

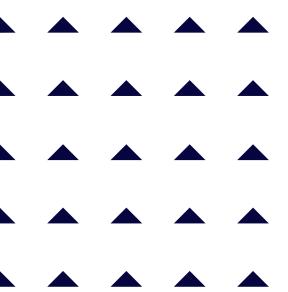
KIMIA FARMA BUSINESS PERFORMANCE

ANALYSIS YEARS 2020-2023

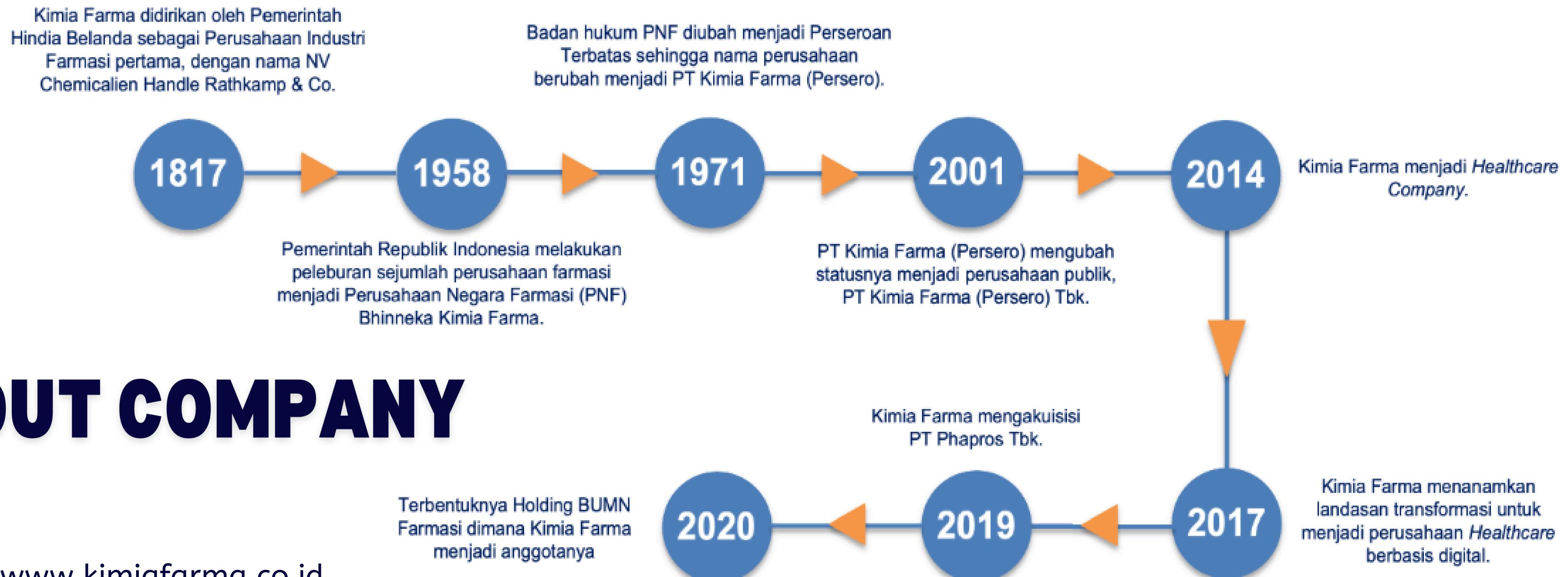
Kimia Farma - Big Data Analytics

Presented by Rani Eka Puspita





- Kimia Farma is a leading pharmaceutical company in Indonesia, established in 1971.
- Kimia Farma is involved in the production and distribution of pharmaceutical products, medical devices, and healthcare services such as pharmacies, clinical laboratories, and health clinics.
- The company is committed to supporting the health of the Indonesian community through innovative quality products and an extensive distribution network, with the vision of becoming the preferred healthcare company in Southeast Asia.



ABOUT COMPANY

PROJECT PORTFOLIO



Background

Kimia Farma is undertaking a project to evaluate its business performance from 2020 to 2023 through comprehensive data analysis. This project challenge is designed to enhance skills in big data analytics, SQL programming, and data visualization, ultimately contributing to the improvement of Kimia Farma's business performance.

