

About Company

Kimia Farma is the first pharmaceutical industry company in Indonesia, founded by the Dutch East Indies government in 1817. Initially, the company's name was NV Chemicalien Handle Rathkamp & Co. Based on the nationalization policy of former Dutch companies in the early years of independence, in 1958, the Government of the Republic of Indonesia merged several pharmaceutical companies into PNF (Perusahaan Negara Farmasi) Bhinneka Kimia Farma. Then, on August 16, 1971, the legal status of PNF was changed to a limited liability company (Perseroan Terbatas), and the company's name was changed to PT Kimia Farma (Persero)

Problem Statement

A lack of centralized, data-driven insights makes it challenging for decision-makers to identify growth opportunities, optimize branch performance, and enhance product strategy.

By leveraging data analytics and visualization, this dashboard will enable Kimia Farma to detect sales trends, assess regional strengths and weaknesses, and uncover emerging opportunities for sustainable business growth

Goal

This project aims to develop a comprehensive interactive dashboard that visualizes key performance indicators (KPIs) such as total sales, regional performance, product category trends, and quarterly growth patterns. The objective is to provide business leaders with actionable insights to improve strategic planning, resource allocation, and market positioning.

Data Gathering

The dataset is obtained from Kimia Farma's internal data, sourced from four .csv files. It records sales transaction details, including customer information, products, pricing, discounts, and ratings.

Data Selection

The four available files were selected for analysis and imported to Google BigQuery using SQL for data preparation and dashboarding. The files include:

```
kf_final_transaction.csv  
kf_inventory.csv  
kf_kantor_cabang.csv  
kf_product.csv
```

Data Cleaning and Formatting

Only relevant columns were retained, and necessary merges were performed to consolidate the data into a single .csv file.

Additional computed columns include:

- **persentase_gross_laba:** The expected profit percentage based on the product price:

Price ≤ Rp 50,000 → 10% profit

Price > Rp 50,000 - 100,000 → 15% profit

Price > Rp 100,000 - 300,000 → 20% profit

Price > Rp 300,000 - 500,000 → 25% profit

Price > Rp 500,000 → 30% profit

- **nett_sales:** The final price after applying discounts.

- **nett_profit:** The profit earned by Kimia Farma.

