



# Econ 2

# Principles of Macroeconomics

## Lecture 18:

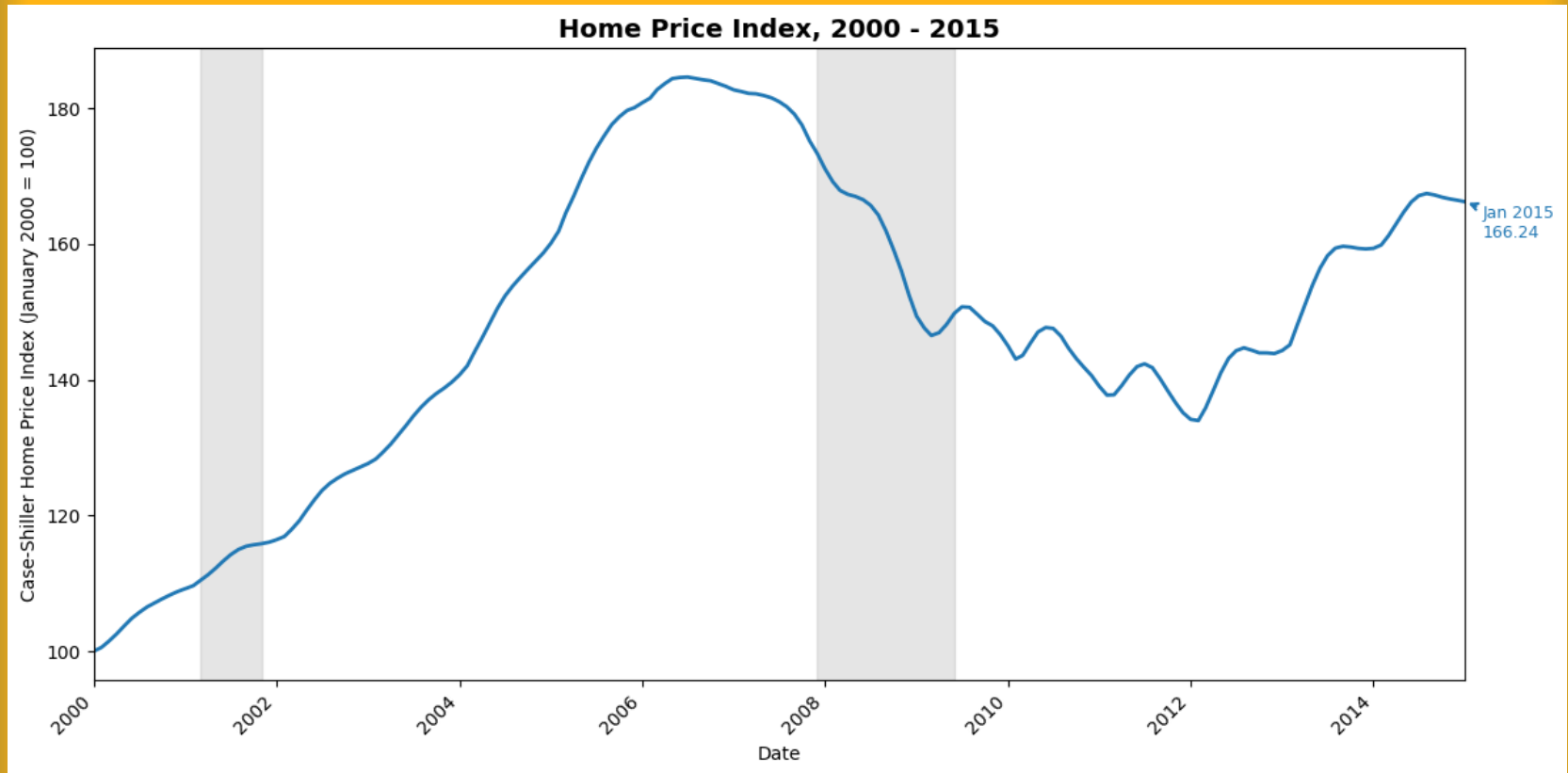
## Aggregate Demand/Aggregate Supply

# Shocks to the Macroeconomy

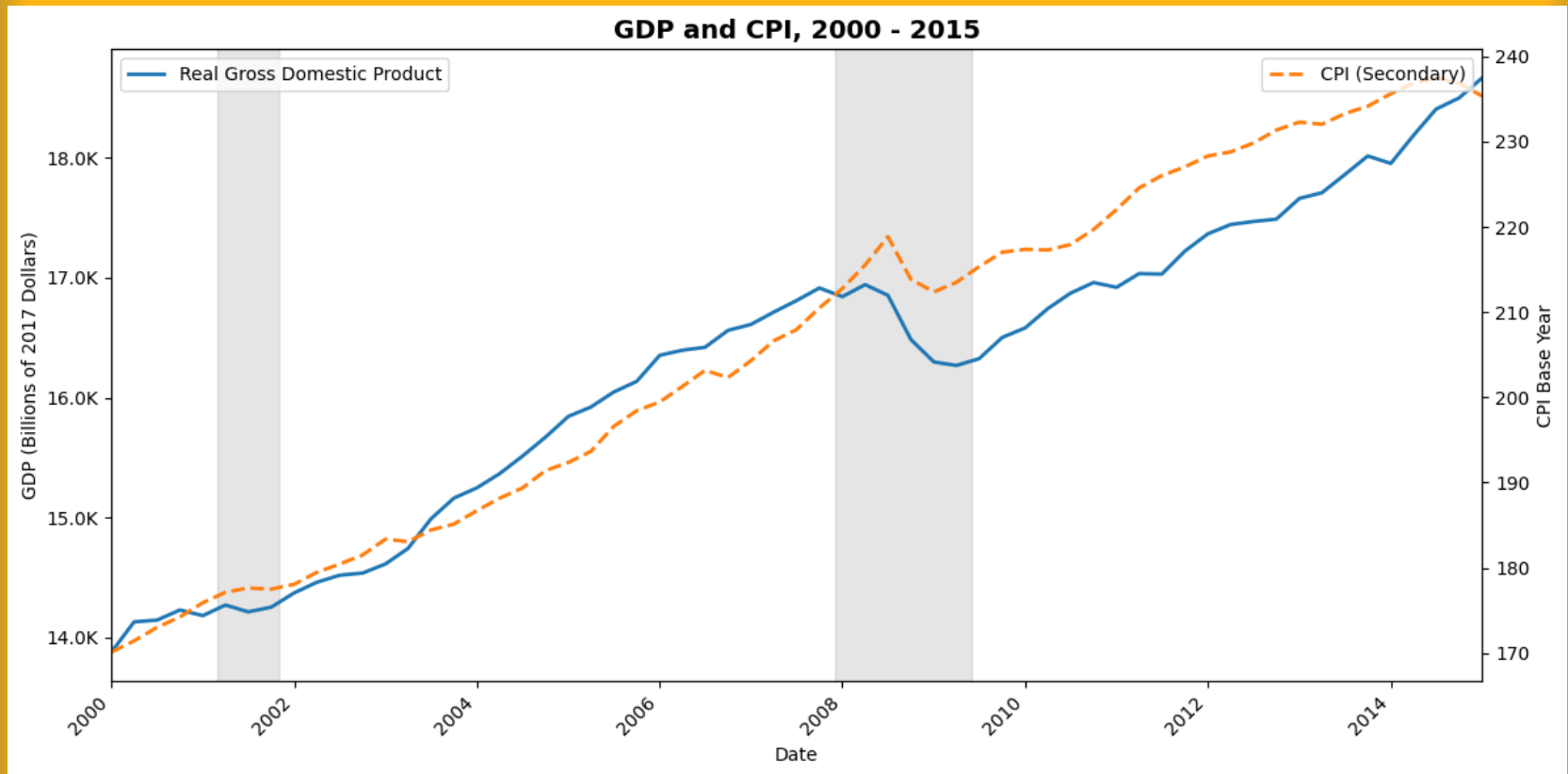
- Connect model to real-world data
- During the Great Recession, is there evidence that:
  - housing prices fell
  - output and CPI decreased
  - government spending increased
  - tax revenue decreased
  - interest rates decreased (money supply increased)



