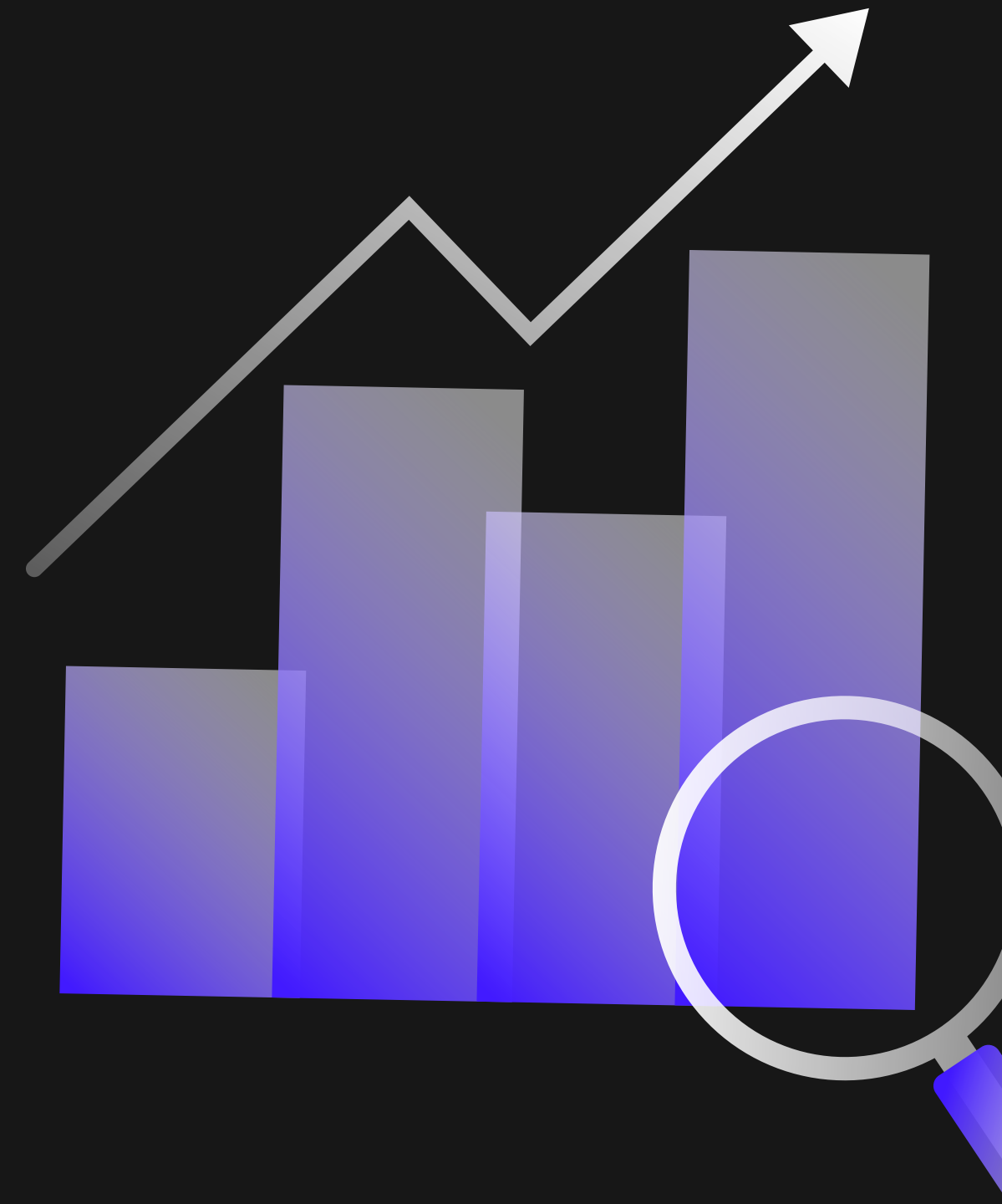# STOCK MARKET DASHBOARD ANALYSIS

Uncovering Trends, Returns, and Volatility through Power BI

Stocks: AAPL, GOOG, MSFT, NFLX
Tools: Excel, Power BI, Canva
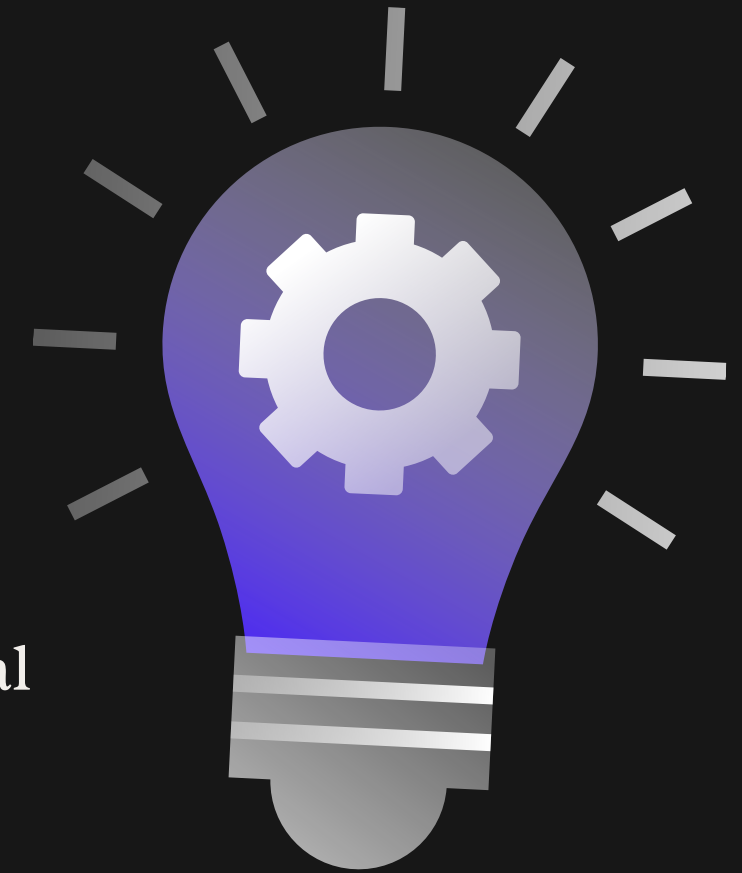Time Period: Feb–Apr 2023
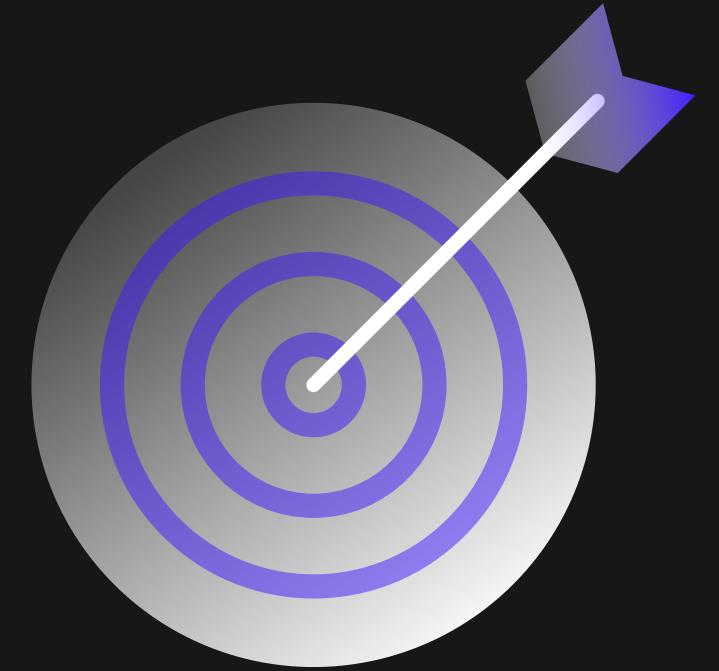
Presented By: Pragya Dodrajka

Introduction

In the world of finance, data holds the key to smarter investment decisions. This project analyzes stock price movements, volatility, and returns of 4 global giants — Apple, Google, Microsoft & Netflix — to spot patterns, risks, and investment insights using data visualization.

Purpose:

- Explore price trends, daily movements, and returns

- Analyze volatility to assess investment risk

- Compare performance between tech giants

Problem Statement

- Stock market prices fluctuate daily due to various external and internal factors.

- Investors need clear visual insights to track stock trends and performance.

- Comparing multiple tickers manually can be time-consuming and inefficient.

- This project analyzes AAPL, GOOG, MSFT, and NFLX stock data from Feb–Apr.

