ECON 2:
Principles of Macroeconomics

Lecture 12: Fiscal Policy, Deficits, and Debt

Role of the Federal Government

Executive (President) and Legislative (Congress/Parliament) Branches of Government:

Move Y to full-employment Y!

"Federal Government" = "Government" = "President/Congress"

What can the Government change that will influence aggregate expenditures/equilibrium Y?

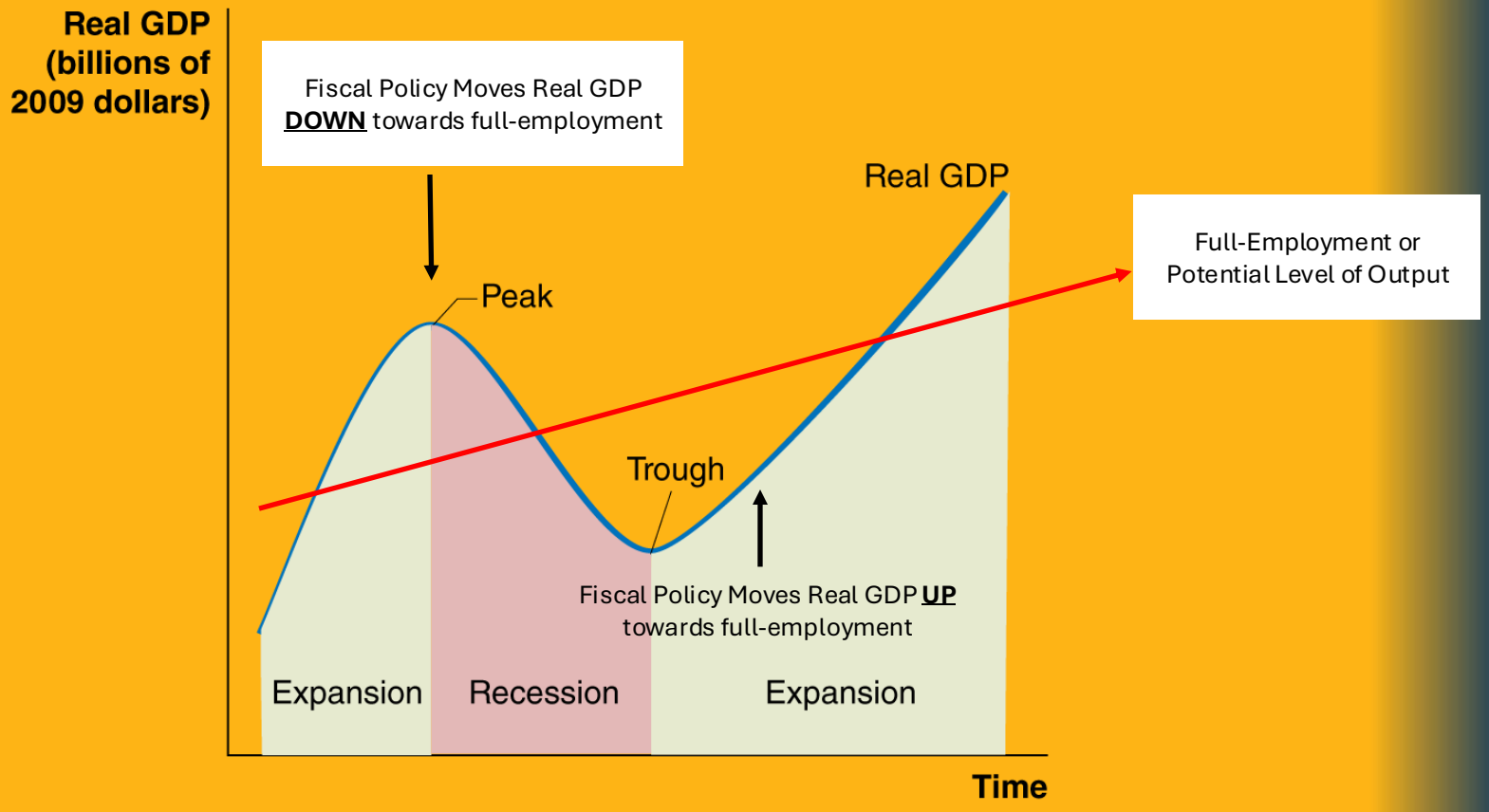
1.

2.

Fiscal Policy:

Counter-Cyclical Fiscal Policy:

Counter-Cyclical Fiscal Policy



Fiscal Policy

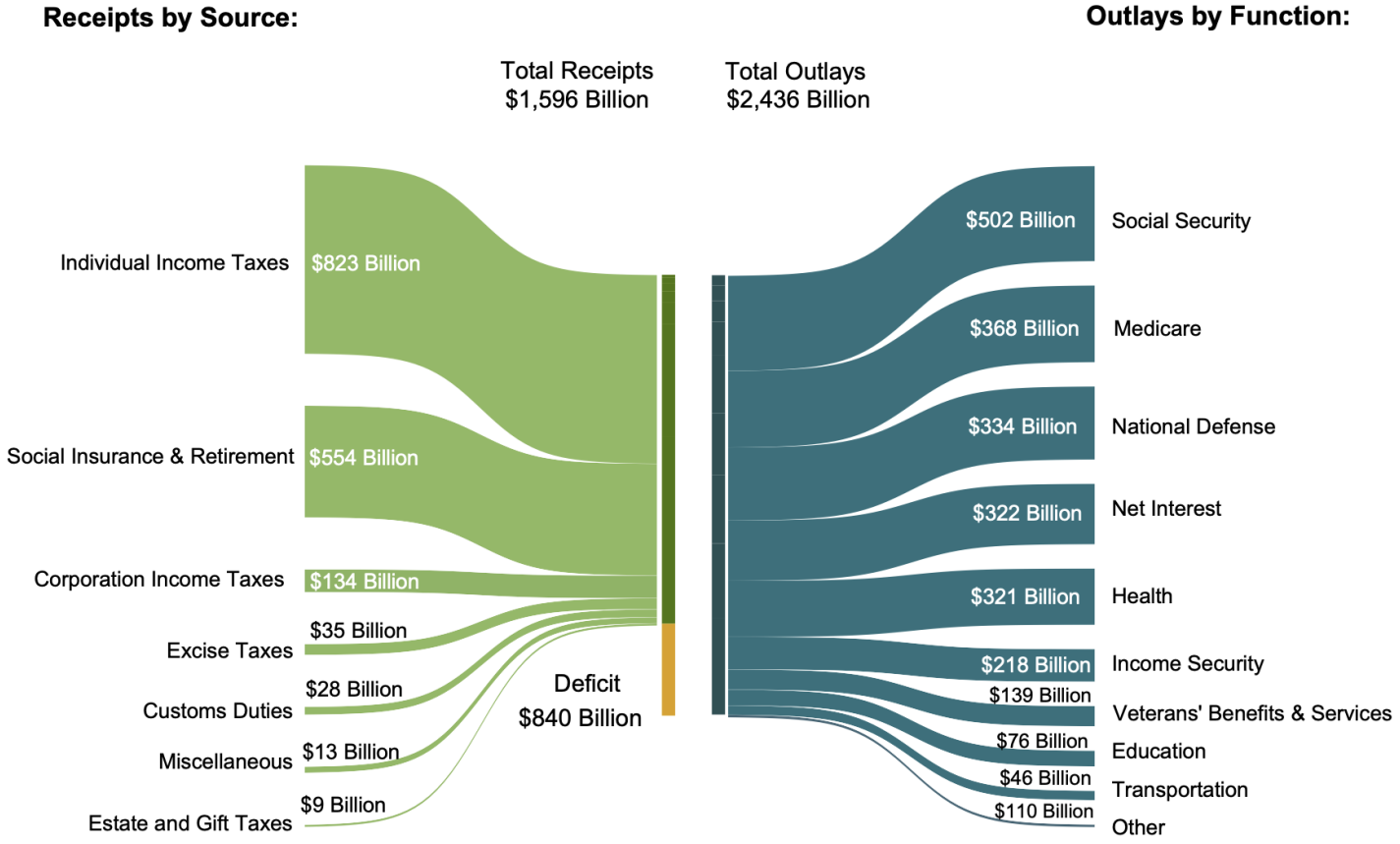
Two categories of Fiscal Policy

1. Discretionary Fiscal Policy

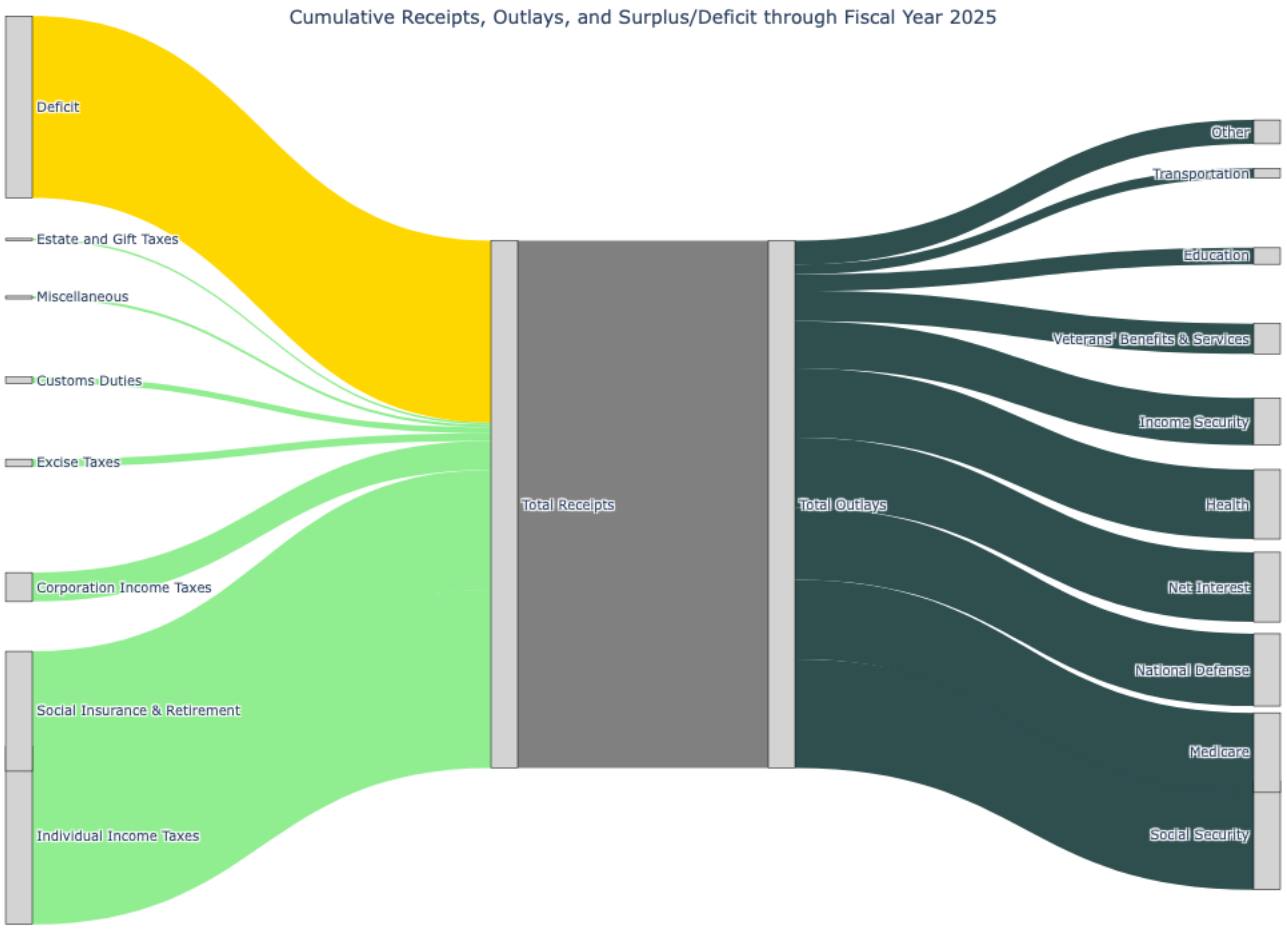
2. Automatic Stabilizers

Federal Government Expenditures (since 10/2024)

Figure 2. Cumulative Receipts, Outlays, and Surplus/Deficit through Fiscal Year 2025



Federal Government Revenue



How can the Government use Fiscal Policy?

- Y* decreases to $7,500
- What should the government do to bring output up to $10,000 but **mpc=0.90**?
- Option 1: Increase Government Purchases (same as before)

How can the Government use Fiscal Policy?

- Option 1: Increase G by $250, mpc=0.9

Round 1:
Y up $250

$250 in new bridge = increase G by $250
Incomes increase by $250

Round 2:
Y up $225 more,
$475 total

Spend mpc x 250 =
0.90 x 250= $225
Consumption increase

Save mps x 250 =
0.10 x 250 = $25

Incomes rise by $225

Round 3:
Y up $202.50,
$677.5 total

Spend mpc x 225 =
0.90 x 225 = $202.5
Consumption increase

Save mps x 225 =
0.10 x 225 = $22.50

Changing Government Purchases or Taxes?

- How does the government increase G?
- Congress ***AGREES*** on a change in G! President does not veto a change in G!
- Example: A new bridge is built over the Ohio River in Cincinnati on I-71/75, $\Delta G = 250$

Problems with Changing G

1. Time Lag: Can Congress respond quickly?

2. Implementing Spending: Who builds the bridge? When?

3. Irreversibility: What if economy recovers before completion of the project?

How can the Government use Fiscal Policy?

Option 2: Decrease Taxes by $250, mpc = 0.9

Decreasing T misses round 1 increase in Y, but all other rounds are the same.

Increasing G by $250 increased Y by $2,500

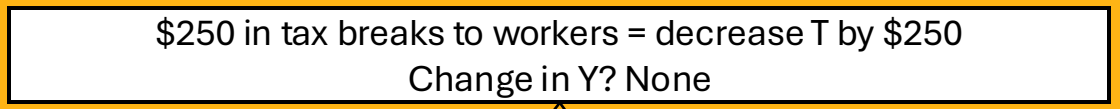
Decreasing T by $250 will increase Y by less than $2,500. How much less?

Tax Multiplier:

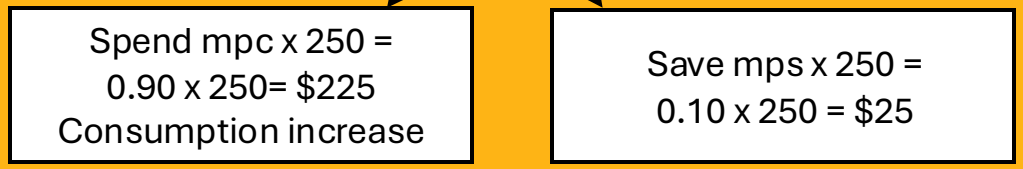
How can the Government use Fiscal Policy?

- Option 2: Decrease Taxes by $250, mpc = 0.9

Round 1:
No change in Y
Disposable Y up $250



Round 2:
Y up $225 more, $225 total



Round 3:
Y up $202.50, $427.5 total

Tax Multiplier

What is the value of the tax multiplier?

For every $1 increase in taxes, Y will change by…

For every $1 decrease in taxes, Y will change by…

Problems with Tax Cuts

Simple Option 1: Cut taxes for low income households

Benefits:

Costs:

Problems with Tax Cuts

Simple Option 2: Cut taxes for rich

Benefits: $1 million dollar salary = $353,168.19 in Federal taxes

Costs:

Forward-Looking Behavior: Tax cuts today mean tax increases in the future

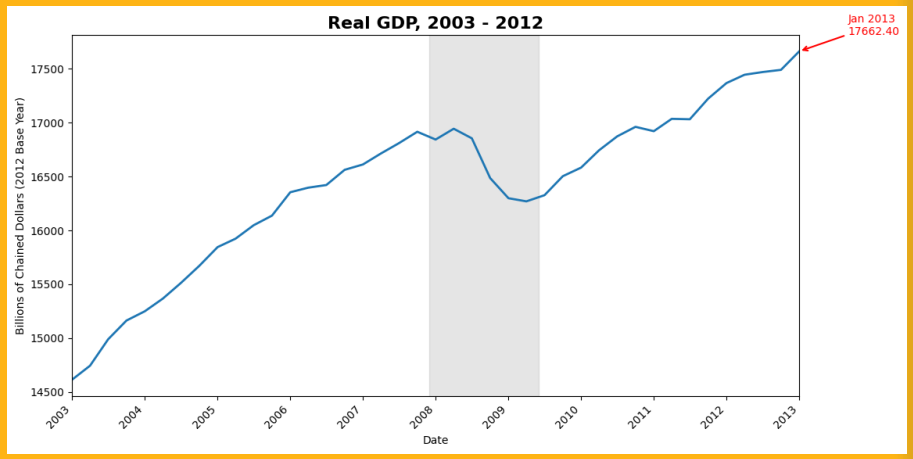
Federal Reserve Response?

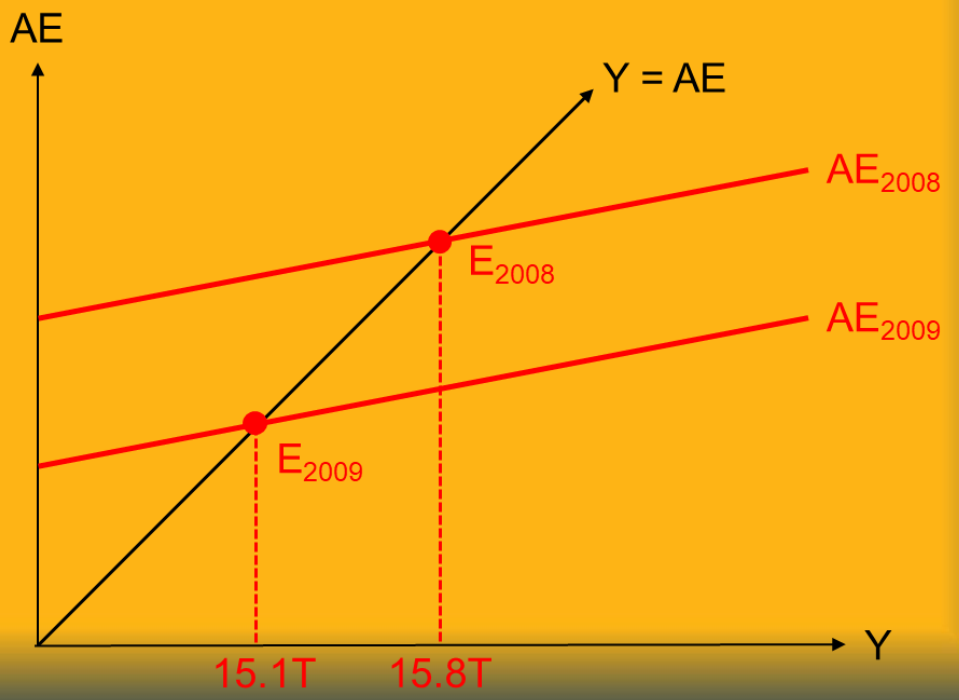
Biggest Concern with Fiscal Policy?

Government Response to the Great Recession

Economic crises = fiscal policies

- Great Financial Crisis
- Covid-19 pandemic





2008: Troubled Asset Relief Program (TARP) Bank Bailout Bill

Stabilize the U.S. financial system during the 2008 financial crisis by purchasing $700 billion in troubled assets and injecting capital into financial institutions.

The U.S. Treasury purchased equity in banks and other financial institutions to stabilize their balance sheets.