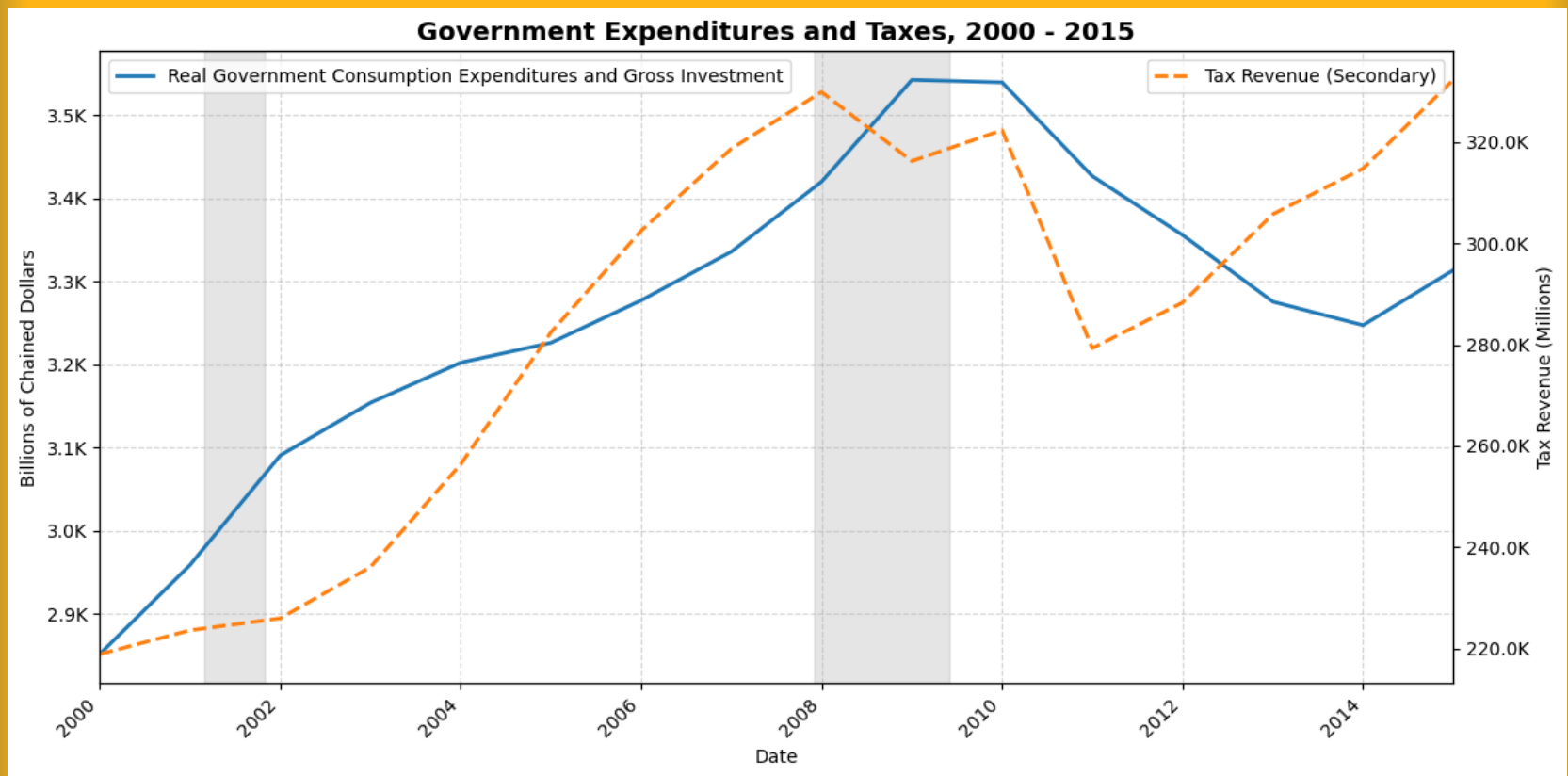
# Housing Prices



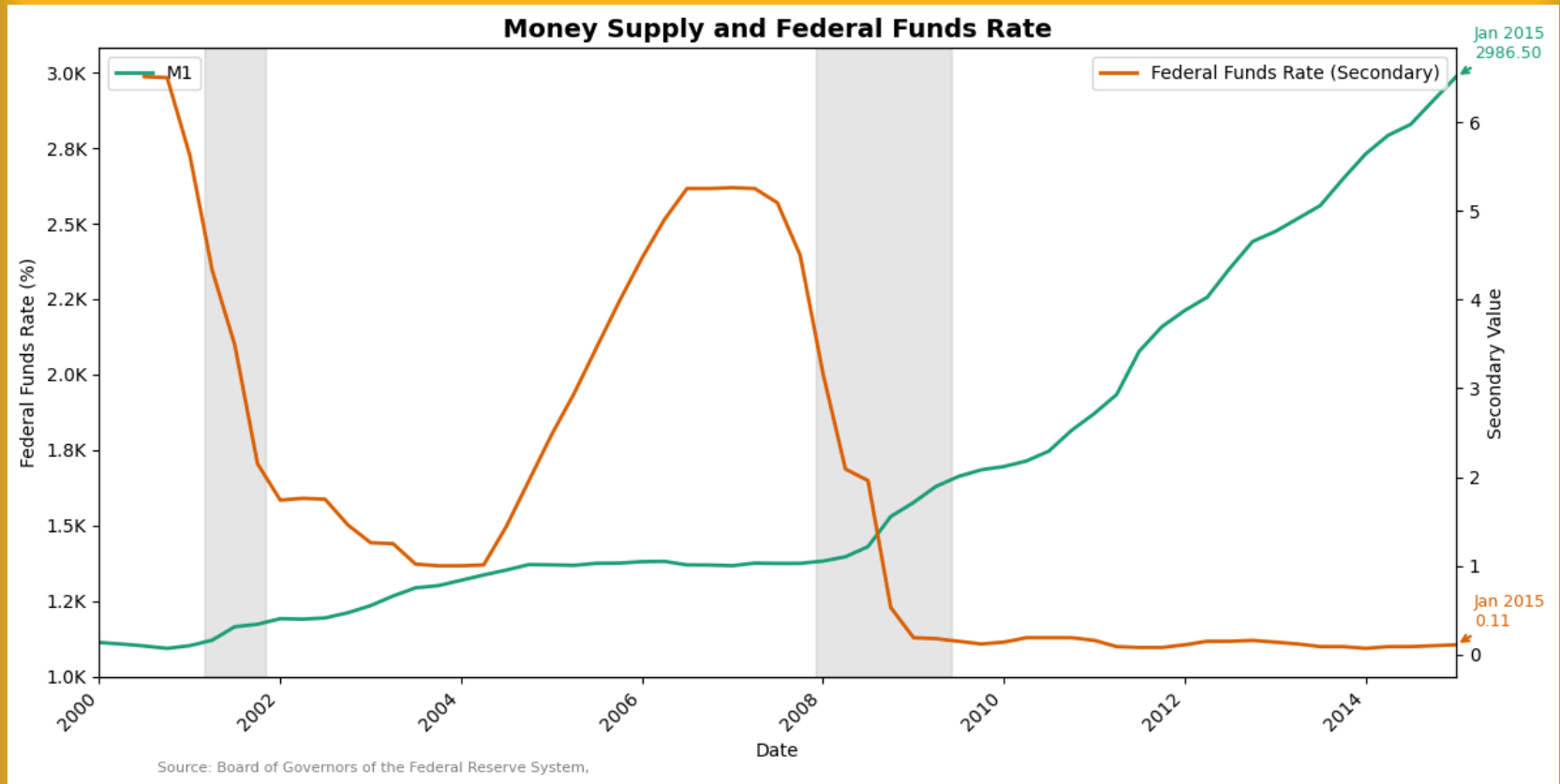
# GDP/CPI



# Taxes and Government Expenditures



# Interest Rate and Money Supply



# Shocks to the Macroeconomy

- Start at Full-Employment output
- Covid-19 Pandemic: how do  $P^*$  and  $Y^*$  change?



# Shocks to the Macroeconomy

- Start at Full-Employment output
- Covid-19 Pandemic: how do  $P^*$  and  $Y^*$  change?
- How should the government or Fed respond?

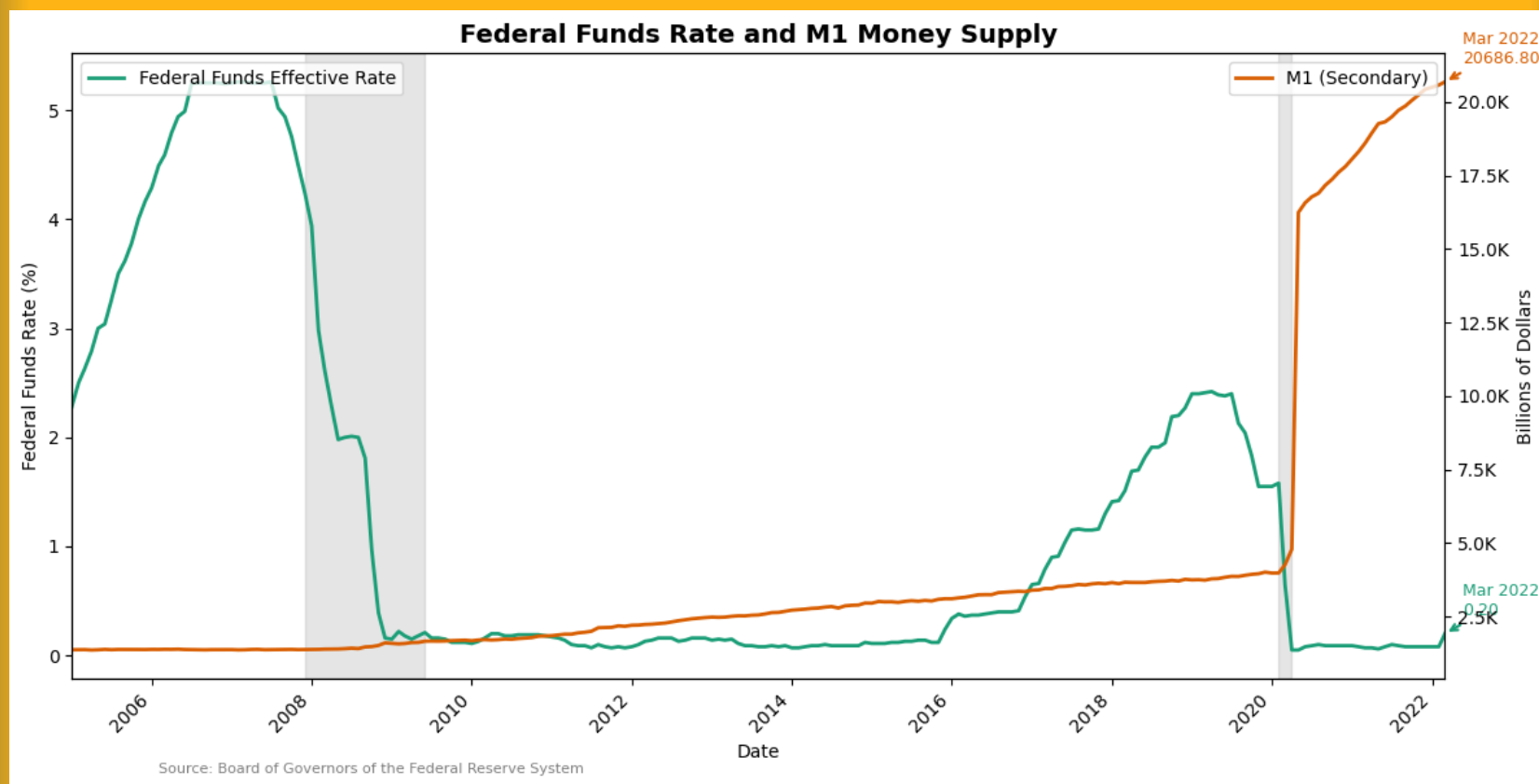




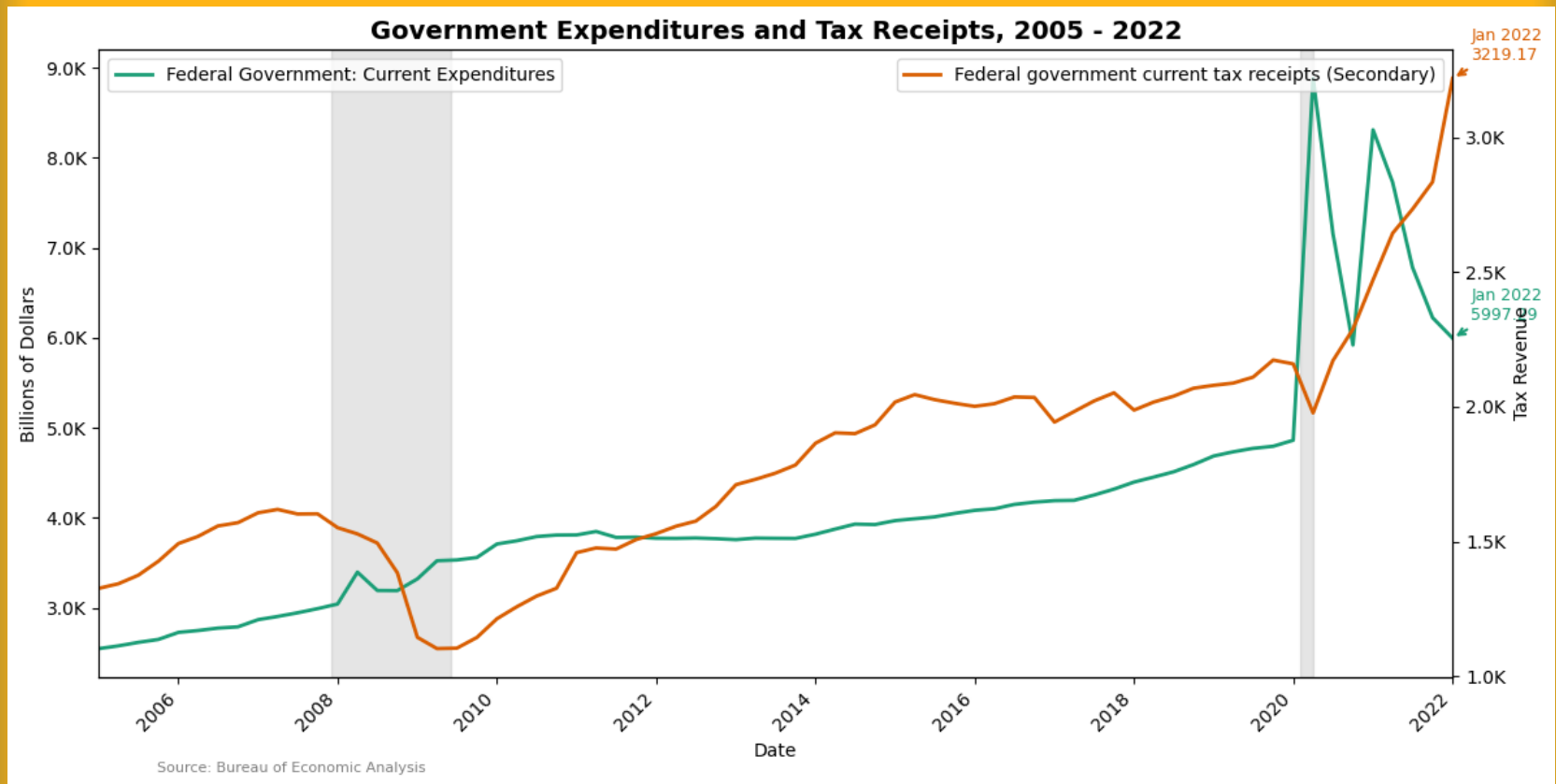
# The Federal Reserve During COVID

- Emergency Rate Cut I on March 3<sup>rd</sup>, 2020
  - Fed Funds Rate: 1.0 to 1.25%
- Emergency Rate Cut II on March 15<sup>th</sup>, 2020
  - Fed Funds Rate: 0 to 0.25%
- Only unconventional tools remain
  - Buying mortgage-backed securities
  - Lower reserve requirements for banks
- All meant to increase AC, I<sup>P</sup>

# Federal Funds Rate and M1, 2005-2022



# Government Expenditures and Taxes, 2005 - 2022



# Demand Shocks to the Macroeconomy

- Demand Shock:
- Counter-Cyclical Policy:

# Supply Shocks

- Supply Shock: Change in AS that moves economy away from full-employment equilibrium
- How do we know if a recession is caused by a supply shock instead of demand shock?



# Supply Shock

- How should the government respond to a recession driven by a decrease in AS?
- Option 1: Fight unemployment, bring economy back to  $Y\text{-bar}$



# Supply Shock

- How should the government respond to a recession driven by a decrease in AS?
- Option 2: Fight rising prices, bring prices back to  $P^*$

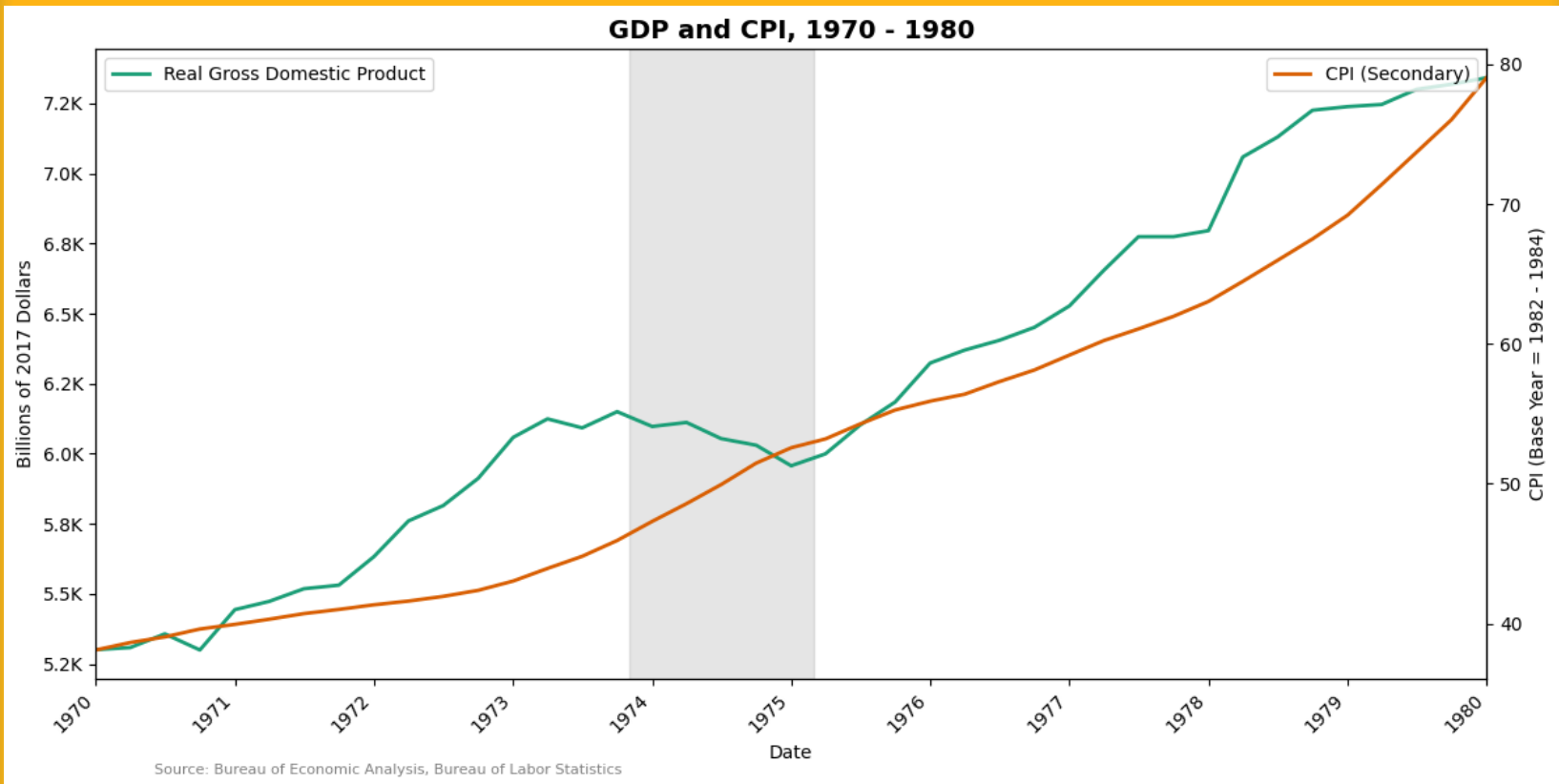
# Historical Supply Shocks

- OPEC Oil Embargo in the early 1970s
- Microeconomic Consequences: Gasoline shortage



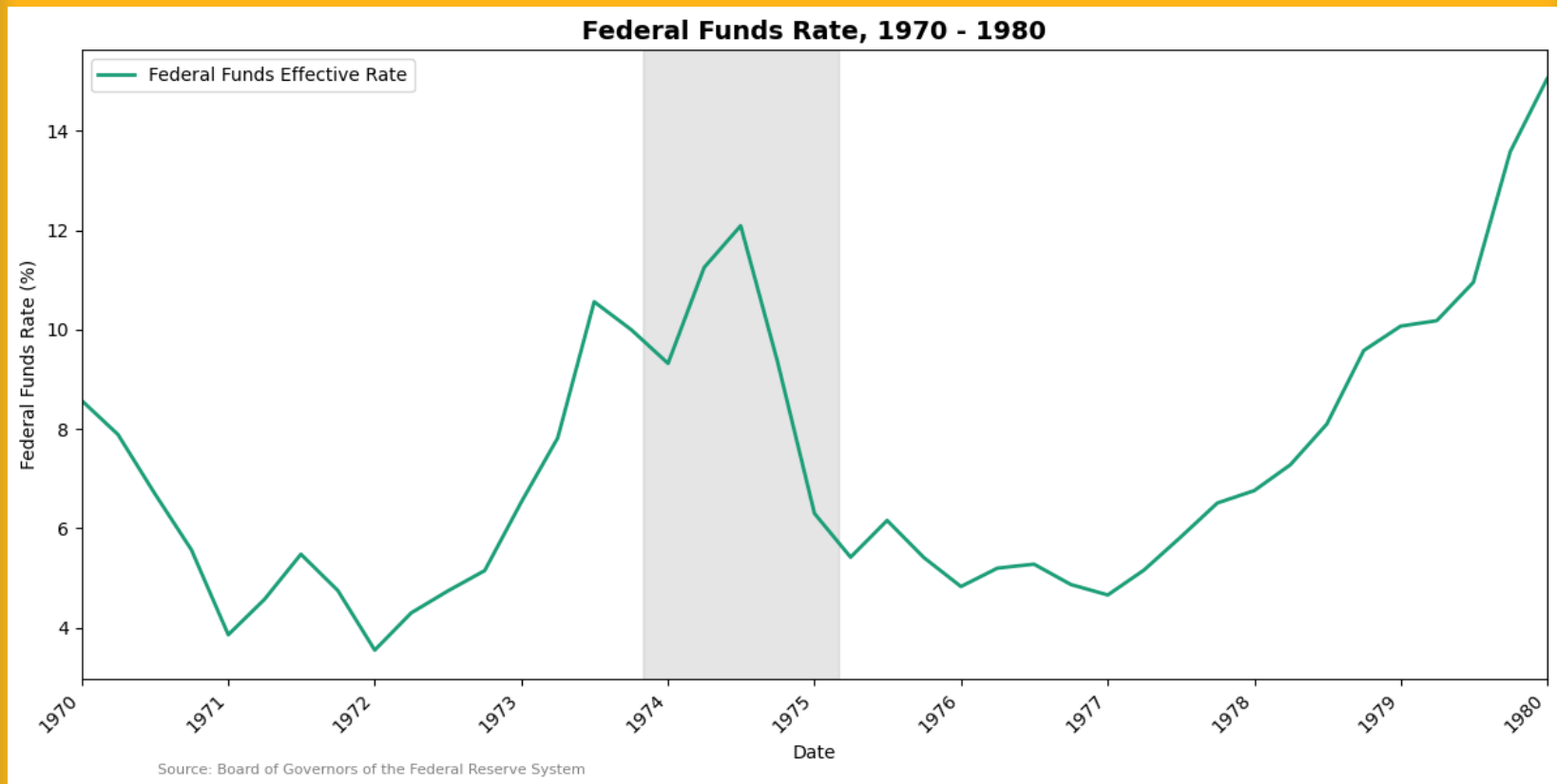
# Historical Supply Shocks

- Did prices rise as output fell?



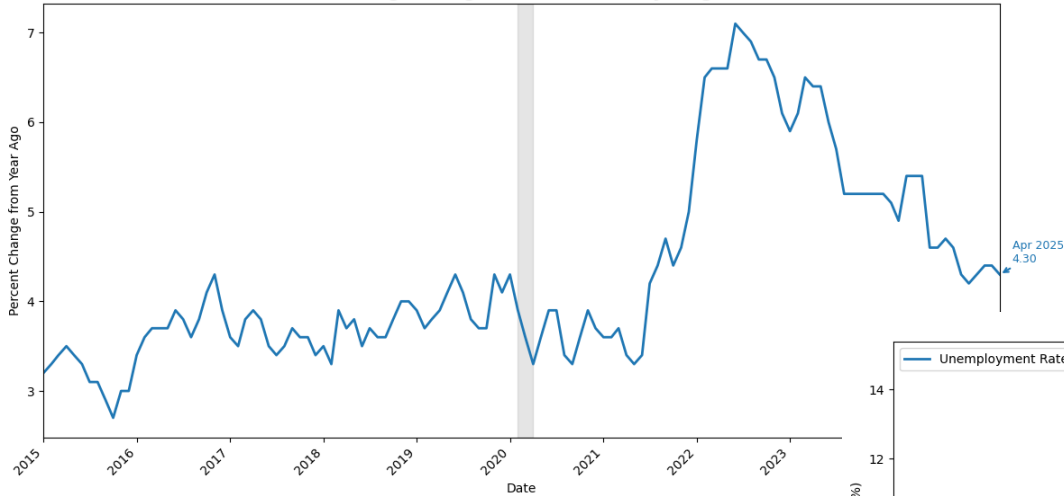
# Historical Supply Shocks

- How did the Federal Reserve respond?

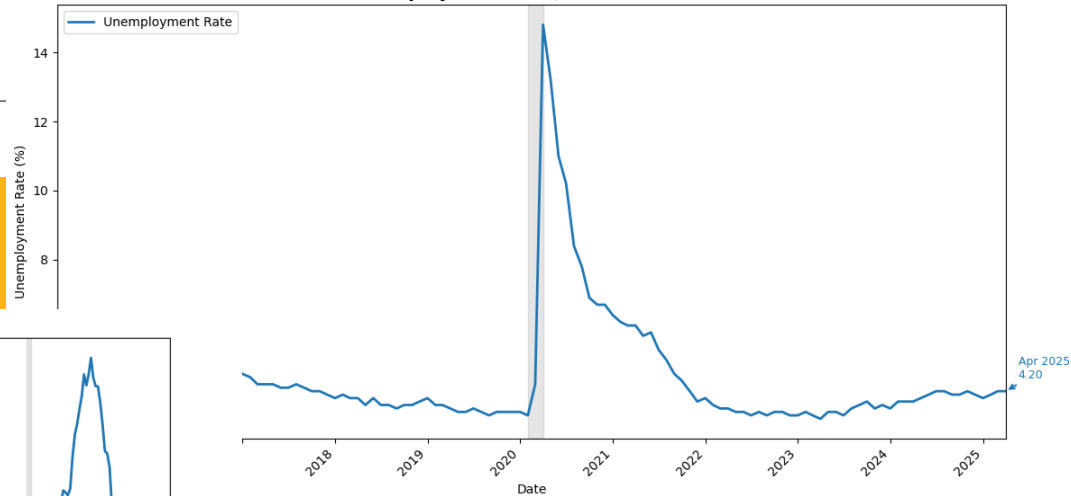


# Federal Reserve Today

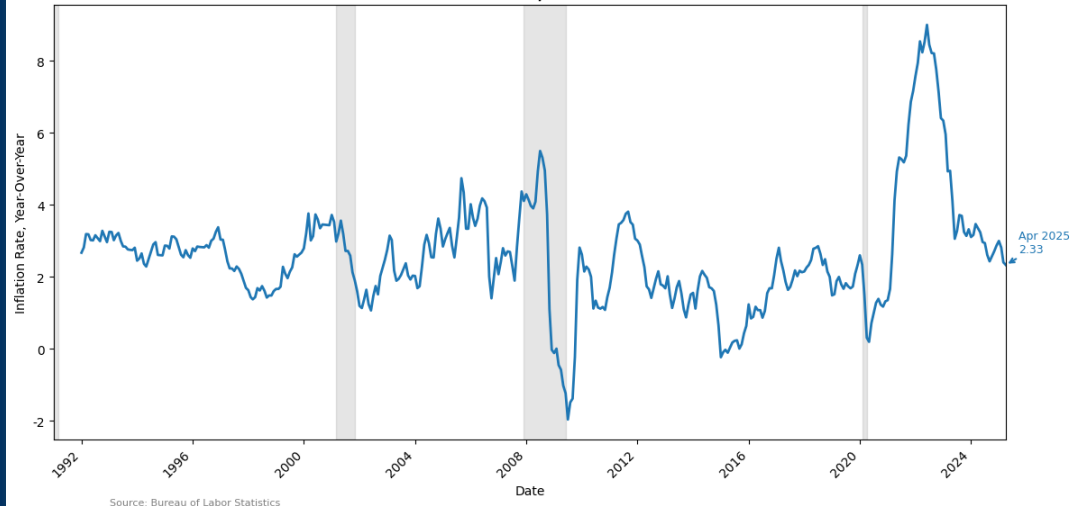
3-Month Moving Average of Median Hourly Wage Growth



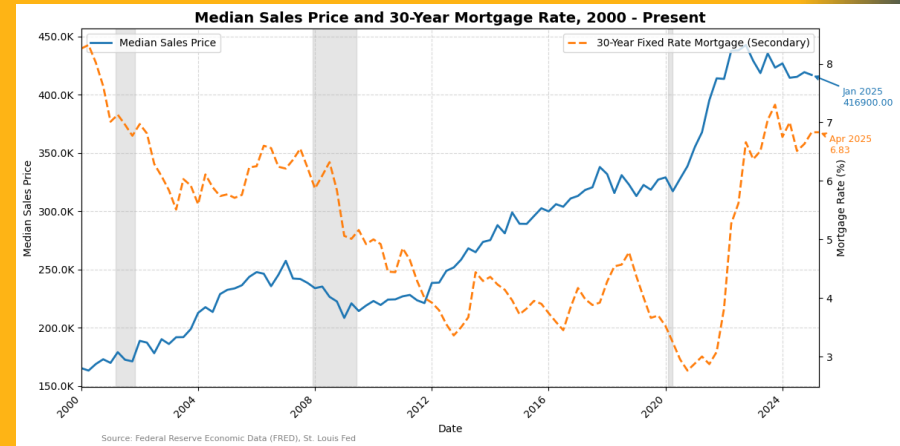
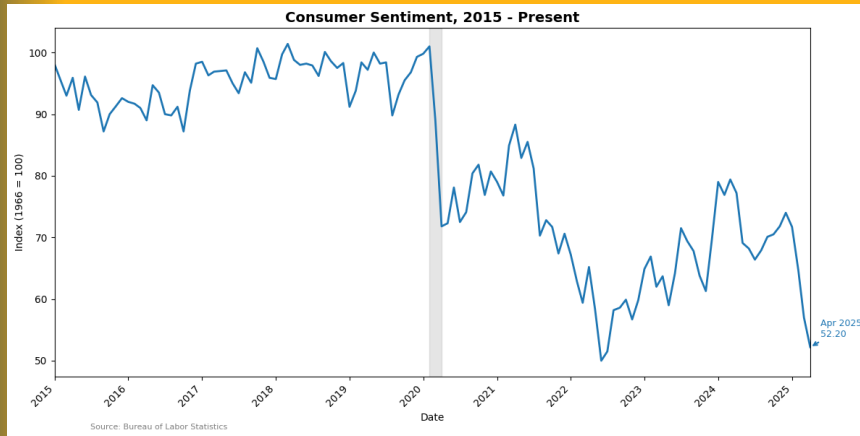
Unemployment Rate, 2015 - Present



CPI Inflation Rate, 1992 - Present



# Federal Reserve Today



**Committee for a Responsible Federal Budget**

OUR WORK INTERACTIVES

## Interest Costs Could Explode from High Rates and More Debt

MAY 20, 2025 | [BUDGETS & PROJECTIONS](#)

Interest costs are projected to approach [\\$1 trillion](#) this year, nearly triple 2020 levels. In light of current interest rates and the ongoing reconciliation negotiations, they are likely to more than double by the end of the decade.

**CNBC**

WATCH LIVE

ECONOMY

## Private sector hiring rose by just 37,000 in May, the lowest in more than two years, ADP says

PUBLISHED WED, JUN 4 2025 8:15 AM EDT  
UPDATED 42 MIN AGO

Jeff Cox  
@JEFFCOXCNBCOM  
@JEFF.COX.7528

WATCH LIVE

**Donald J. Trump**

@realDonaldTrump

ADP NUMBER OUT!!! "Too Late" Powell must now LOWER THE RATE. He is unbelievable!!! Europe has lowered NINE TIMES!

ReTruths 156 Likes

Jun 04, 2025, 8:21 AM



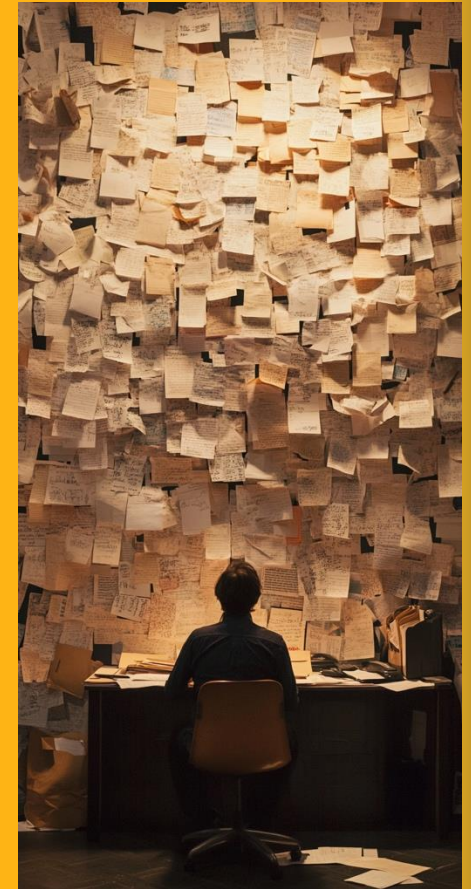
# Federal Reserve Today



- Political and Economic Uncertainty
- Tariffs → inflationary?
- 2025 Q1 GDP → Negative, -0.2%
- Atlanta Fed Q2 GDP Prediction: 4.6% Growth!
- Forward-looking markets (S&P 500)
  - All Time High, Mid-February
  - Down 21% by Early-April
  - Mostly recovered, down ~3% from ATM
- Involuntary Part-Time Workers up from 3.6M (July 2022) to 4.7M (April 2025)
- What will they do at their meeting next week?
- What will they do by the end-of-the-year?

# Housekeeping

- Final Exam: Tuesday, June 10<sup>th</sup>, 12 – 2:30pm
- 30 Questions, spread roughly even among topics
- Unless you have heard otherwise, you have full participation
- Indeed.com: apply, apply, apply!
- Evaluations



# Topics for the Final Exam

## Part 1 (Weeks 1 – 5)

- Supply and Demand (Chapter 2)
  - Gasoline Market (2.3, 2.4)
  - Housing Market (2.5)
- Course Goals (Chapter 3)
  - High Standard of Living (3.1)
    - Real vs. Nominal GDP
    - GDP Deflator Inflation Rate
  - Stable Prices (3.2)
    - CPI Inflation Rate
    - CPI vs. GDP Deflator
  - Unemployment Rate (3.3)
    - BLS Calculation
    - Involuntary Part-Time Workers
    - Discouraged Workers
    - Limitations

## Part 2 (Weeks 5 – 10)

- Short-Run Equilibrium (Chapter 4)
  - Consumption Function (4.1)
  - Aggregate Expenditures (4.2)
  - Short-Run Equilibrium (4.3)
- Fiscal Policy (Chapter 5)
- Monetary Policy (Chapter 6)
  - Money Market (6.1, 6.2)
  - Monetary Policy (6.3)
- Agg. Demand/Agg. Supply (Chapter 7)
  - Agg. Demand/Agg. Supply (7.1)
  - Complete Equilibrium (7.2)
  - Policy Responses (7.3, 7.4)