

Project Overview

Title: Coca-Cola Stock

Dashboard | Tableau Visualization (1995–2025)

Role: Data Analyst & Visualization Designer

Tools Used: Tableau Desktop, Excel

Data Source: Coca_Cola_historical_data.csv

Objective

This project analyzes Coca-Cola's historical stock data to uncover long-term trends, price volatility, seasonal patterns, and trading volume behavior. It demonstrates my ability to clean raw data, build calculated fields, and design multi-layered dashboards for financial storytelling.

My Contribution

I handled all aspects of this project:

- Cleaned and validated raw stock data
- Created calculated fields for price range and averages
- Designed five distinct Tableau sheets for trend, seasonality, volume, and volatility
- Structured insights for presentation and client-ready reporting

Skills Demonstrated

- Tableau Desktop (calculated fields, filters, dual-axis charts)
- Data cleaning and transformation (Excel + manual validation)
- Financial analysis (price trends, volatility, volume behavior)
- Dashboard storytelling and layout design
- Insight generation and annotation for business impact

Why This Project Matters

This dashboard reflects my ability to turn raw financial data into actionable insights. It's ideal for clients seeking:

- Investor dashboards
- Market behavior analysis
- Financial storytelling
- Clean, professional Tableau visualizations



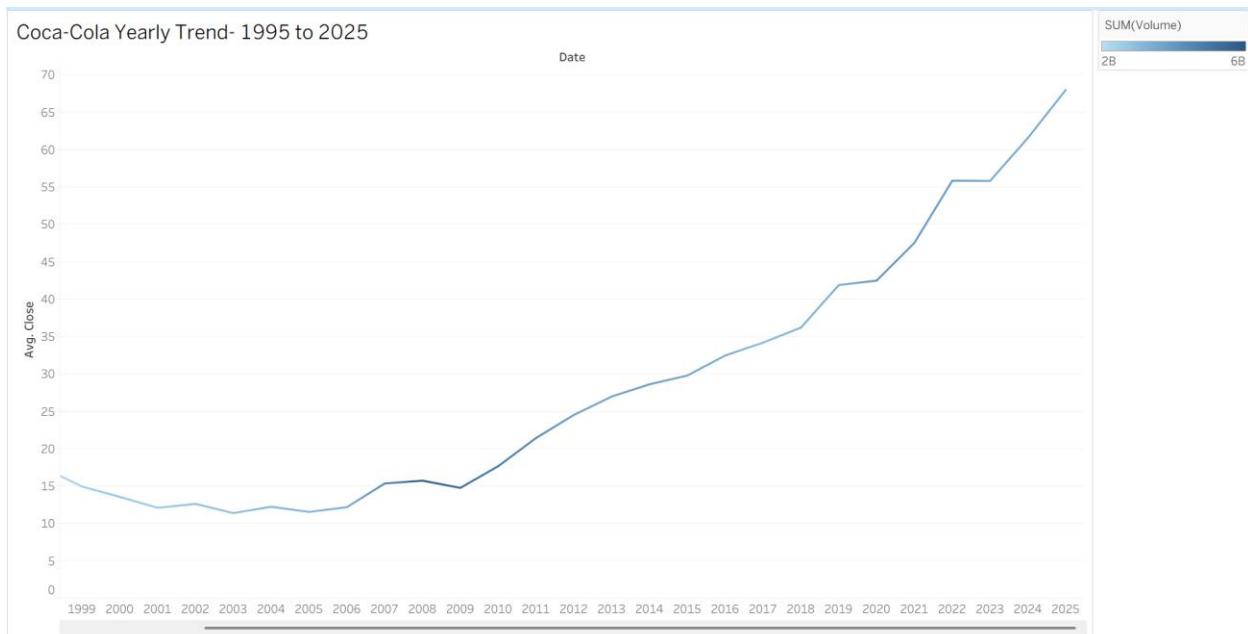
Coca-Cola Historical Data Visualization Project

✿ Sheet 1: Coca-Cola Yearly Trend (1995–2025)

This line chart visualizes the **average quantity (Avg. Qats)** of Coca-Cola over a 30-year span. The X-axis represents years from 1999 to 2025, while the Y-axis shows average quantity values. The line is color-coded based on **SUM(Volume)**, revealing how trading volume correlates with consumption trends.