Dataset

▼ [rakamin-kf-analytics-463418](#)

 ▼ [kimia_farma](#)

 ■ kf_final_transaction

 ■ kf_inventory

 ■ kf_kantor_cabang

 ■ kf_product

Problem Statement

- Importing Datasets into BigQuery
- Create Analysis Table
- Build a Business Performance Analysis Dashboard 2020-2023

Tools needed



Google
Big Query



Looker Studio

IMPORTING DATASET TO GOOGLE BIGQUERY

1. Create Project

rakamin-kf-analytics-463418

- Repositories
- Queries
- (Classic) Queries (10)
- Notebooks
- Data canvases
- Data preparations
- Pipelines
- External connections
- kimia_farma**

2. Create Dataset

3. Create Table

Create table

Source

Create table from _____
Upload

Select file *
kf_final_transaction.csv X Browse ?

File format
CSV

Destination

Project *
rakamin-kf-analytics-463418 Browse

Dataset *
kimia_farma

Table *
kf_final_transaction

Maximum name size is 1,024 UTF-8 bytes. Unicode letters, marks, numbers, connectors, dashes, and spaces are allowed.

Table type
Native table

Create table Cancel

Imported Dataset

kimia_farma

- kf_final_transacti...
- kf_inventory
- kf_kantor_cabang
- kf_product

CREATE ANALYSIS TABLE

kf_final_transaction

- transaction_id
- date
- branch_id
- customer_name
- product_id
- price
- discount_percentage
- rating

Total Data: 672.458

kf_inventory

- Inventory_ID
- branch_id
- product_id
- product_name
- opname_stock

**Total Data:
1.035.000**

kf_kantor_cabang

- branch_id
- branch_category
- branch_name
- kota
- provinsi
- rating

Total Data: 1.725

kf_product

- product_id
- product_name
- product_category
- price

Total Data: 150

BIGQUERY SYNTAX

1. create new table

```
1 CREATE TABLE `rakamin-kf-analytics-463418.kimia_farma.kf_salesperformance_analysis` AS
```

```
2 WITH kf_ft_laba AS (
```

2. Common Table Expression

```
3   SELECT * ,  
4     CASE  
5       WHEN price <= 50000 THEN 0.10  
6       WHEN price > 50000 AND price <= 100000 THEN 0.15  
7       WHEN price > 100000 AND price <= 300000 THEN 0.20  
8       WHEN price > 300000 AND price <= 500000 THEN 0.25  
9       ELSE 0.30  
10      END AS persentase_gross_laba,  
11      (price - (price * discount_percentage / 100)) As nett_sales  
12  FROM `rakamin-kf-analytics-463418.kimia_farma.kf_final_transaction`)
```

```
13 SELECT
```

5. Select clausa

```
14   ft.transaction_id,  
15   ft.date,  
16   kc.branch_id,  
17   kc.branch_name,  
18   kc.kota,  
19   kc.provinsi,  
20   kc.rating AS rating_cabang,  
21   ft.customer_name,  
22   p.product_id,  
23   p.product_name,  
24   ft.price AS actual_price,  
25   ft.discount_percentage,  
26   ft.persentase_gross_laba,  
27   ft.nett_sales,  
28   ft.nett_sales * ft.persentase_gross_laba AS nett_profit,  
29   ft.rating AS rating_transaksi
```

3. Gross Profit Percentage Calculation

4. nett sales Calculation

7. Combine data from three tables

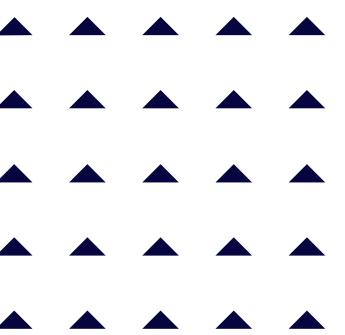
```
30   FROM kf_ft_laba AS ft  
31   JOIN `rakamin-kf-analytics-463418.kimia_farma.kf_kantor_cabang` AS kc  
32   ON ft.branch_id = kc.branch_id  
33   JOIN `rakamin-kf-analytics-463418.kimia_farma.kf_product` AS p  
34   ON ft.product_id = p.product_id
```