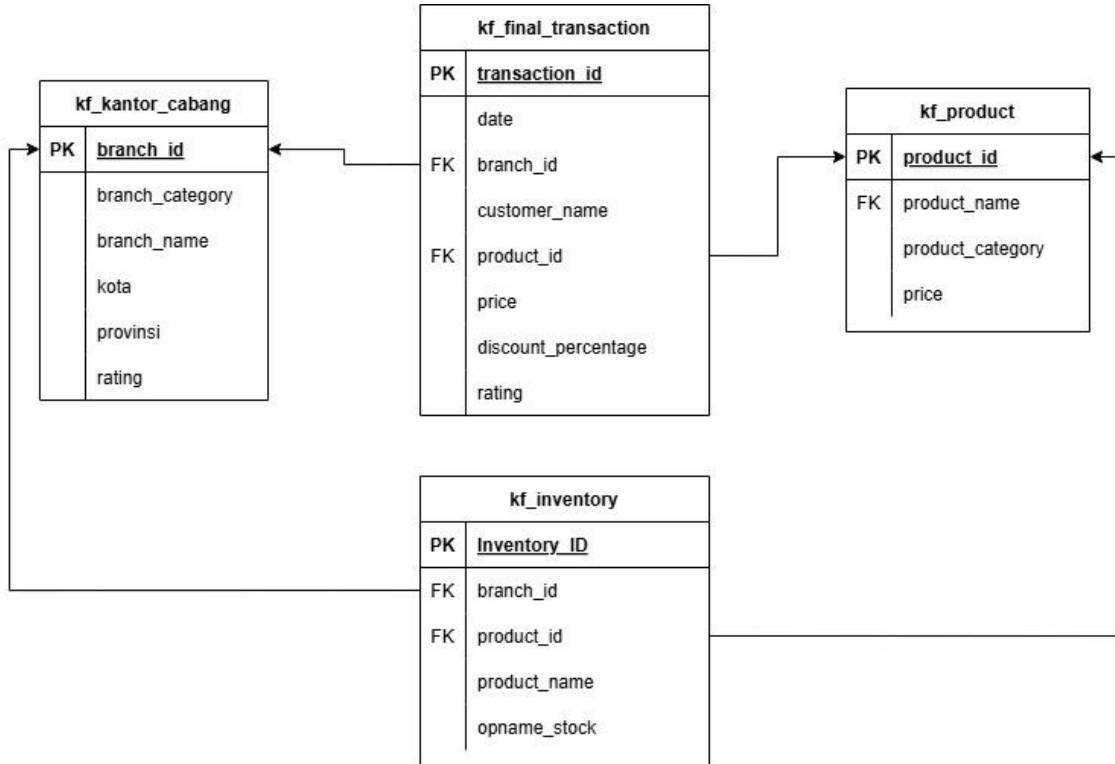
Importing to Looker Studio

The dataset is linked to Looker Studio, which supports Google BigQuery, enabling further analysis and visualization for dashboard creation.

Data Modelling

An Entity Relationship Diagram (ERD) was created to visualize the relationships among all tables and ensure proper data structure for analysis (image 1).

Image 1.



Analysis of Data

Now that all data preparation is done, its time for analysis of data

6.1 – Statistical Findings

Image 2.

Total Sales	Total Profit	Total Transactions
 Rp346.962B	 Rp98.540B	 672,458

The total sales from 672,458 transactions amounted to Rp 346.962 billion, generating a profit of Rp 98.540 billion

6.2 – Sales per Quarter

Image 3.



From Image 3, we can observe that the **lowest sales occurred in 2021**, totaling Rp 86.470 billion, while the **highest sales were recorded in 2022** at Rp 87.059 billion.

Image 4.



But if we look more specifics to chart that presents Total Sales per Quarter from Q1 2020 to Q4 2023. Here's an analysis based on the trend observed:

- The total sales per quarter exhibit fluctuations over the years without a strong upward or downward trend. The values remain within a relatively close range, around Rp 21.3 billion to Rp 21.98 billion.
- Lowest sales** Occurred in Q1 2021 at Rp 21.333 billion and **highest sales:** Recorded in Q1 2023 at Rp 21.983 billion.

- The first quarter of each year tends to have relatively higher sales. There is often a dip in Q2 or Q4, followed by a recovery in subsequent quarters. The variations are minor, with differences of less than Rp 1 billion between most quarters.

6.3 – Sales per Province and City

Image 5.

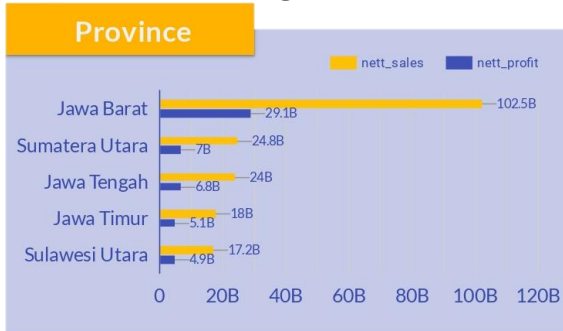
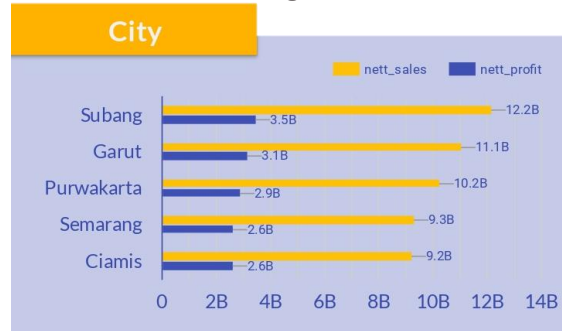


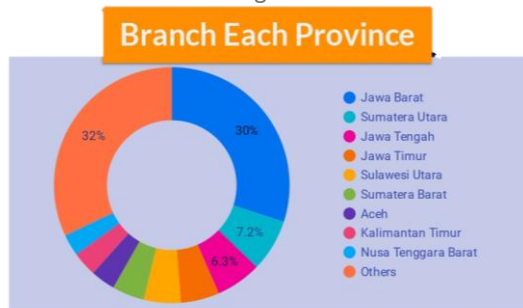
Image 6.