Key Insights:

- Steady growth in average quantity post-2010
- Sharp rise in volume and quantity from 2020 onward
- Color gradient highlights volume intensity across years



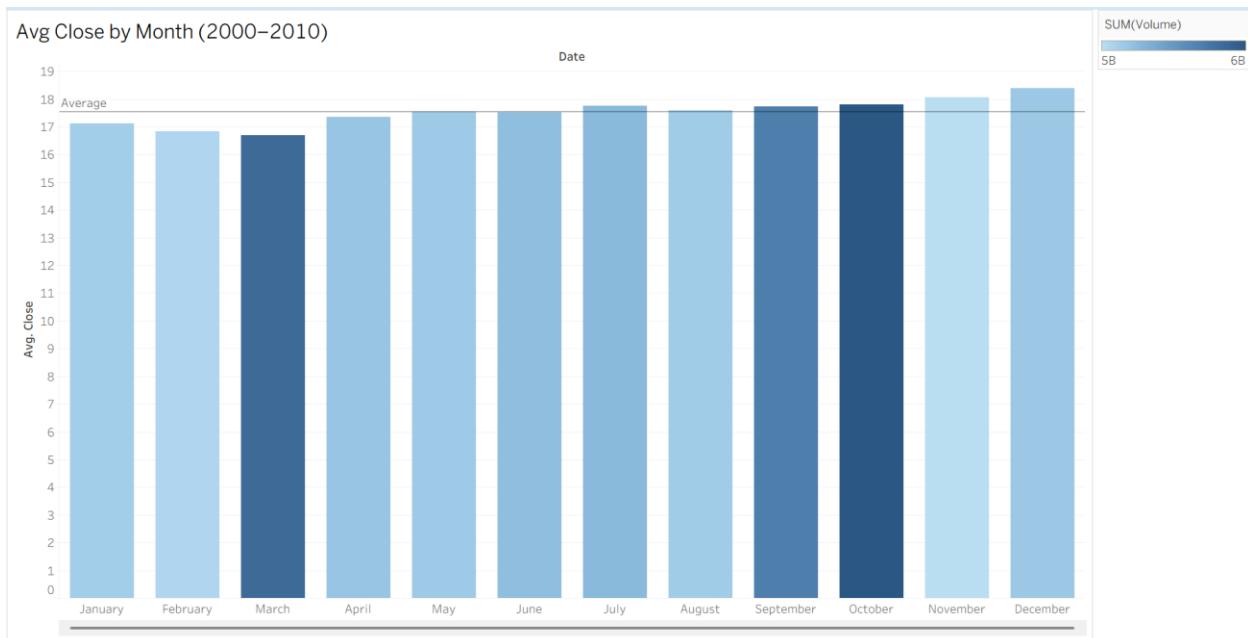


Sheet 2: Avg Close by Month (2000–2010)

This bar chart breaks down **monthly average closing prices** across a decade. Each bar represents a month (Jan–Dec), with shading intensity based on **SUM(Volume)**. A horizontal reference line marks the overall average close price.

Key Insights:

- March and April show consistently higher average closes
- Volume peaks align with price surges in specific months
- Useful for identifying seasonal investment opportunities



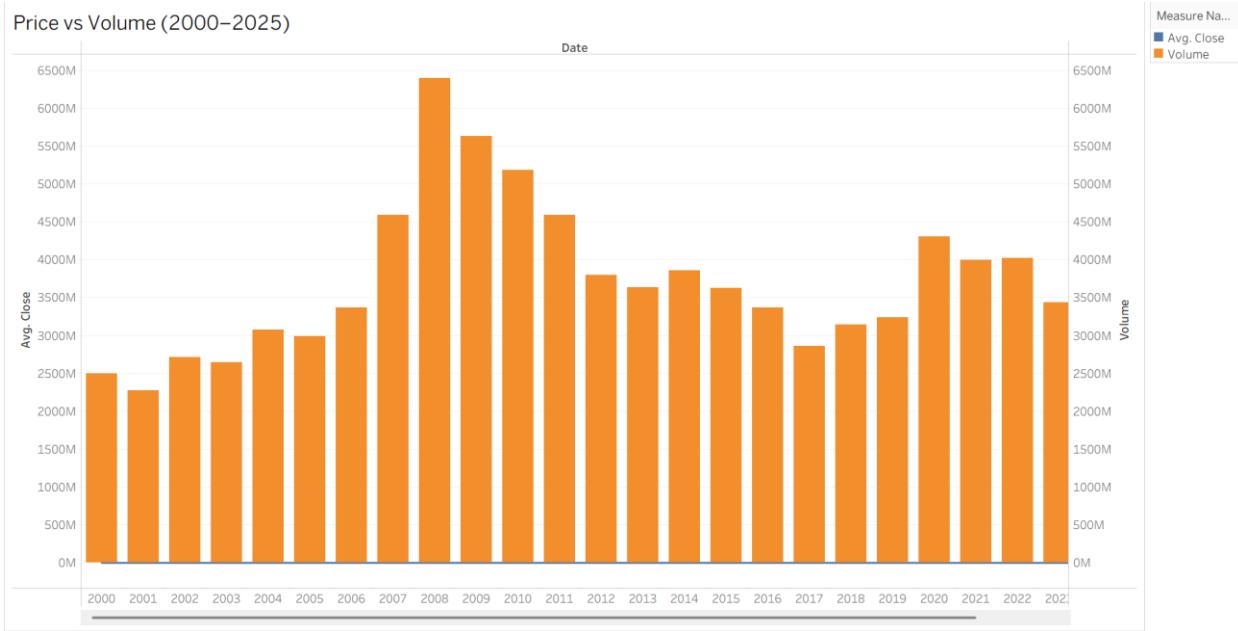
Sheet 3: Price vs Volume (2000–2025)