8. order data

```
35 ORDER BY ft.date ASC;
```

6. net profit calculations

BIGQUERY SYNTAX (RESULTS)



Row	transaction_id	date	branch_id	branch_name
1	TRX3248504	2020-01-01	92582	Kimia Farma - Apotek
2	TRX9756282	2020-01-01	43663	Kimia Farma - Klinik-Apotek-Lab..
3	TRX2604879	2020-01-01	48243	Kimia Farma - Klinik & Apotek
4	TRX2861898	2020-01-01	12174	Kimia Farma - Apotek
5	TRX9941602	2020-01-01	69958	Kimia Farma - Klinik & Apotek

kota	provinsi	rating_cabang	customer_name
Sibolga	Sumatera Utara	4.4	Susan Stevens DDS
Ambon	Maluku	4.0	Jeffrey Lutz
Tasikmalaya	Jawa Barat	4.1	Jay Mitchell

product_id	product_name	actual_price	discount_per...
KF162	Anti-inflammatory and antirheumatic products, non-steroids, Propionic acid derivatives	840200	0.01
KF162	Anti-inflammatory and antirheumatic products, non-steroids, Propionic acid derivatives	840200	0.0
KF223	Anti-inflammatory and antirheumatic products, non-steroids, Acetic acid derivatives and related	401700	0.15

persentase...	nett_sales	nett_profit	rating_transa...
0.3	840115.98	252034.794	3.0
0.3	840200.0	252060.0	3.0
0.25	401097.45	100274.3625	3.0

DASHBOARD

kimia farma

SUMMARY

PRODUCT ANALYSIS

CUSTOMER ANALYSIS

RESET

DOWNLOAD

Rakamin
By Rani Eka Puspita

PERFORMANCE ANALYTICS DASHBOARD SUMMARY I BUSINESS YEAR 2020 -2023

provinsi kota branch_name Select date range

Revenue

346.96B

Nett Profit

98.54B

Total Transactions

672.46K

Transaction Rating

4.00

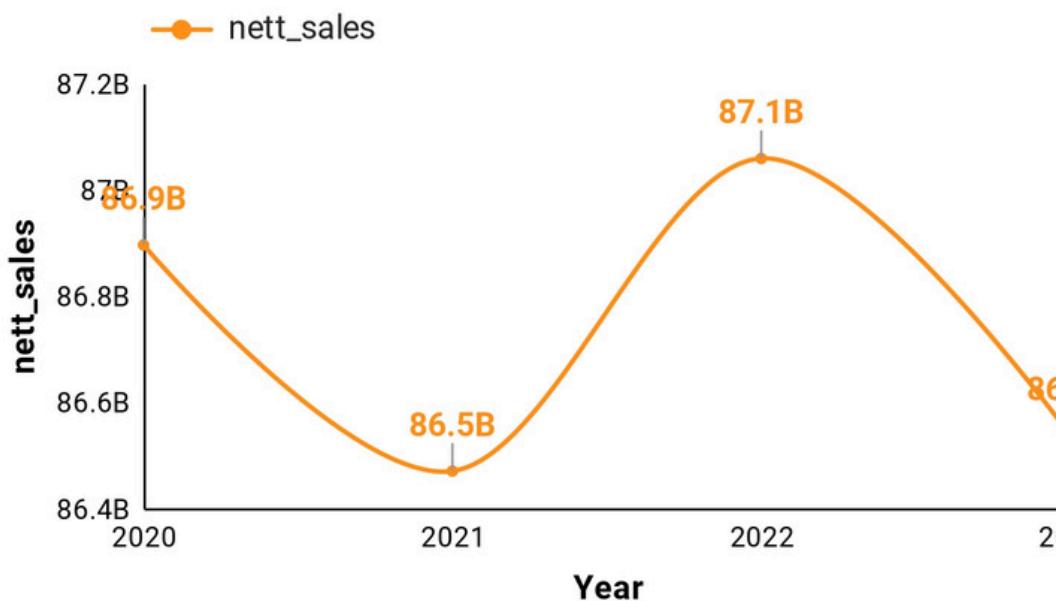
Total Branch

1.73K

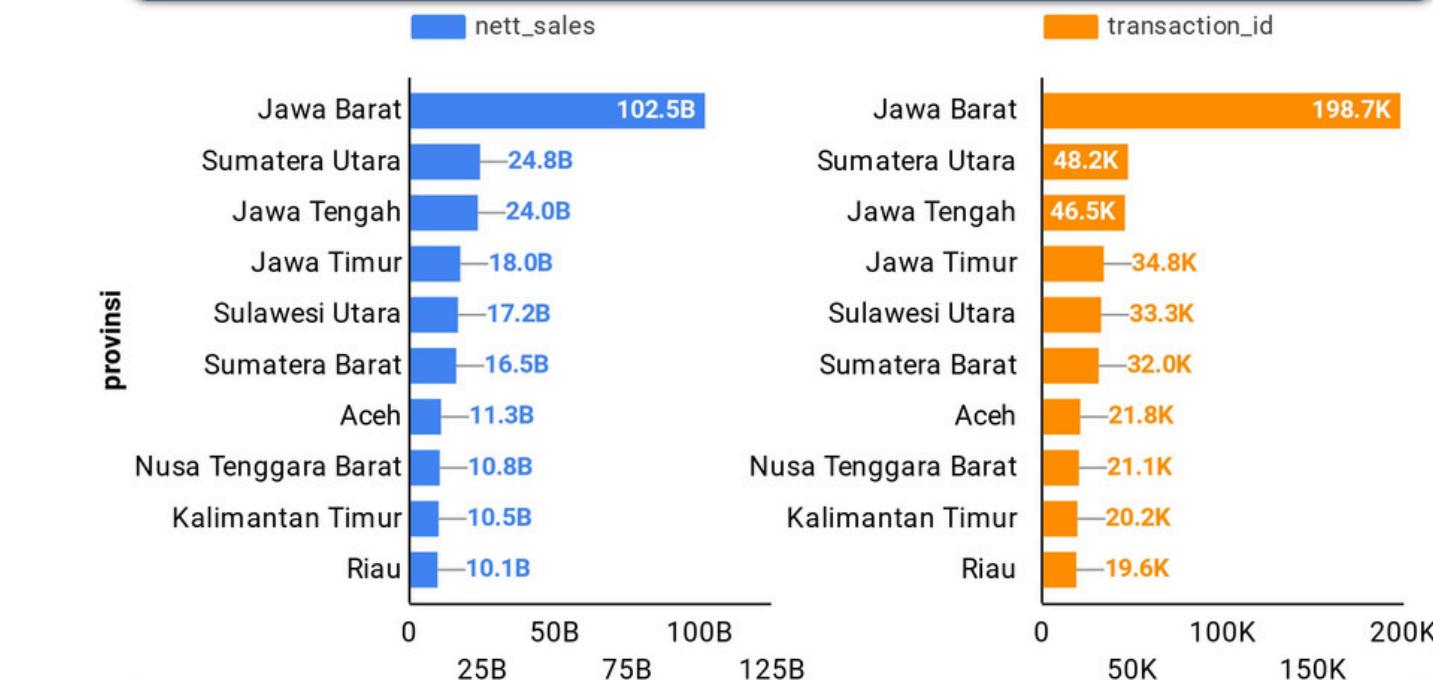
Branch Rating

4.45

Annual Revenue Growth Chart



Top 10 Province by Highest Sales & Transaction



Total Profit by Province (Geo Map)