The top five provinces with the highest sales are **Jawa Barat, Sumatera Utara, Jawa Tengah, Jawa Timur, and Sulawesi Utara**, with Jawa Barat leading at Rp 102.5 billion. The difference between the highest (Jawa Barat) and the fifth-ranked (Sulawesi Utara) is Rp 85.3 billion, highlighting a significant concentration of sales in the top-performing provinces.

Notably, **four of the top five cities in sales are located within the highest-selling province** (Jawa Barat), while one city is situated in another top-performing province. This correlation further emphasizes the impact of branch distribution and regional economic activity on sales performance.

Image 7.



As shown in Image 7, the ranking of the top percentages of branch presence closely aligns with the top five provinces in sales, reinforcing the connection between branch availability and sales success.

6.4 – Product Sold

Image 8.



The pie chart in image 8 illustrates the distribution of different product categories, showcasing their respective share in total sales. The key takeaways from the data are:

- Leading Product Categories are Psycholeptic drugs (Hypnotics and sedatives) - 16.8%** **Psycholeptic drugs (Anxiolytic drugs) - 16.2%**
- Psycholeptic drugs (Hypnotics and sedatives) (16.8%) and Anxiolytic drugs (16.2%) together make up a large portion of sales.
- Other analgesics and antipyretics (13.2%) and Drugs for obstructive airway diseases (12.9%) are also major contributors.
- Antihistamines for systemic use (12.3%) and Other analgesics and anti-inflammatory drugs (10.3%) have smaller but still significant shares.

Insight

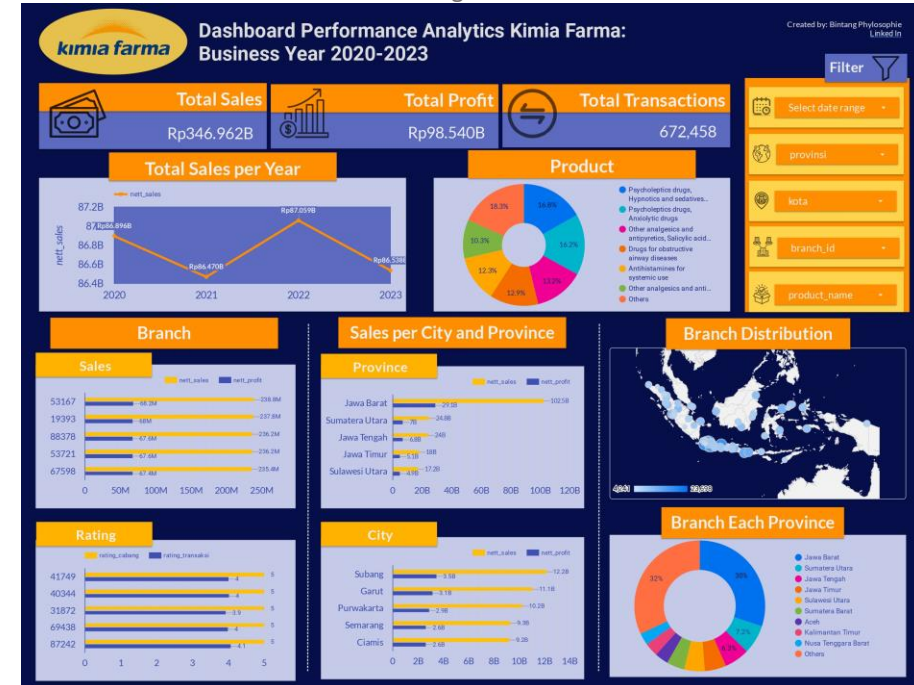
- Sales performance remains relatively stable over the observed period. While there are fluctuations per quarter, they are not significant enough to indicate a major trend shift.
- Mental health medications (**Psycholeptics and Anxiolytics**) together account for **over 33%** of total sales, indicating a growing market trend.
- The province with the highest sales is Jawa Barat, and four of the top five cities in sales are located within it. This also aligns with the top percentages of branch presence.

Recommendation

- The sales remain within a narrow range, expansion into new geographic regions, untapped customer segments, or online sales channels can drive additional growth.
- Explore customer needs and trends to develop value-added products that align with market demands.
- The product distribution indicates high demand for mental health suggests potential growth strengthen marketing efforts targeting mental health professionals, clinics, and pharmacies to increase market penetration.

Dashboard

Image 9.



More Further

- Created by:: **Bintang Phylosophie**

- To dashboard:



- To creator:



- To GitHub:

