Project Title: Rate Scraper

Executive Summary & Scope

The Rate Scraper automates the end-to-end process of collecting, compiling, and formatting the latest interest rate data from three external sources:

- FRED (Federal Reserve Economic Data) API for Treasury rates

- CME (Chicago Mercantile Exchange) website for SOFR term rates

- FHLB (Federal Home Loan Bank of Boston) website for downloadable Excel rate sheets

Automated browser interaction via playwright and chromium to reliably extract web-based rate data from CME and FHLB without user intervention. The script fetches the latest available data, formats it into a standardized table, and exports a professional Excel report (with PDF conversion) for internal distribution.

Benefits and Potential Gain(s)

The prior solution used Alteryx, which required:

- Manual preparation of historical rate files in Excel

- Complex and fragile workflows prone to user error

Benefits of the New Approach:

- **Fully Automated** – No manual input or file prep required

- **Faster Execution** – End-to-end in under a minute

- **Reliable and Repeatable** – Consistent results across runs

- **Secure & Auditable** – API-based pulls and timestamped exports

Deliverable(s)

Daily PDF Rate Report

Process Flow:

Start Rate Scraper

FETCH FRED DATA FROM API

FRED
ECONOMIC DATA | ST. LOUIS FED

https://api.stlouisfed.org/fred/series/observations[WGS1YR,GS1,WGS3YR,WGS5YR]

FHLB DATA

Playwright

Download FHLB Excel Rate sheet via Playwright automated browser
https://www.fhlbboston.com/fhlbank-boston/rates#/long-term

CME DATA

Playwright

Scrape CME DATA via Playwright automated browser
https://www.cmegroup.com/services/sofr-strip-rates

Write Rates to
Excel/PDF