- The goal is to identify trends, measure volatility, and compare returns using an interactive dashboard.
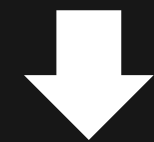
Tools & Software Used

Excel
- Data preparation
- Derived metrics: Price Change, % Change, Volatility
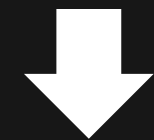
Power BI
- Dashboard creation
- Slicers, KPIs, interactive visuals

Canva
- Used for crafting a professional and clean presentation
- Enhanced slide design for better readability and storytelling

.CSV

Power BI

Canva

Datasheet Overview

Field Name Description
- Date → Trading day
- Ticker → AAPL, GOOG, MSFT, NFLX
- Open, High, Low → Intraday price range
- Close → End-of-day stock price
- Volume → Number of shares traded

Derived Columns Created:
- Price Change & % → Day's gain/loss
- Volatility → High–Low range %
- Daily Avg. Price → Mean of OHLC
- 7-Day Moving Avg. → Smoother trendline
- Date Updated Fields → Weekday, Month, Year

Calculation Sheet & Metrics

01. Price Change & % Change:

Close - Open, (Close - Open)/Open * 100

→ Tracks daily return and market direction.

02. Volatility:

High - Low

→ Measures daily price fluctuation.

03. Daily Average Price:

(Open + High + Low + Close)/4

→ Smoothened daily price for trend smoothing.

04. 7-Day Moving Average (DAX in Power BI):

Moving Avg = AVERAGEX(LASTN(7, Table), Table[Close])

→ Helps identify medium-term price trends.

Key Performance Indicators (KPIs)

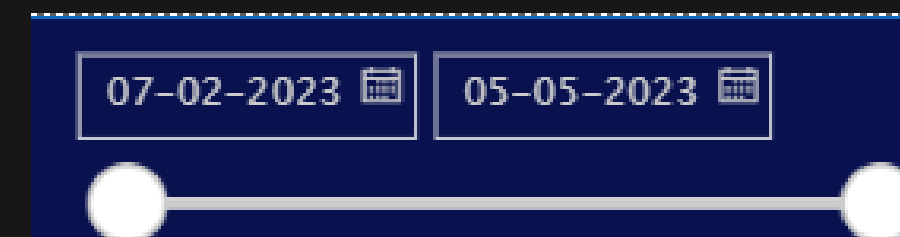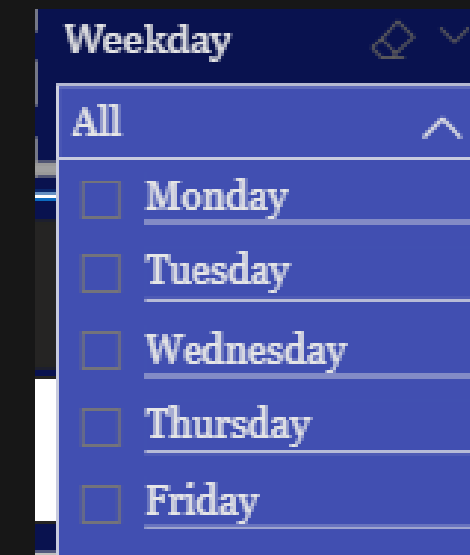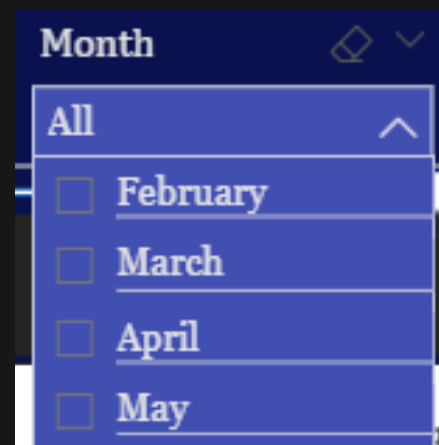| 322.76	-11.07	32.08..	18.64	1.61
Latest Closing Price	Total Return %	Average Volume	Max Volatility	Latest Daily Return %

- Latest Closing Price – Shows the most recent close price per stock

- Total Return % – % gain or loss from Feb to Apr

- Average Volume – Indicates average trading volume for each ticker

-

- Max Volatility – Captures the highest volatility observed

- Latest Daily Return – Daily return for the most recent date in data

Dashboard Slicers

Filter Panel for Custom Analysis

AAPL | GOOG
MSFT | NFLX

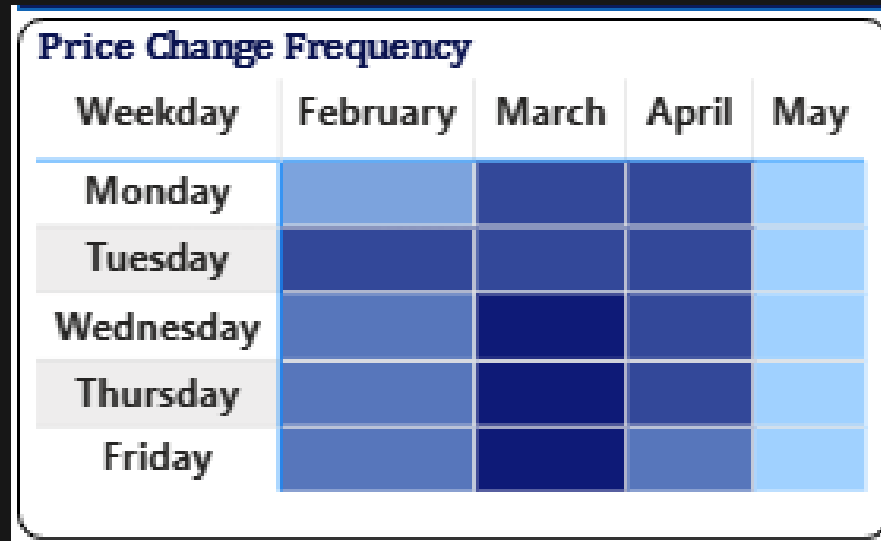- Ticker – AAPL, GOOG, MSFT, NFLX

- Month – February, March, April

- Weekday – Monday to Sunday

- Date – Full range slicer to view daily insights

Weekday

All

☐ Monday
☐ Tuesday
☐ Wednesday
☐ Thursday
☐ Friday

Month

All

☐ February
☐ March
☐ April
☐ May

07-02-2023 📅 | 05-05-2023 📅

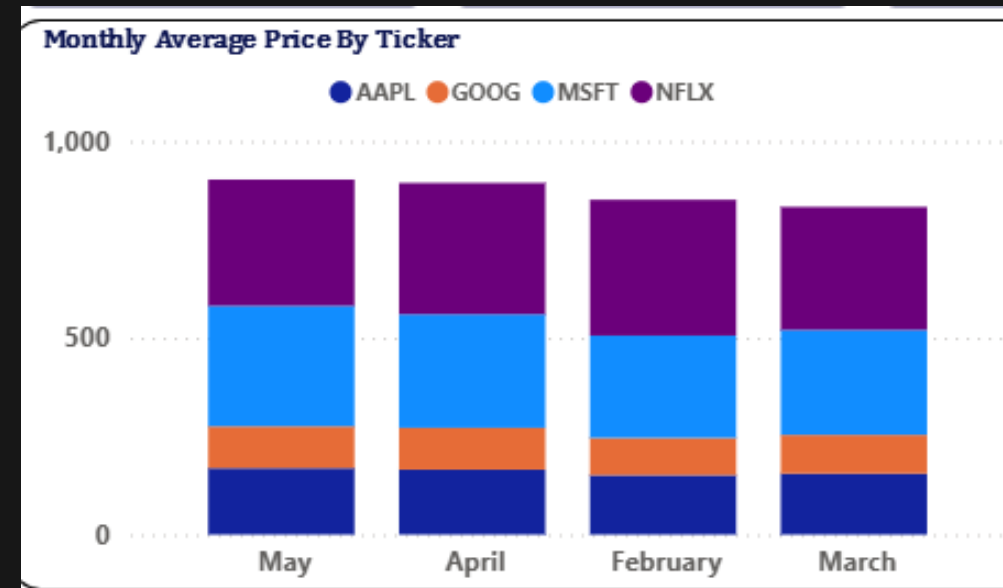# Visuals on Price Trends

PAGE 1: PRICE TRENDS

01.

Price Change Frequency

- Heatmap – Weekday × Month (Price Change Count)

- • Most price activity occurred in March Fridays.

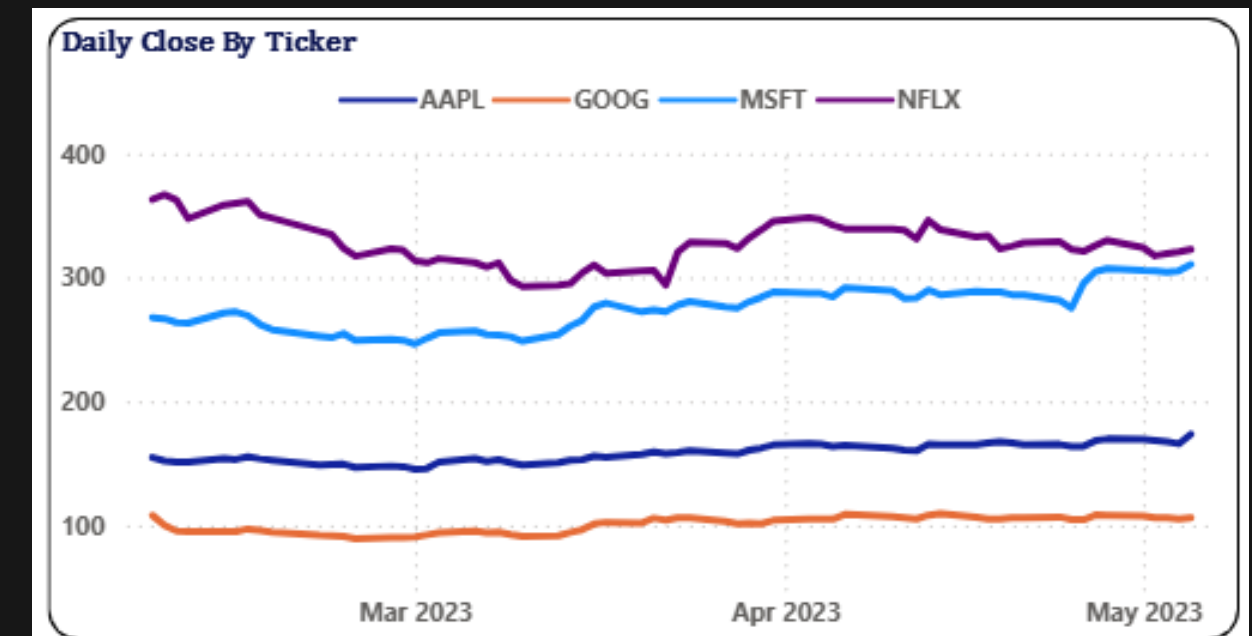- • Reflects higher volatility and trading interest during that period.

02.

Monthly Average Price By Ticker

- Column Chart – Monthly Avg. Close by Ticker

- • MSFT had the highest average close prices.

- • NFLX showed the lowest among all.

03.

Daily Close By Taker

- Line Chart – Daily Sum of Close Price by Date

- MSFT and NFLX fluctuated more than AAPL and GOOG.

- AAPL and GOOG maintained price stability.

Visuals on Price Trends

04.

Daily Stock Candlestick Chart

- Candlestick Chart – Daily Price Movement

- MSFT showed upward momentum on most days.

- NFLX candles reflected erratic price swings.
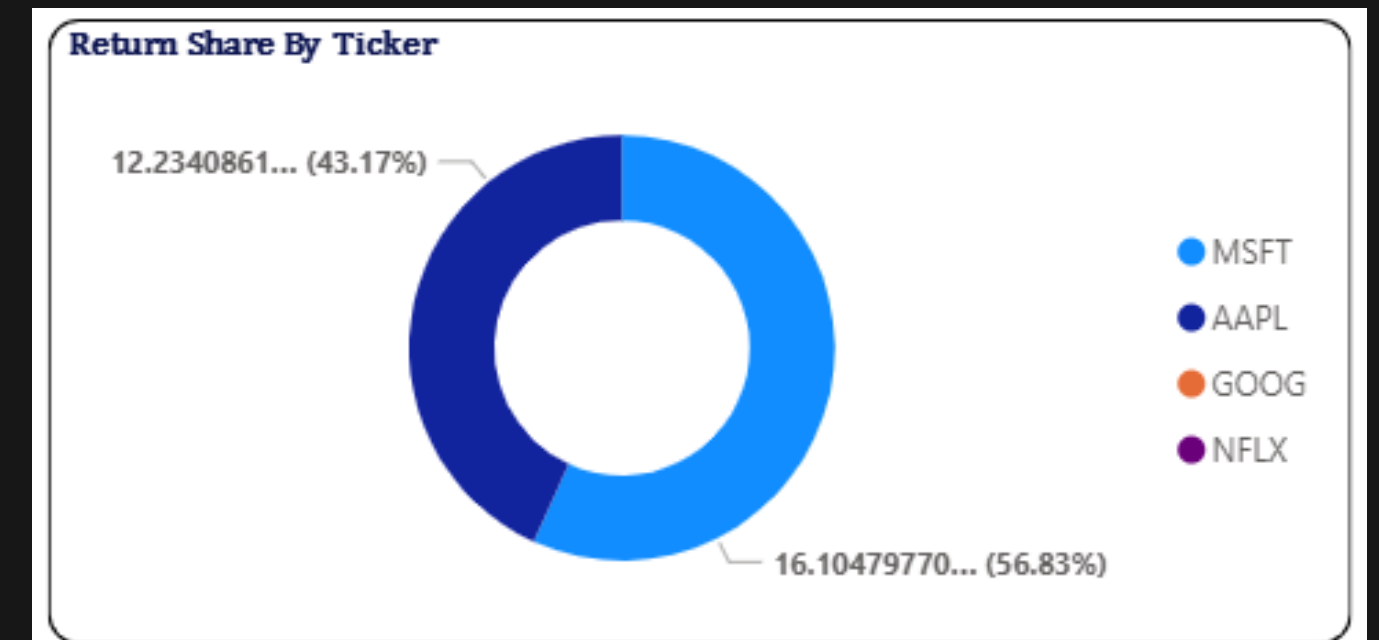
Visuals on Returns & Trends

01.

Price Vs 7 - Day Average

- Heatmap – Weekday × Month (Price Change Count)

- • Most price activity occurred in March Fridays.

- • Reflects higher volatility and trading interest during that period.
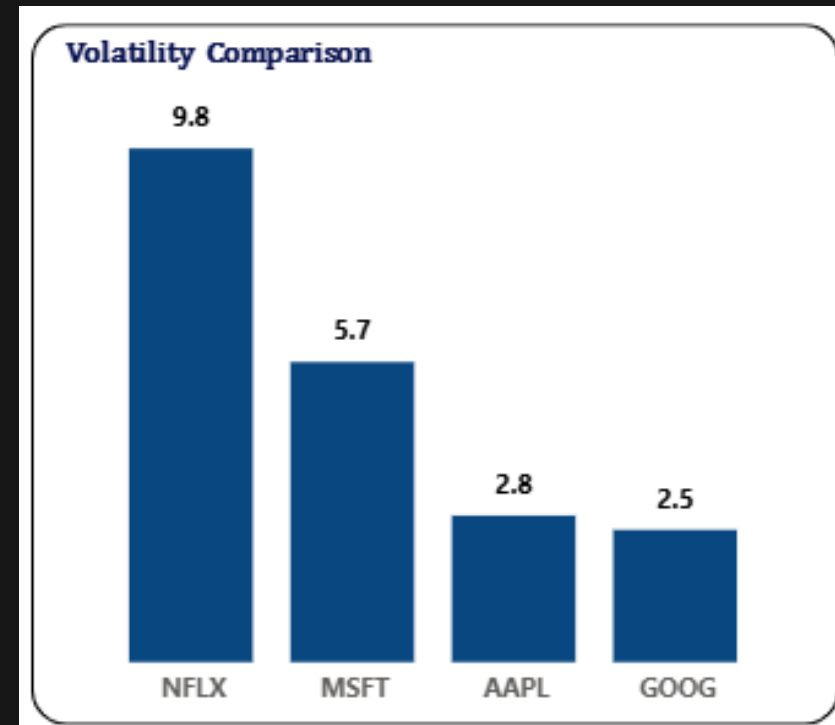
02.

Return share By Ticker

- Pie Chart – Total Return % by Ticker

- MSFT led with the highest returns.

- NFLX had negative returns, indicating underperformance.

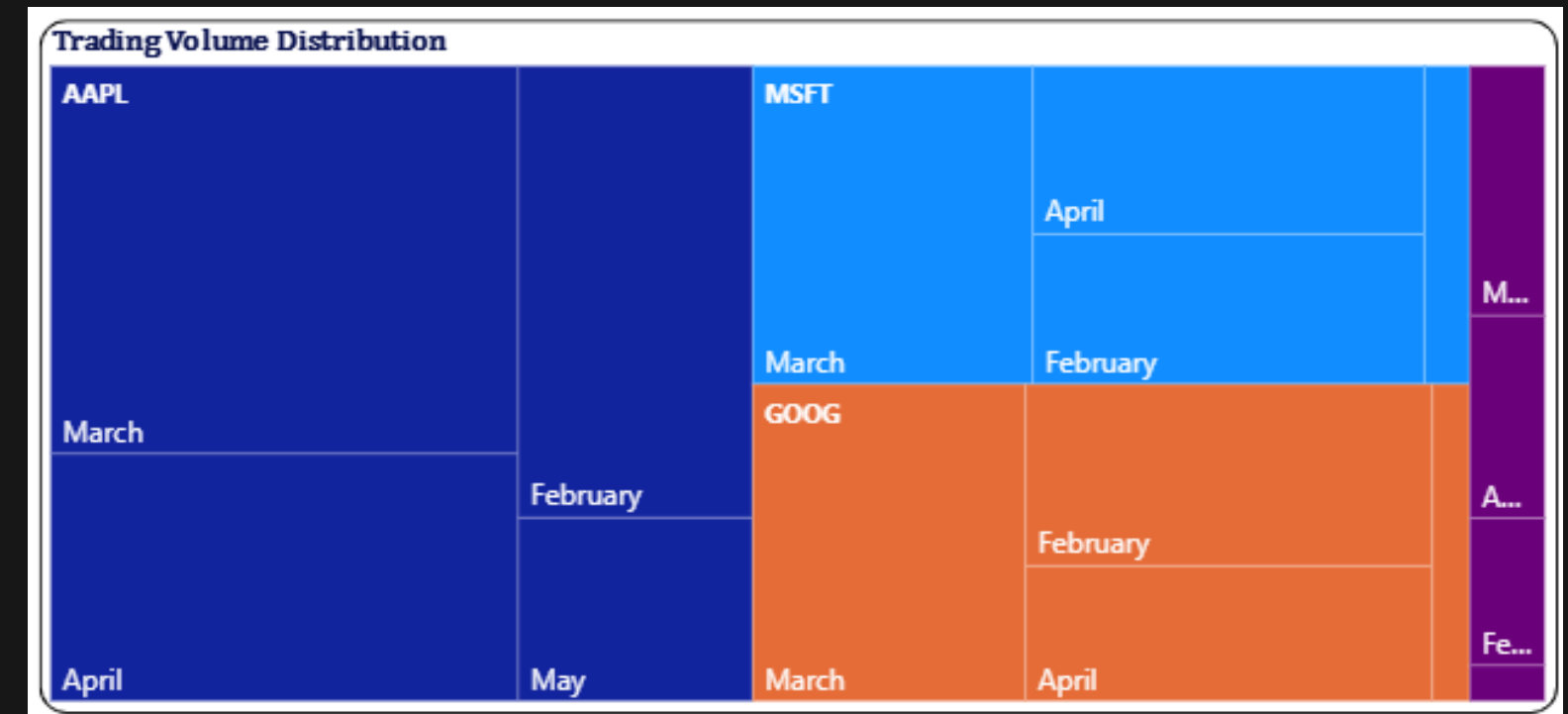# Visuals on Returns & Trends

PAGE 2: RETURN & INSIGHTS

03.

Volatility Comparison

- Column Chart – Average Volatility by Ticker

- NFLX was the most volatile, suggesting higher risk.

- AAPL and GOOG were comparatively stable.

04.

Trading Volume Distribution

- Candlestick Chart – Daily Price Movement

- MSFT showed upward momentum on most days.

- NFLX candles reflected erratic price swings.

Final Learnings & Strategic Insights

Final Learnings

- MSFT showed consistent performance with stable returns.

- NFLX had high volatility and the most negative return.

- March stood out with overall positive returns across tickers.

- AAPL recorded the highest trading volume.

- GOOG remained the most stable with minimal movement.

Strategic Insights

- Diversify between stable and volatile stocks for balanced portfolios.

- Use 7-day moving averages to smooth short-term price noise.

- Analyze volume patterns to gauge market interest.

- Track daily returns for agile investment decisions.

- Review monthly trends to adjust trading strategies ahead of time.

Thank You!!