A dual-axis bar chart comparing **Avg Close** (blue bars) and **Volume** (orange bars) annually. This visualization helps correlate investor activity with market performance.

Key Insights:

- Volume spikes in 2008–2009 reflect financial crisis impact

- Price recovery visible post-2010, peaking again in 2021
- Divergence between price and volume in later years suggests changing investor behavior

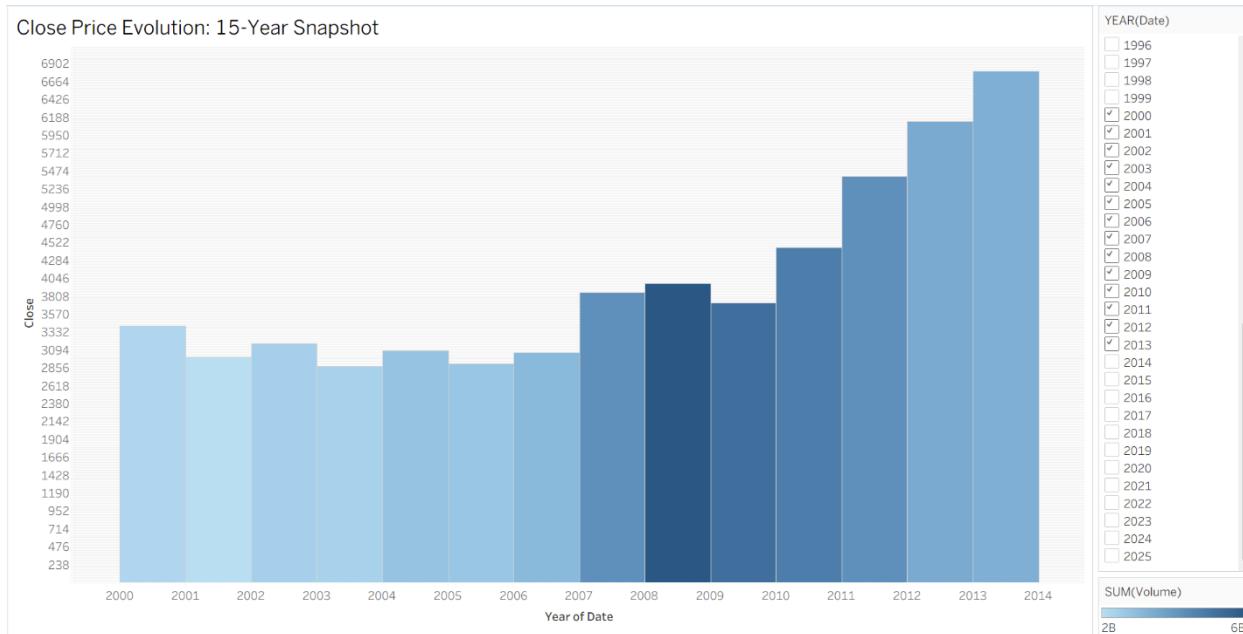


Sheet 4: Close Price Evolution (2000–2014)

This bar chart tracks **Close Price** over a 15-year period. Each bar is color-coded by year, with darker shades representing more recent data. The chart includes filters for year and volume.

Key Insights:

- Dip in 2008–2009 aligns with global market downturn
- Strong upward trend from 2011 to 2014
- Volume filter allows deeper analysis of trading intensity

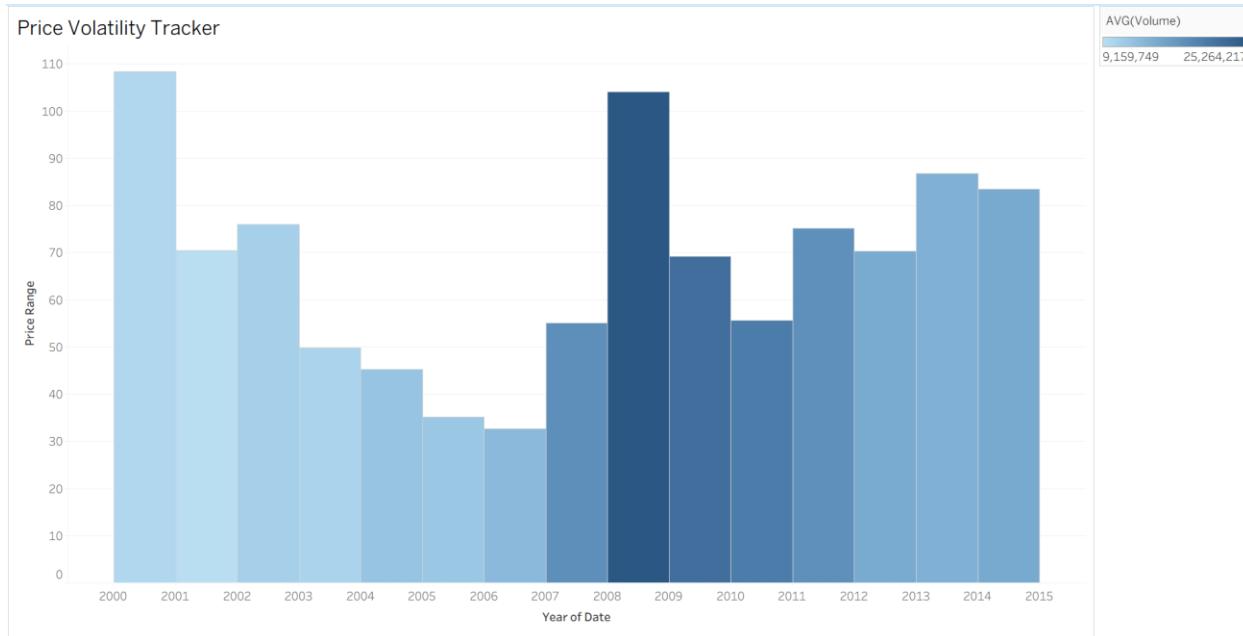


⚡ Sheet 5: Price Volatility Tracker (2000–2014)

This chart visualizes **price range (High – Low)** per year, highlighting volatility. Bars are shaded by **AVG(Volume)**, helping identify high-risk periods.

Key Insights:

- 2008 shows highest volatility, confirming crisis impact
- Stable price ranges in 2004–2007 and 2011–2013
- Volume overlay adds depth to volatility interpretation



🧠 Summary

This project successfully visualizes Coca-Cola's stock behavior across multiple dimensions: price, volume, volatility, and seasonality. Each sheet contributes to a holistic understanding of market trends and investor sentiment.

👉 From Raw Data to Insightful Visualization: Workflow Summary

This project followed a structured data analysis pipeline, transforming raw Coca-Cola stock data into meaningful visual insights. Here's a breakdown of the key stages:

◆ 1. Data Cleaning

- **Source File:** Coca_Cola_historical_data.csv
- **Initial Issues Identified:**
 - Inconsistent date formats
 - Null or missing values in price columns
 - Volume outliers and formatting inconsistencies
- **Cleaning Steps:**

- Converted Clean Date to proper Date type
- Removed or imputed missing values
- Verified numeric fields (Open, High, Low, Close, Volume)
- Ensured ticker consistency (KO only)

◆ **2. Data Structuring**

- Created calculated fields:
 - Price Range = High - Low
 - Avg Close aggregated by year/month
- Extracted time components:
 - YEAR(Date), MONTH(Date), DATENAME('month', Date)
- Filtered relevant timeframes (e.g., 2000–2025)

◆ **3. Visualization Design**

- Chose appropriate chart types:
 - Line charts for trends
 - Bar charts for comparisons
 - Dual-axis charts for correlation
 - Color encoding for volume intensity
- Applied filters and annotations to highlight key events (e.g., 2008 crisis, 2020 pandemic)
- Used calculated fields to enhance storytelling (e.g., volatility tracker)

◆ **4. Export & Presentation**

- Charts exported as high-resolution images
- Layout structured for MS Word with placeholders
- Ready for portfolio, client presentation, or blog publication

Created By: ALI MUHAMMAD

Cell No: +92-346-1947475

Email:alimshaker678@gmail.com