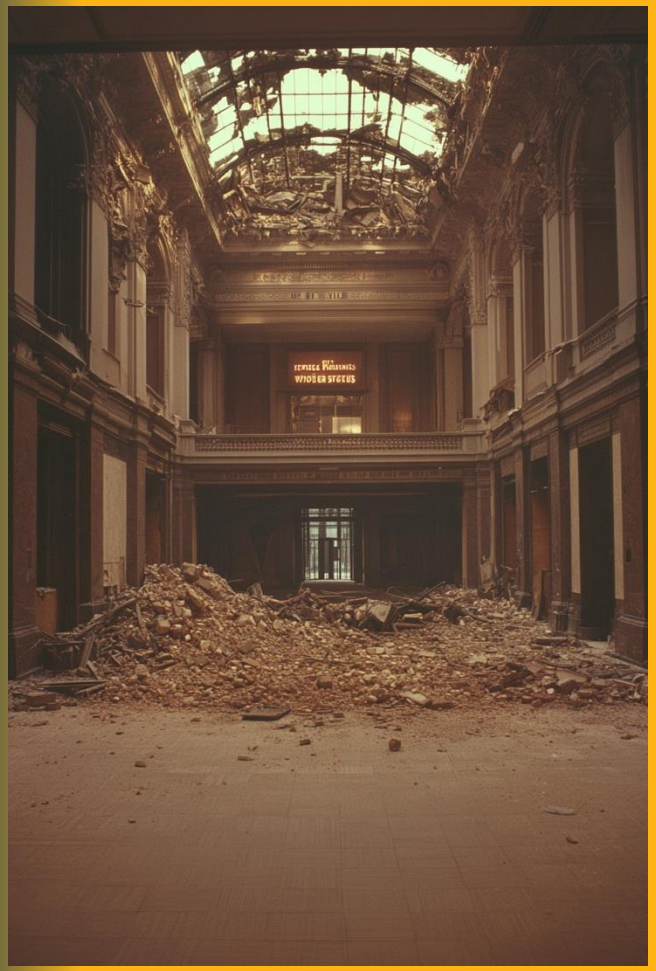
Banks repaid loans with a 5% dividend (increased to 9% by 2013).

Major recipients included Goldman Sachs, JP Morgan, Wells Fargo, AIG ($40B), and Citigroup/Bank of America ($45B combined).

Loans to:
Community Banks ($92 billion)
Big 3 Auto Companies ($25 billion)

The U.S. Treasury earned $441.7 billion on $426.4 billion invested, resulting in a $15 billion profit.

2008: Troubled Asset Relief Program (TARP) Bank Bailout Bill



- Impact
  - Prevented a deeper economic collapse by restoring confidence in financial markets.
  - Critics argue it created a “Too Big to Fail” precedent, encouraging risky behavior in large institutions.
- Controversies
  - Allegations of favoritism in selecting bailout recipients.
  - Moral hazard concerns: rewarding poor management decisions of failing institutions.
  - Limited help for homeowners and housing markets despite initial goals.
- Legacy
  - TARP is credited with averting a potential Great Depression but faced criticism for its perceived inequities and long-term implications for financial regulation.

2009: American Recovery and Reinvestment Act (ARRA) Economic Stimulus Bill

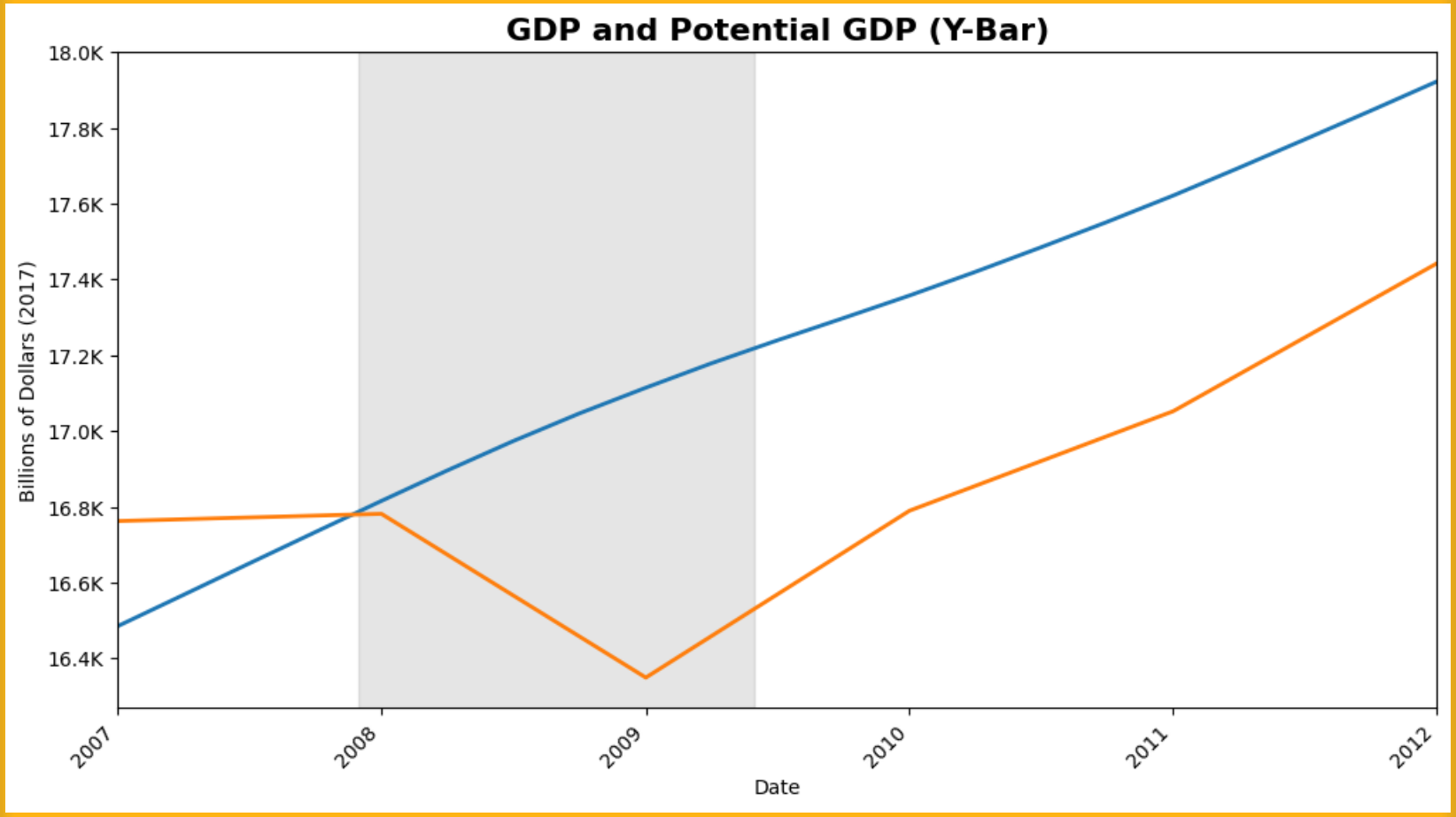
- Signed into Law: February 17, 2009, by President Barack Obama.
- Key Figures
- Original Budget: $787 billion (later revised to $831 billion) :
  - $288 billion in tax cuts and incentives.
  - $224 billion for entitlement programs (e.g., unemployment benefits, Medicaid).
  - $275 billion for federal contracts, grants, and loans

- Major Spending Areas
  - Infrastructure: $85 billion for projects like roads, bridges, and mass transit
  - Healthcare: $155 billion for Medicaid expansion, COBRA subsidies, and health IT.
  - Education: $100 billion for schools and state fiscal stabilization.
  - Energy: $90 billion for renewable energy projects and efficiency upgrades.

2009: American Recovery and Reinvestment Act (ARRA) Economic Stimulus Bill

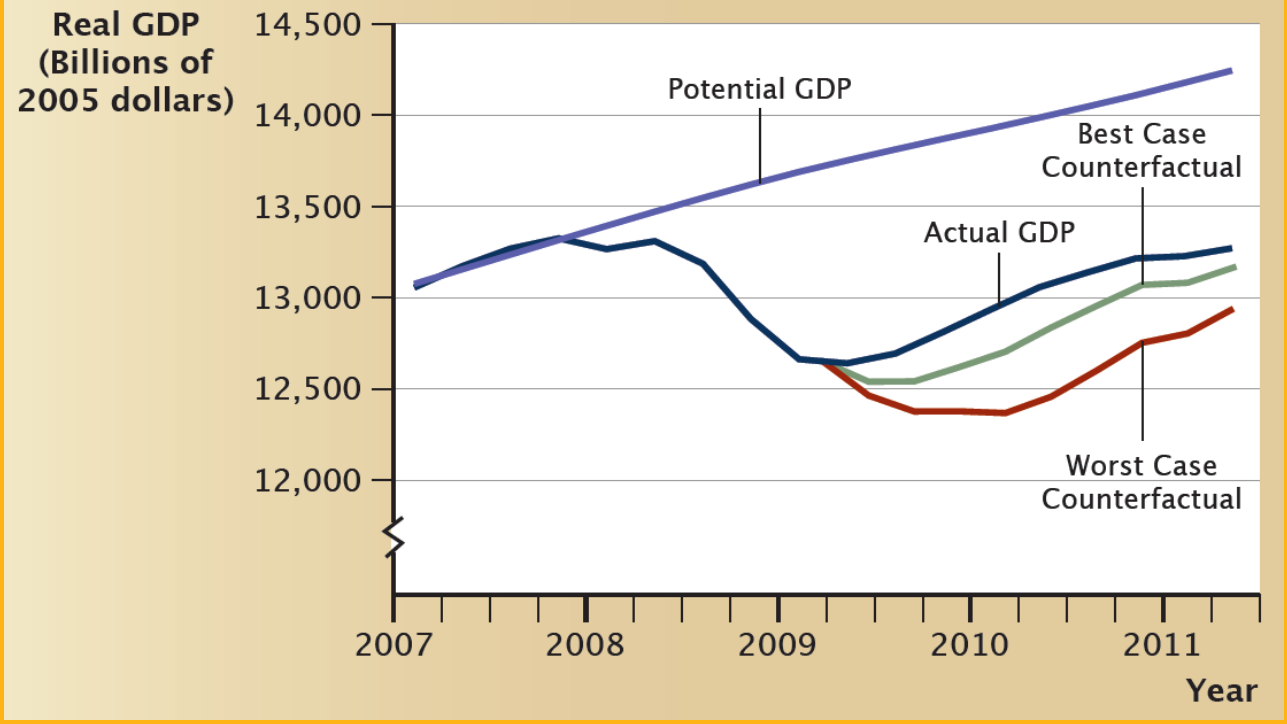
- Economic Impact
  - Boosted GDP growth by up to 4.5% in 2010.
  - Created or saved an estimated 1.4–3.3 million jobs by mid-2010.
  - Helped lower unemployment by up to 1.8 percentage points.
- Criticisms
  - Spending delays hindered immediate economic recovery (“no such thing as shovel-ready projects”).
  - Concerns over waste, fraud, and inefficiency
  - Critics argued it increased federal debt without sufficient long-term benefits.
- Legacy
  - ARRA played a significant role in stabilizing the U.S. economy during the recession but remains controversial regarding its effectiveness and cost.

Government Response to the Great Recession



Government Response to the Great Recession

- Was stimulus useless?



Government Response to the Great Recession

Purchases of goods and services by the federal government	1.0 to 2.5
Transfers to state and local governments for infrastructure	0.5 to 2.5
Transfers to state and local governments for other purposes	0.7 to 1.8
Transfer payments to individuals (such as unemployment benefits and food stamps)	0.8 to 2.1
One-time payments to retirees and disabled individuals	0.3 to 1.0
One-time payments to existing recipients of Social Security	0.3 to 1.0
Making Work Pay tax credit	0.5 to 1.7
AMT patch	0.2 to 0.6
Other individual tax provisions	0.3 to 1.5

Government Response to the Great Recession

The size of the Great Recession stimulus package is still debated

Some say it was too small to stimulate the economy

Others claim it was too large and led to inflation and debt

Problems with the package's design besides its size

Covid-19 Pandemic Fiscal Policy

CARES Act (March 27, 2020)

- **Total Cost: $2.2 trillion (largest in history)**

Key Provisions:

- $290 billion in direct payments to individuals
- $260 billion for unemployment benefits
- $377 billion in small business relief
- $150 billion for state and local governments
- $200 billion for hospitals and healthcare providers.

Consolidated Appropriations Act (Dec. 2020)

- **Total Cost: $900 billion**

Key Provisions:

- $119 billion for unemployment benefits
- $302 billion for small businesses
- $82 billion for education

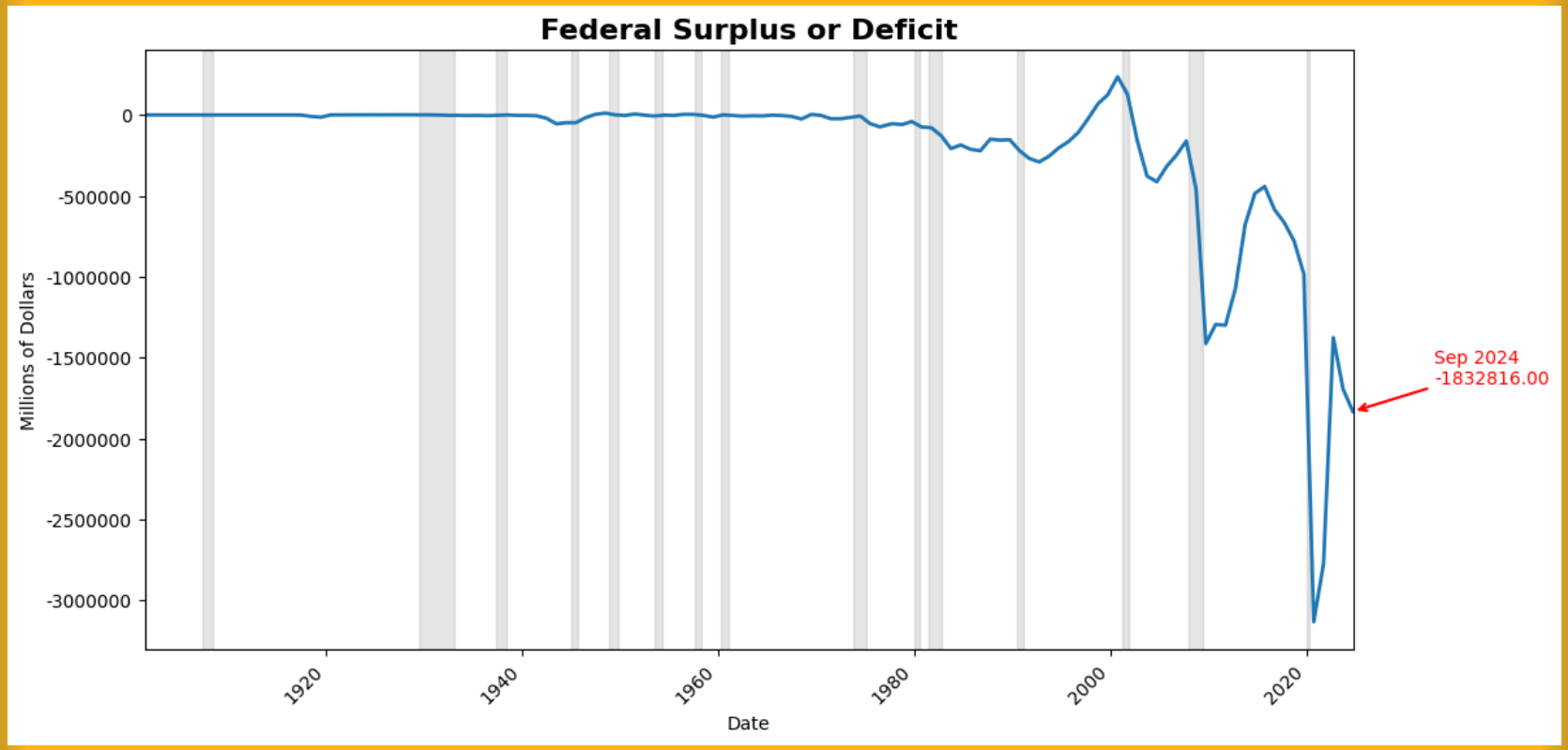
American Rescue Plan Act (March 2021)

- **Total Cost: $1.9 trillion**

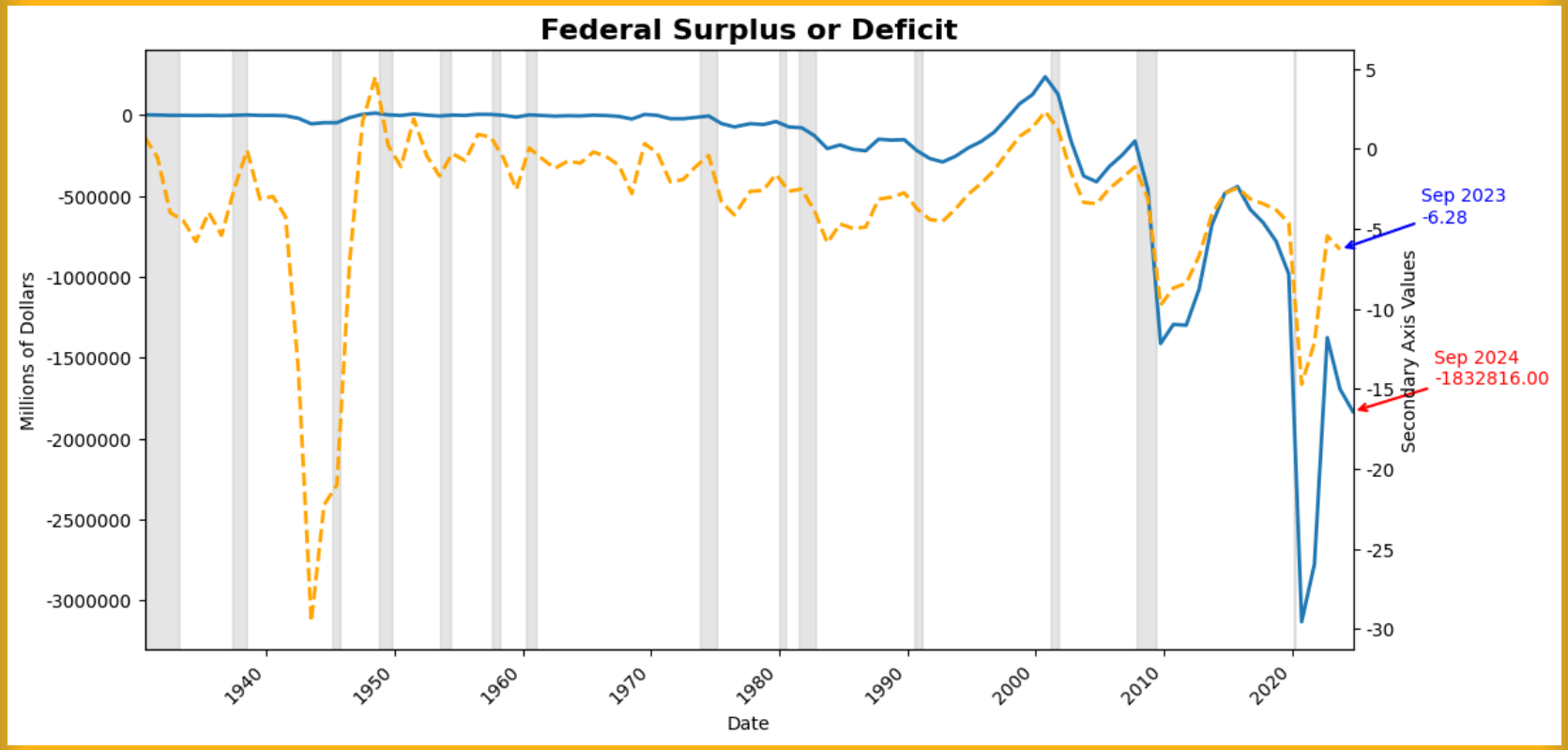
Key Provisions:

- $203 billion for unemployment benefits
- $176 billion in tax credits
- $170 billion for education
- $174 billion for healthcare

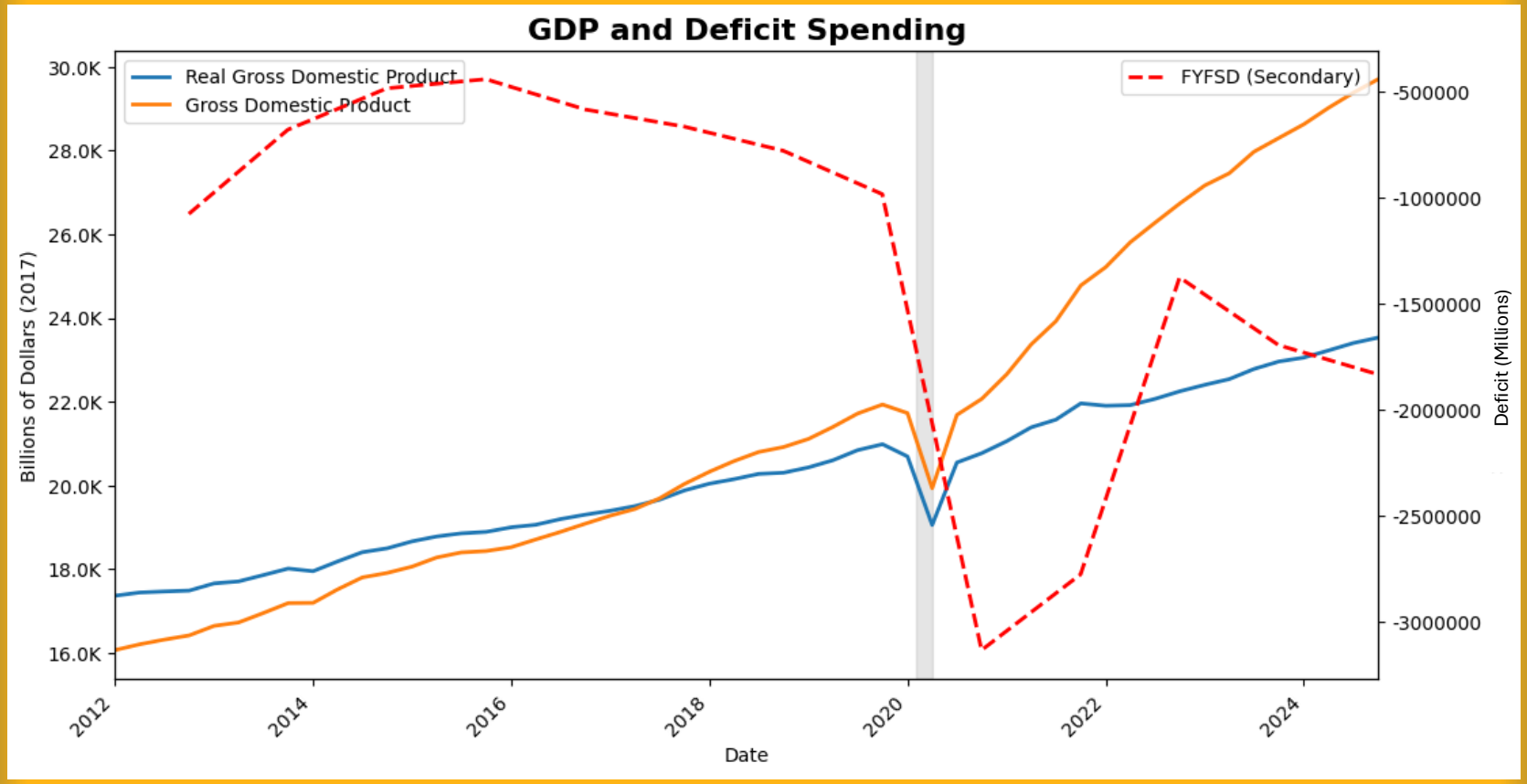
Federal Deficit over Time



Federal Deficit over Time



Federal Deficit over Time

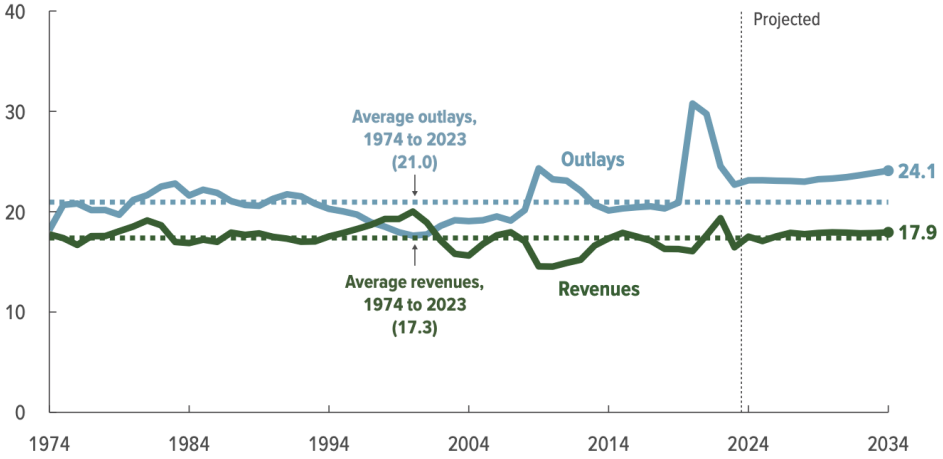


Federal Outlays and Revenues

Figure 1-3.

Total Federal Outlays and Revenues

Percentage of GDP



Measured as a percentage of GDP, projected outlays remain about the same for the next several years as growth in outlays for interest payments is offset by decreases in discretionary spending. Over the 2024–2034 period, outlays exceed their 50-year average by more than revenues exceed their historical average.

Data source: Congressional Budget Office. See www.cbo.gov/publication/59710#data.

When October 1 (the first day of the fiscal year) falls on a weekend, certain payments that would have ordinarily been made on that day are instead made at the end of September and thus are shifted into the previous fiscal year. All projections presented here have been adjusted to exclude the effects of those timing shifts. Historical amounts have been adjusted as far back as the available data will allow.

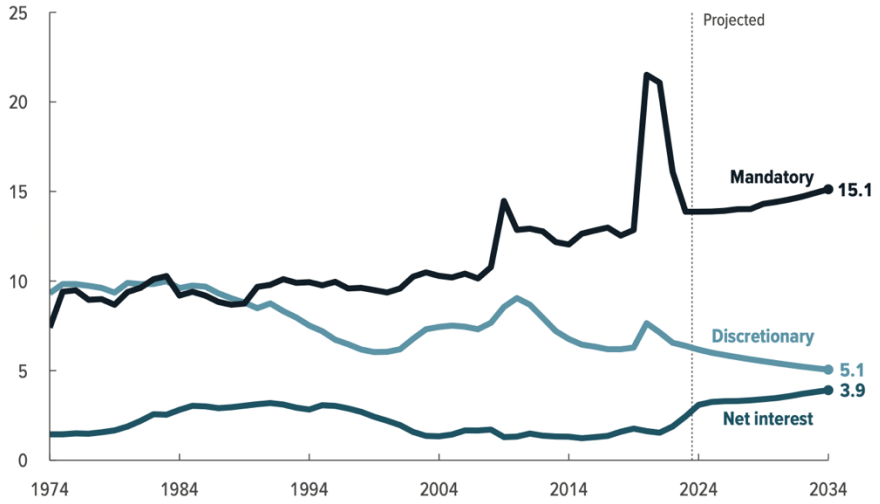
GDP = gross domestic product.

Federal Outlays and Revenues

Figure 1-4.

Outlays, by Category

Percentage of GDP

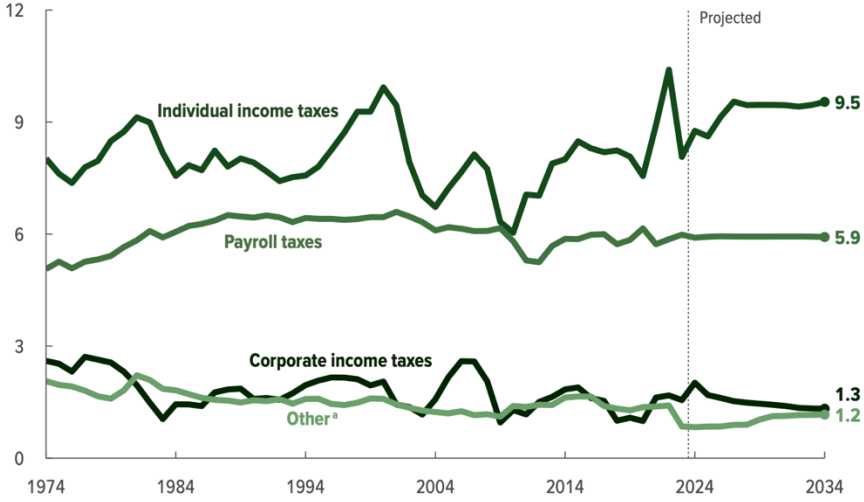


Data source: Congressional Budget Office. See www.cbo.gov/publication/59710#data.

Figure 1-5.

Revenues, by Category

Percentage of GDP



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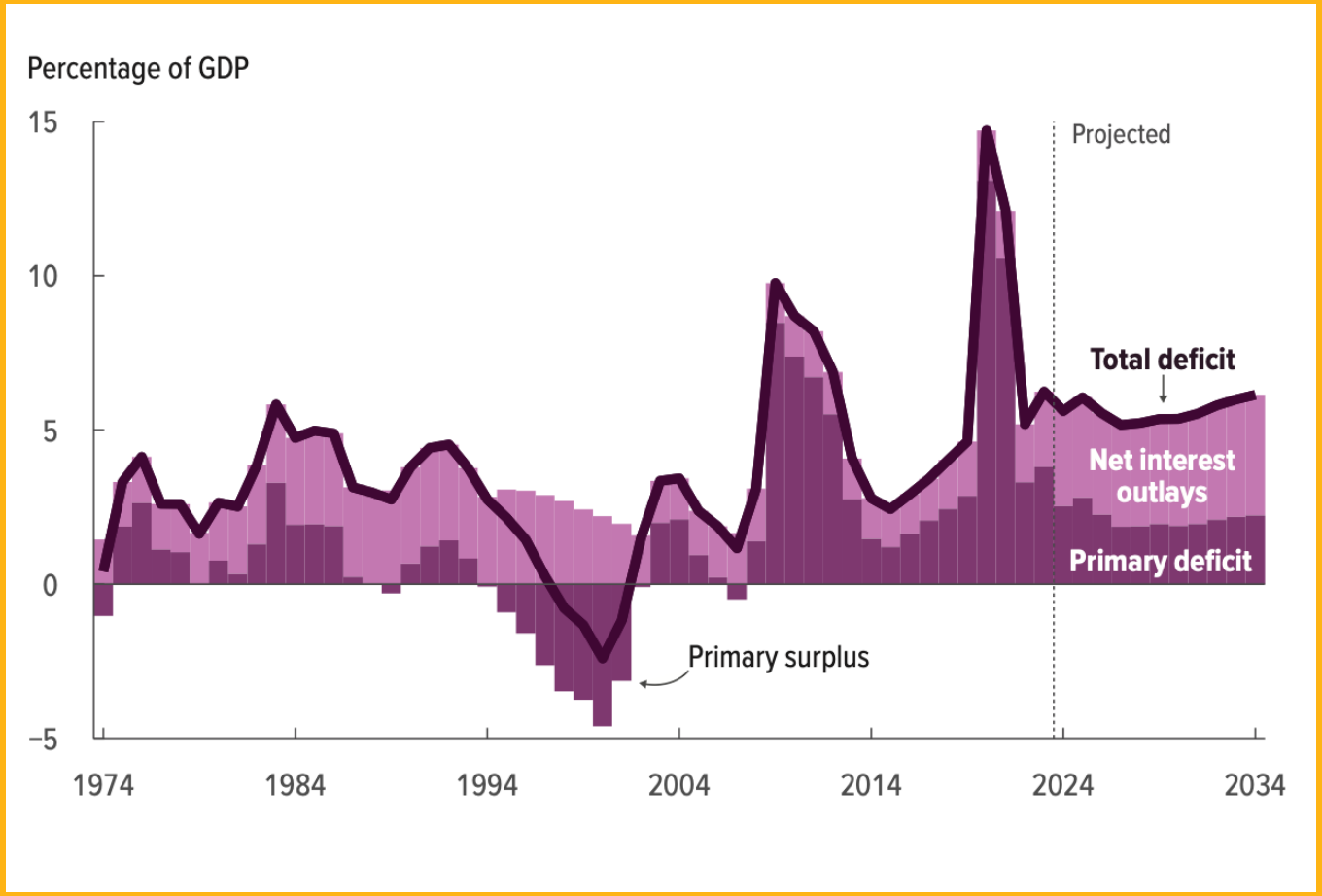
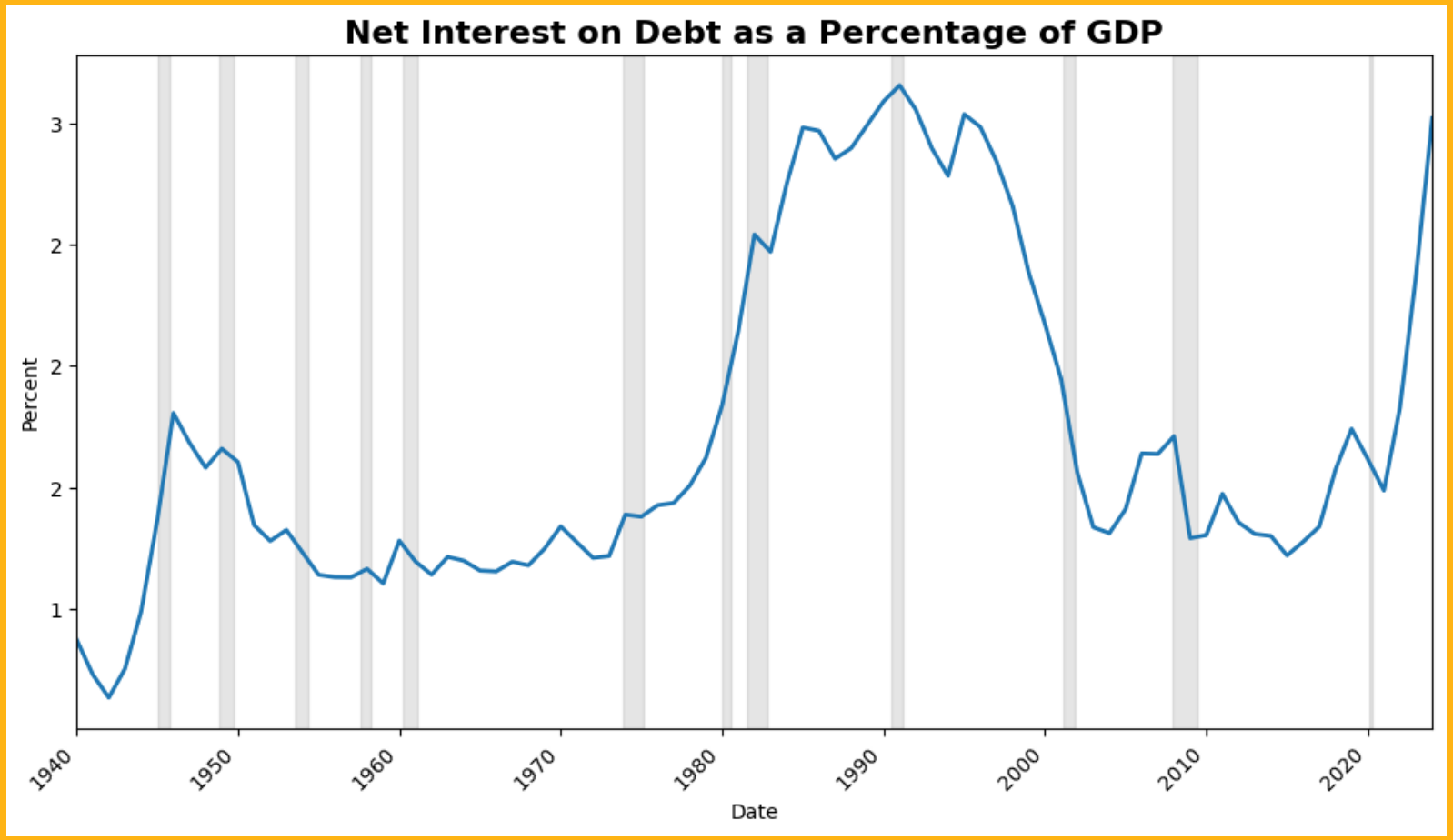
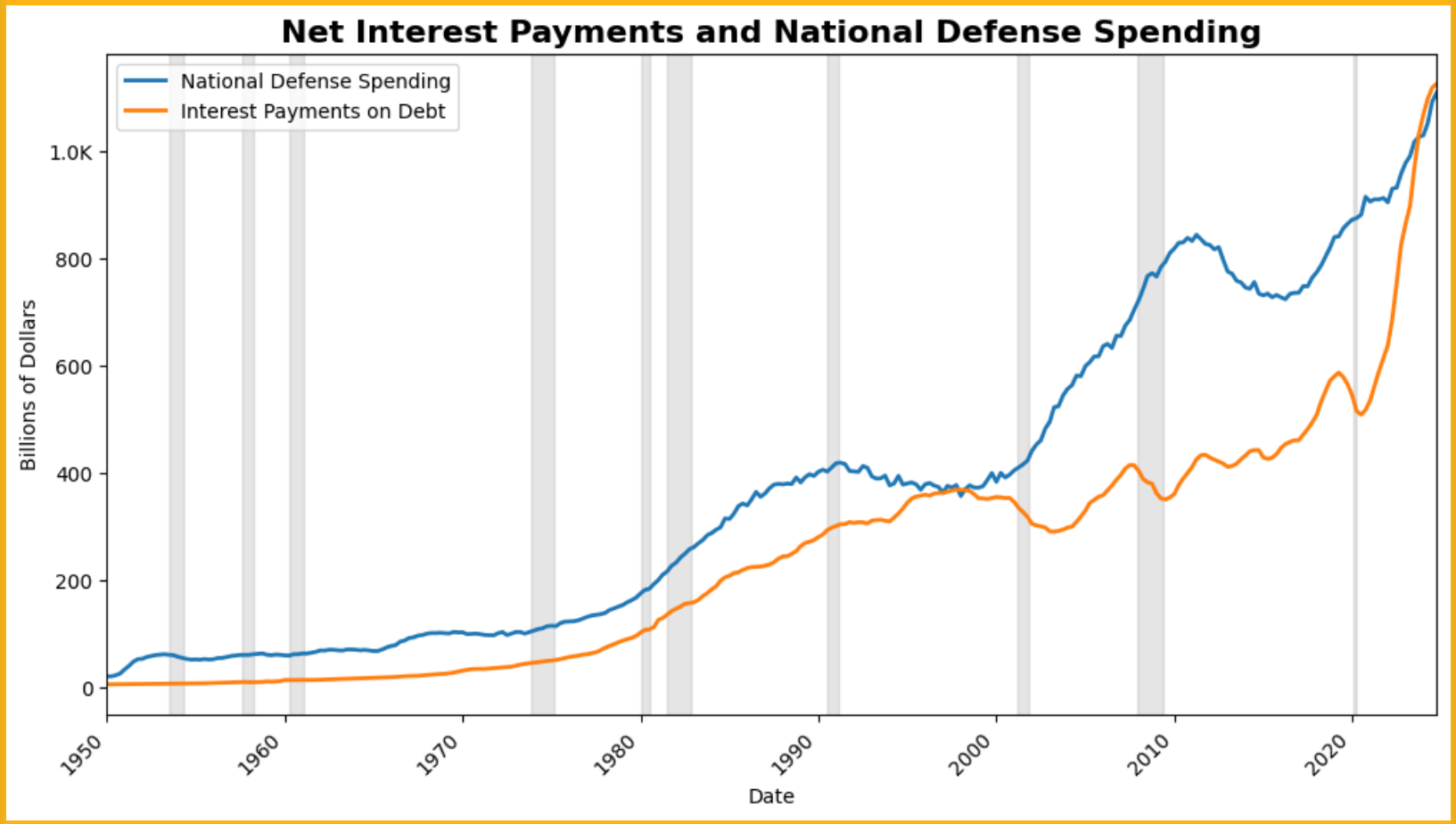
Federal Outlays and Revenues



Net Interest on Debt



Net Interest vs. Defense Spending



Connecting Deficit to Debt

- Each year a deficit is run, money must be borrowed in order to pay for shortfall

How Big is the National Debt?

Link 1

Link 2

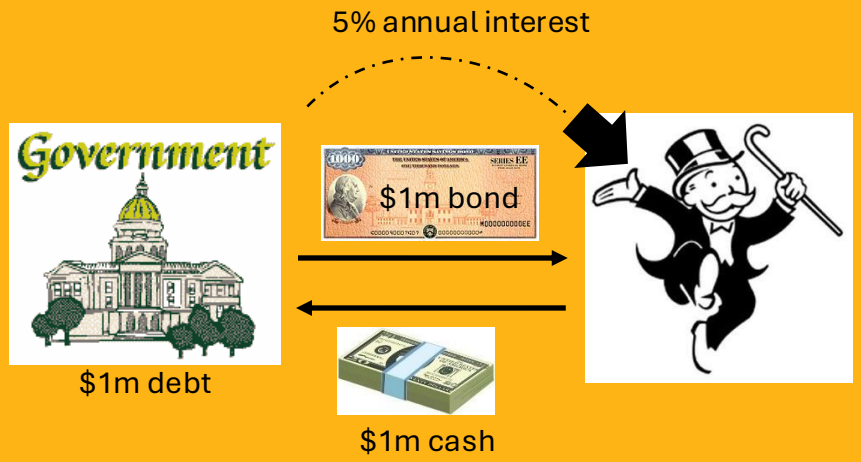
National Debt Facts

Fact #1: Public Debt vs Intra-Governmental Borrowing

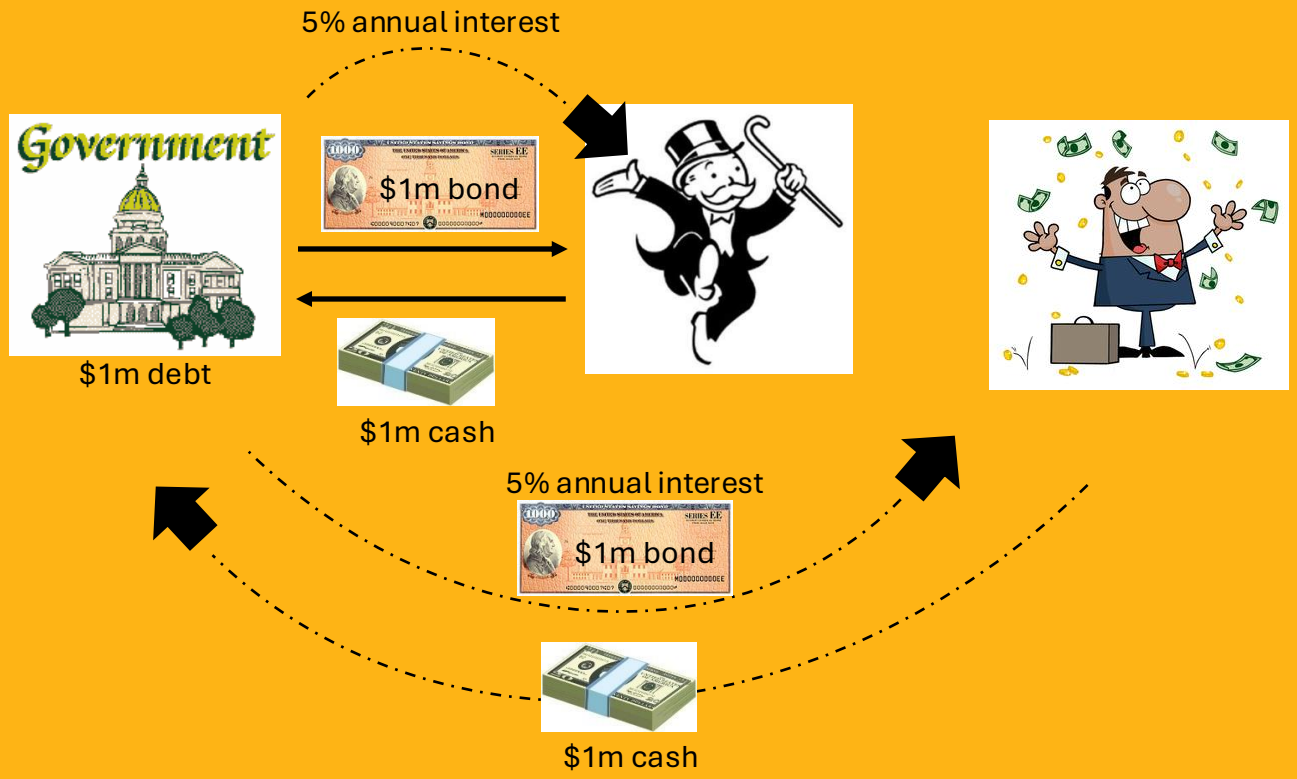
National Debt Facts

Fact #2: Government Bonds and Rolling Over Debt

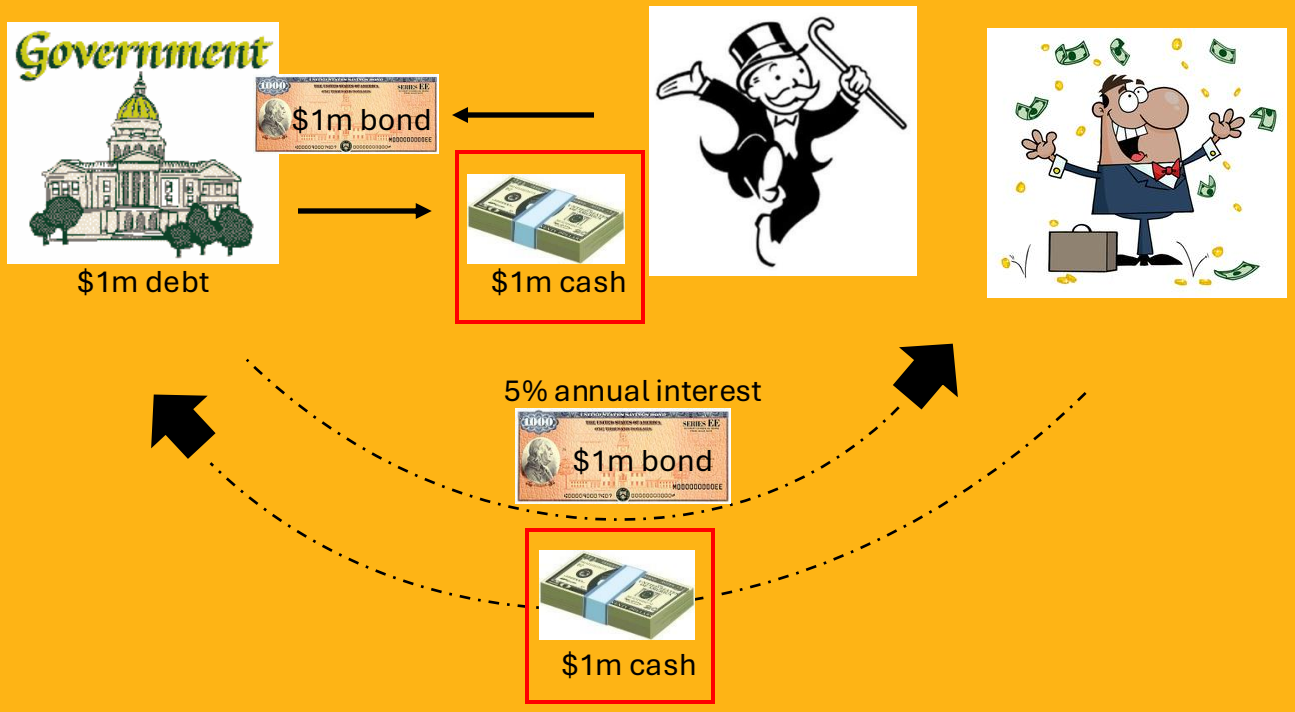
Rolling Over Debt



Rolling Over Debt



Rolling Over Debt



What if the government can't find a lender?

What about the debt matters?

Interest Payments

Example:

Government Debt = 1 million

Interest Rate = 5% = 0.05

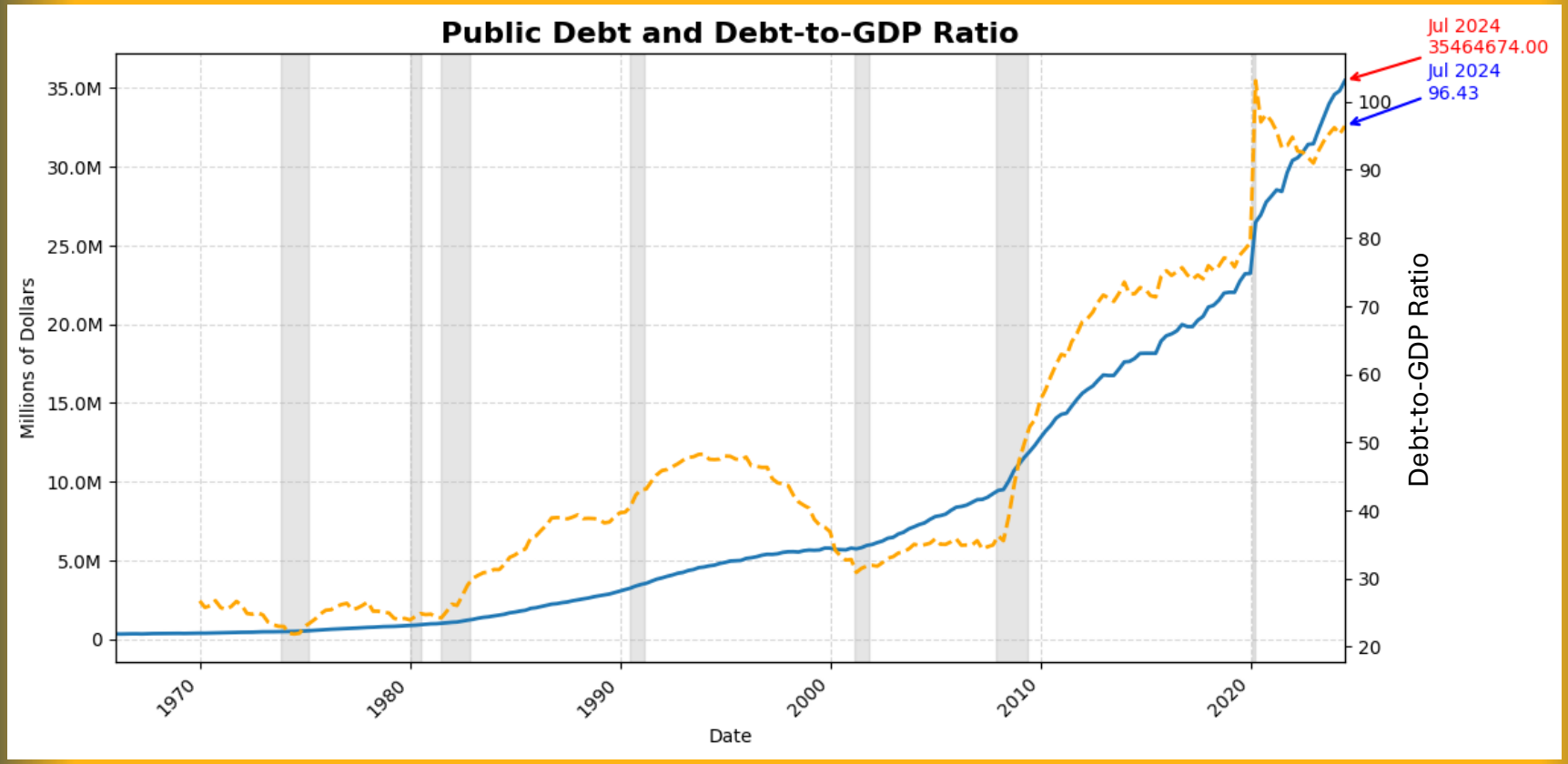
Nominal GDP = 5 million

National Debt Facts

Fact #3:Debt-to-GDP Ratio

National Debt Facts

- Debt-to-GDP Ratio:



National Debt Facts

Fact #4: National Debt Interest Payments

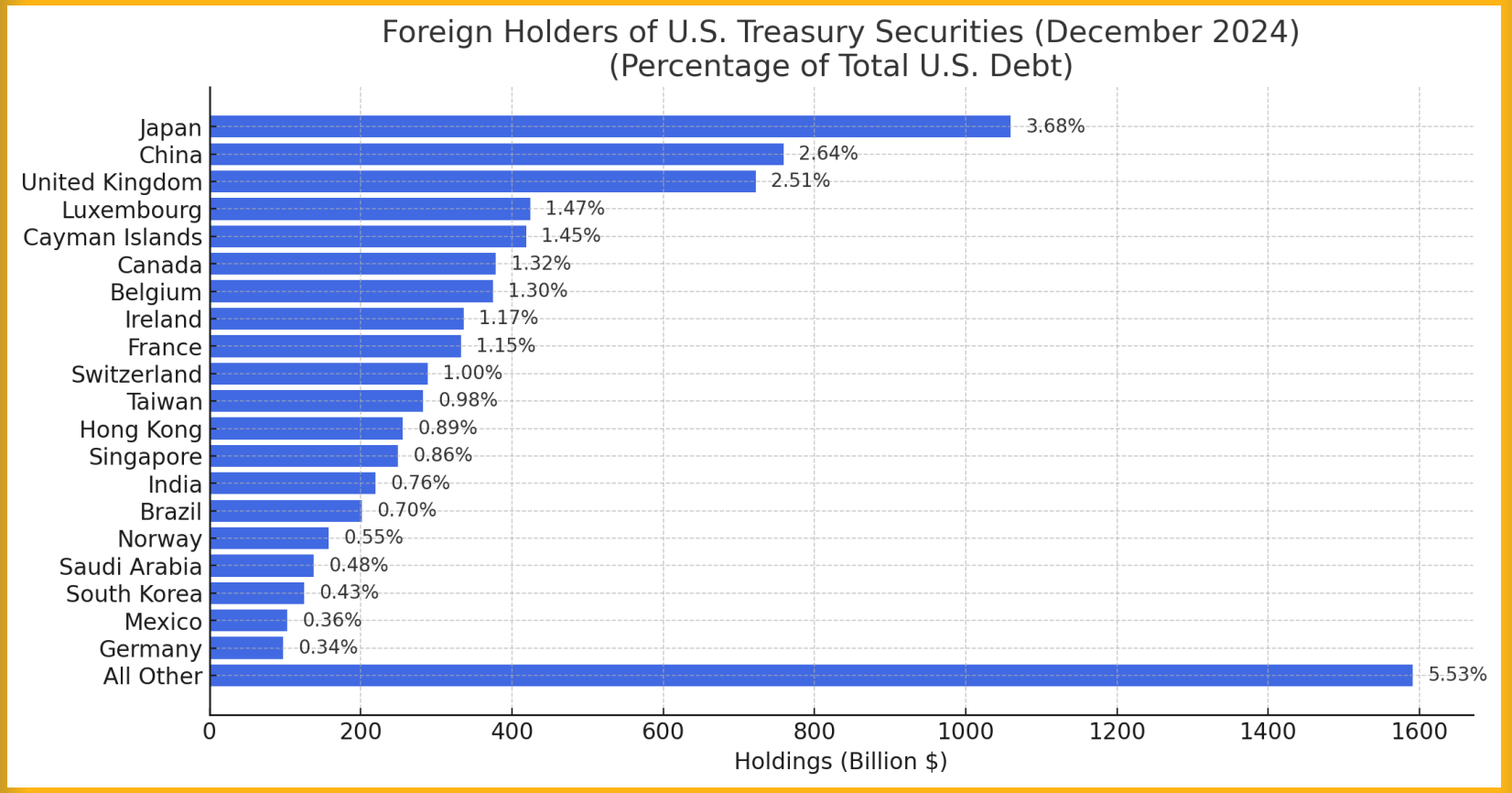
Spending Interest Payments

$1m debt

5% annual interest

$1m cash

Who Owns the US Debt



Debt Projections and Aggregate Expenditures

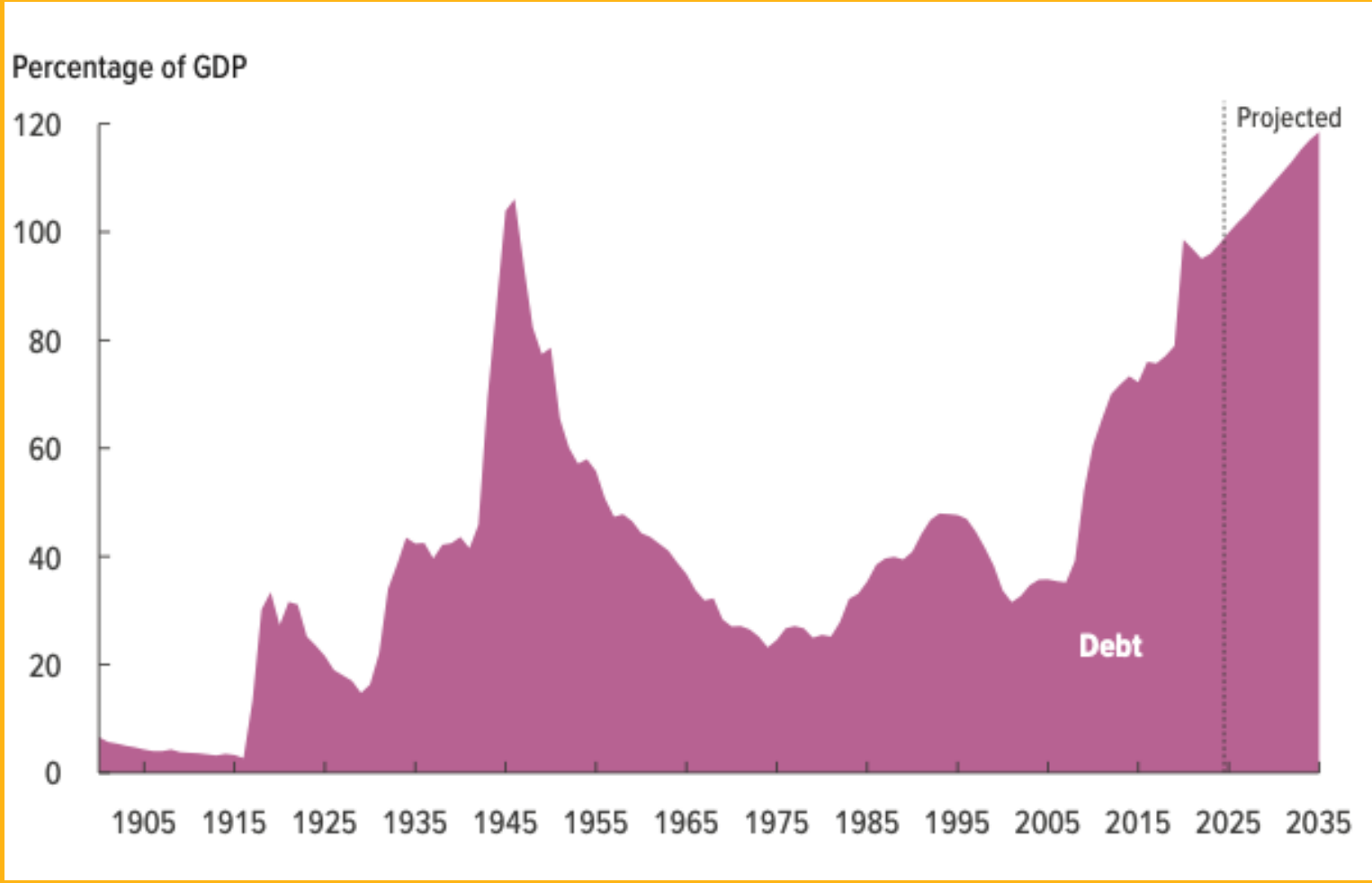
What can be done?

- Decompose the Minimum Tax Rate:

Long Term Costs of Rising Debt

- Fiscal crisis
  - Investors lose confidence in ability to repay its debt/interest
- Higher Interest Payments
  - Larger portion of budget dedicated to interest payments
  - Crowd out other types of government spending
- Economic Impact
  - Serviced and repaid by raising taxes
  - Monetize the debt = inflation, devaluation of currency
- Reduced Flexibility
  - Future generations forced to pay debt of previous generations
  - Limits the resources for economic downturns/emergencies

CBO Debt Projections



Maturing National Debt

- Average Interest Rate on Debt
- Unsustainable Fiscal Path, Bureau of the Fiscal Service
- Fiscal Data (from Treasury.gov)