nett_profit 619,155,804.45 29,104,802,788.15

DASHBOARD

kimia farma

SUMMARY

PRODUCT ANALYSIS

CUSTOMER ANALYSIS

RESET

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PERFORMANCE ANALYTICS DASHBOARD PRODUCT I BUSINESS YEAR 2020 -2023

provinsi ▾ kota ▾ product_id ▾ Select date range ▾

Nett Sales

346.96B

Nett Profit

98.54B

Total Product

150

Best Selling Product

KF519

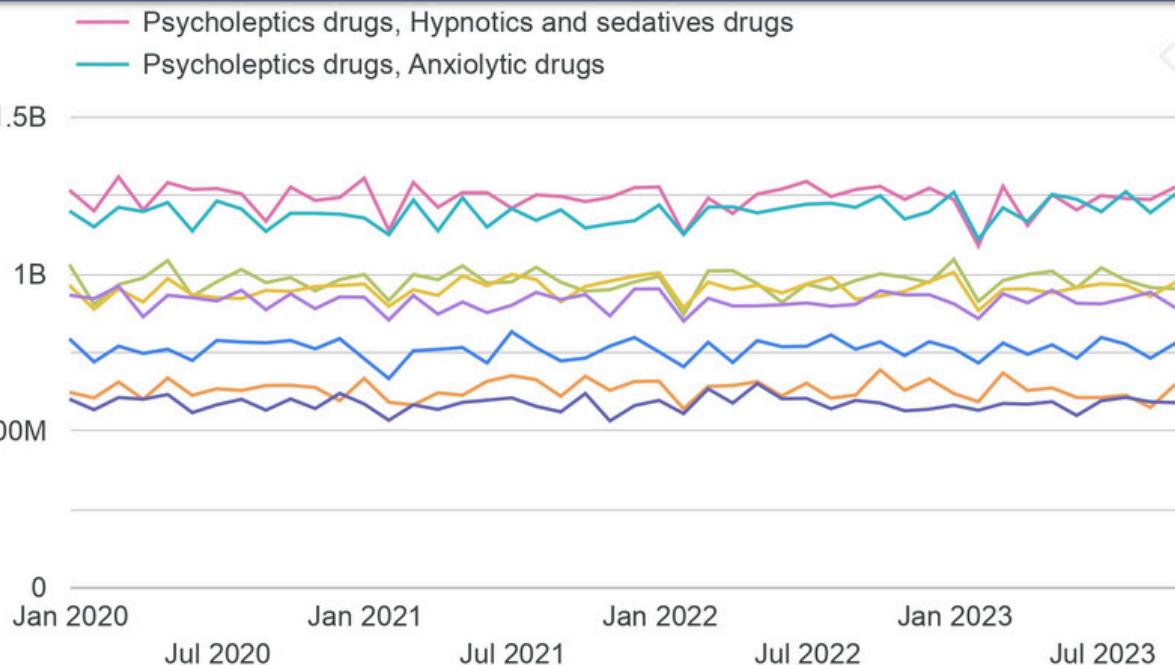
Discount Average

7.50%

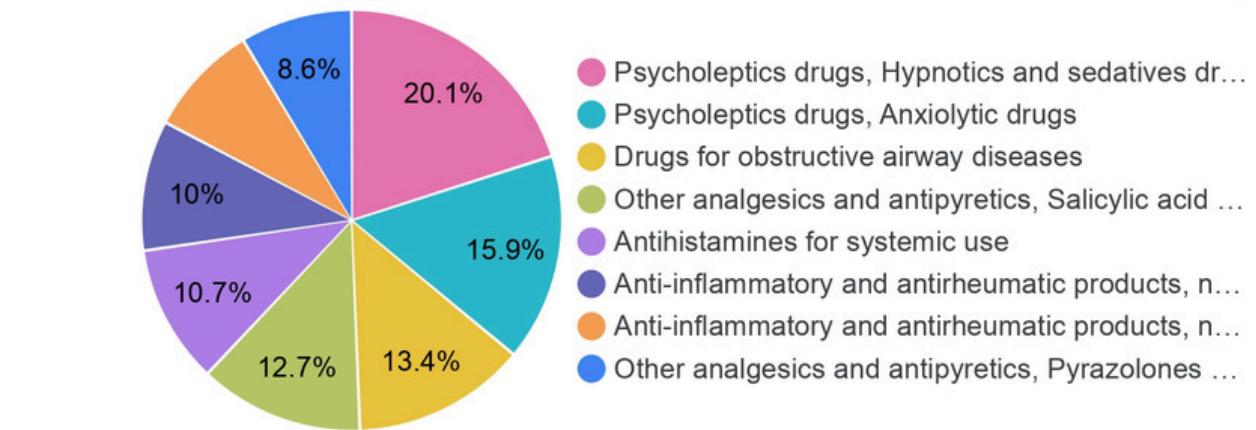
Total Transaction

672.46K

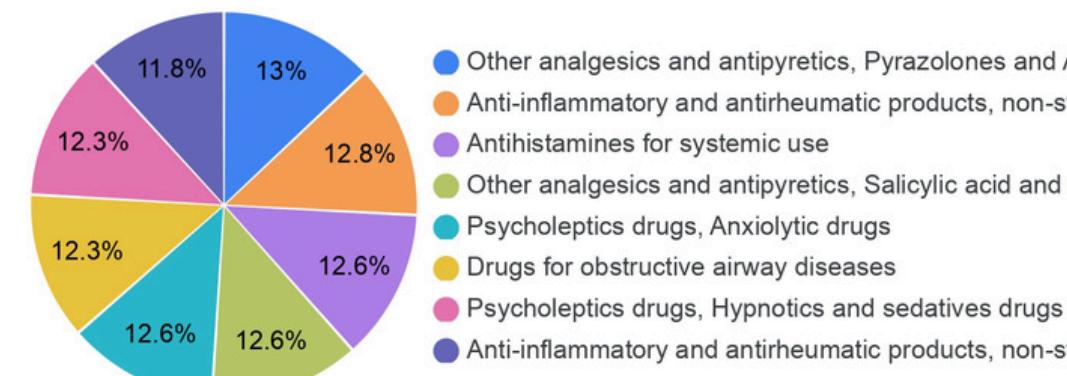
Product Sales Over Time



Sales Distribution by Product Category



Highest Margins by Product Category



product_name	product_id	transaction_id	nett_sales	nett_profit
1. Other analgesics and antipyretics, Pyrazolones and Anilides	KF519	4,608	2,884,294,066.00	865,288,219.90
2. Psycholeptics drugs, Hypnotics and sedatives drugs	KF262	4,590	687,050,584.50	137,410,116.90
3. Anti-inflammatory and antirheumatic products, non-steroids, Acetic acid derivatives and related substances	KF346	4,587	1,764,220,788.00	441,055,197.19
4. Other analgesics and antipyretics, Salicylic acid and derivatives	KF943	4,582	25,182,277.45	2,518,227.74
5. Other analgesics and antipyretics, Salicylic acid and derivatives	KF576	4,582	1,617,618,991.00	404,404,747.84

DASHBOARD

kimia farma

PERFORMANCE ANALYTICS DASHBOARD
CUSTOMER I BUSINESS YEAR 2020 -2023

provinsi ▾ kota ▾ branch_name ▾ Select date range ▾

Revenue 346.96B	Nett Profit 98.54B	Total Customer 264.60K	Basket Size Rp515.52K	Total Transaction 672.46K	Total Branch 1.73K
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SUMMARY

