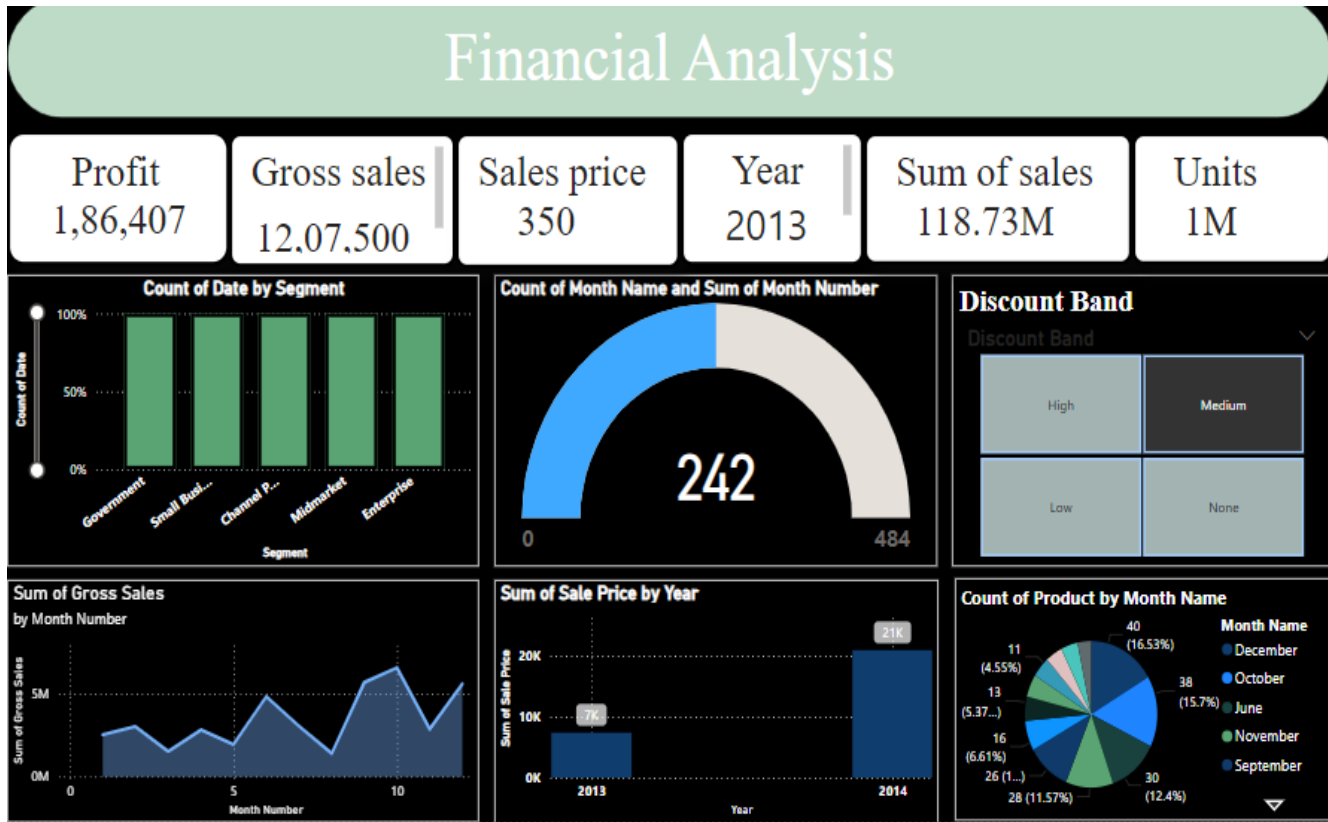
## 7. Profit Margin

Profit Margin =  
DIVIDE(financial[Total Gross Sales], financials[profit percentage], 0) \* 100

It calculates the Profit Margin by using the function Called Divide we required two parameters that Total Gross Sales and profit Percentage .

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# Report Views:



This Power BI dashboard provides a comprehensive **financial analysis**, showcasing key metrics like total sales, current and previous year units, discount percentage, and profit. It uses visualizations such as pie charts, bar charts, and line graphs to highlight **count of product by Month Name**, **count of Date by segment** and **sum of Sale Price by Year**. The data is further segmented by **sum of profit by Discounts** , **Discount band** and **count of month and sum of month number** offering insights into sales performance, profitability, and operational efficiency. Filters for **country** and **date range** enable dynamic data exploration.

## Conclusion:

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Financial analysis provides critical insights into the performance, profitability, and efficiency of a business. By examining metrics such as sales, profit, discounts, and trends over time, organizations can identify strengths, address weaknesses, and optimize strategies. It aids in informed decision-making, enhances resource allocation, and drives growth. A well-executed financial analysis ensures businesses stay competitive, adapt to market changes, and achieve their financial goals effectively.