PRODUCT ANALYSIS

CUSTOMER ANALYSIS

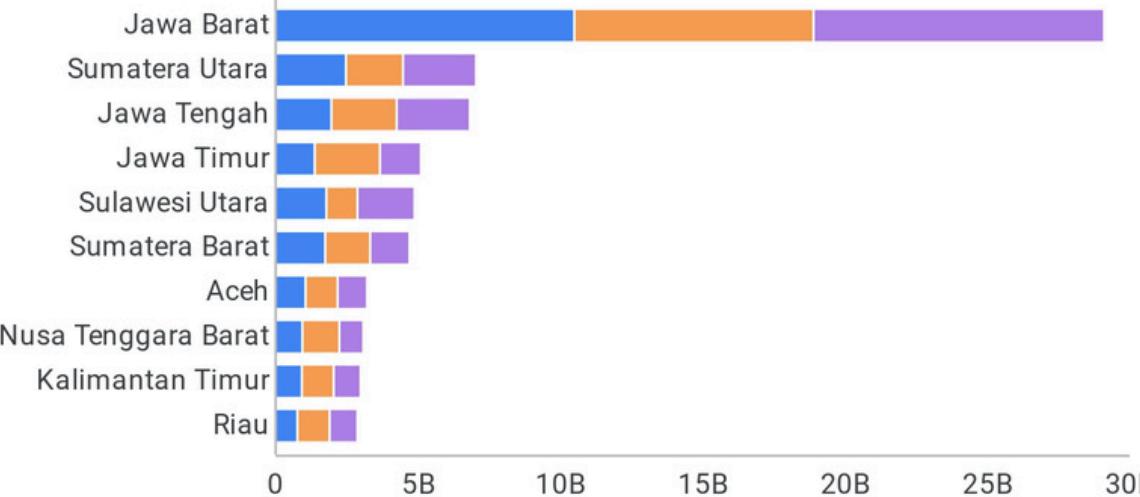
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Profit Distribution by Province and Branch

Kimia Farma - Apotek
Kimia Farma - Klinik & Apotek
Kimia Farma - Klinik-Apotek-Laboratorium



Top 5 Branch Highest Rating but Lowest Transaction Rating

branch_name	branch_id	kota	provinsi	rating_cabang	rating_transaksi
1. Kimia Farma - Apotek	14469	Purwokerto	Jawa Tengah	5	3.97
2. Kimia Farma - Apotek	84189	Ciamis	Jawa Barat	5	4
3. Kimia Farma - Klinik-Apotek-Laboratorium	18858	Surabaya	Jawa Timur	5	3.99
4. Kimia Farma - Klinik & Apotek	44691	Jambi	Jambi	5	3.98
5. Kimia Farma - Apotek	63942	Bandung	Jawa Barat	5	3.99

Top Customer Resume

customer_name	customer_segment	total_transactions	total_nett_sales
1. Michael Smith	Best Customers	316	161,821,378.37
2. Michael Johnson	Best Customers	219	110,273,580.51
3. David Smith	Best Customers	215	120,228,444.14
4. John Smith	Loyal Customers	198	105,848,894.61
5. James Smith	Best Customers	198	94,112,680.11

Customer Segmentation

All	At Risk Customers	Others	Loy...	Best...
At Risk Customers				

INSIGHT

1

Stable Business Performance but Decline Observed in 2021 and 2023

West Java Emerges as the Primary Contributor Kimia Farma recorded total sales of 346 billion with a profit of 98.5 billion, indicating a relatively profitable business. However, a decline in revenue was observed in 2023, which warrants further analysis.

2

West Java as the Main Contributor

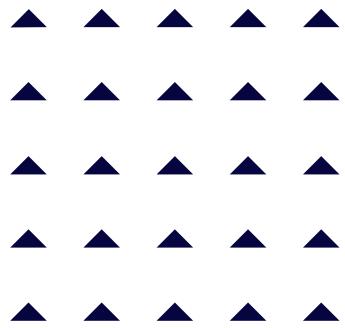
West Java recorded the highest profit, number of transactions, and sales, followed by North Sumatra and Central Java. Provinces with lower transaction volumes, such as Riau and East Kalimantan, could be targeted for expansion to improve business performance.



RECOMENDATIONS

- 1** Enhance marketing and distribution efforts in regions with low transaction volumes to expand market share.
- 2** Evaluate and improve service quality at branches with low ratings to elevate customer experience.
- 3** Optimize inventory management and marketing strategies for best-selling products to sustain sales growth

THANKS



LINK PROJECT

- Dashboard Looker Studio :
<https://lookerstudio.google.com/s/pscQE2pmtQo>
- Google BigQuery :
<https://console.cloud.google.com/bigquery?inv=1&invt=Ab1g4g&project=rakamin-kf-analytics-463418&ws=!1m0>

