



The US Federal Debt

Lifeguard Wealth
April 6, 2023

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NEED


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1

1

National Economic Education Delegation

- **Vision**
 - Someday, the public discussion of policy issues will be grounded in an accurate perception of the underlying economic principles and data.
- **Mission**
 - NEED unites the skills and knowledge of a vast network of professional economists to promote understanding of the economics of policy issues in the United States.
- **NEED Presentations**
 - Are **nonpartisan** and intended to reflect the consensus of the economics profession.



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2

2

Who Are We?

- **Honorary Board: 48 members**

- 2 Fed chairs: Janet Yellen, Ben Bernanke
- 6 chairs of the Council of Economic Advisers
 - o Furman (D), Rosen (R), Bernanke (R), Yellen (D), Tyson (D), Goolsbee (D)
- 3 Nobel Prize-winners
 - o Akerlof, Smith, Maskin

- **Delegates: 650+ members**

- At all levels of academia and government service
- All have a PhD in economics
- Crowdsource slide decks
- Give presentations

- **Global Partners: 45 PhD Economists**

- Aid in slide deck development



3

Credits and Disclaimer

- **This slide deck was created by:**

- Jon Haveman, Executive Director, NEED
- Geoffrey Woglom, Amherst College, Emeritus

- **Disclaimer**

- NEED presentations are designed to be nonpartisan.
- It is, however, inevitable that presenters will be asked for and offer their own views.
- Such views are those of the presenters and not necessarily those of the National Economic Education Delegation (NEED).



4

First: A Budget Primer

5

What Does the US Govt. Budget Look Like?

2022 Budget Summary (in billions)

Revenue		Outlays	
Income Taxes	\$2,632	Mandatory	\$4,134
Payroll Taxes	\$1,484	Discretionary	\$1,661
Corporate Taxes	\$425	Interest	\$475
Other	\$356		
Total	\$4,897	Total	\$6,270

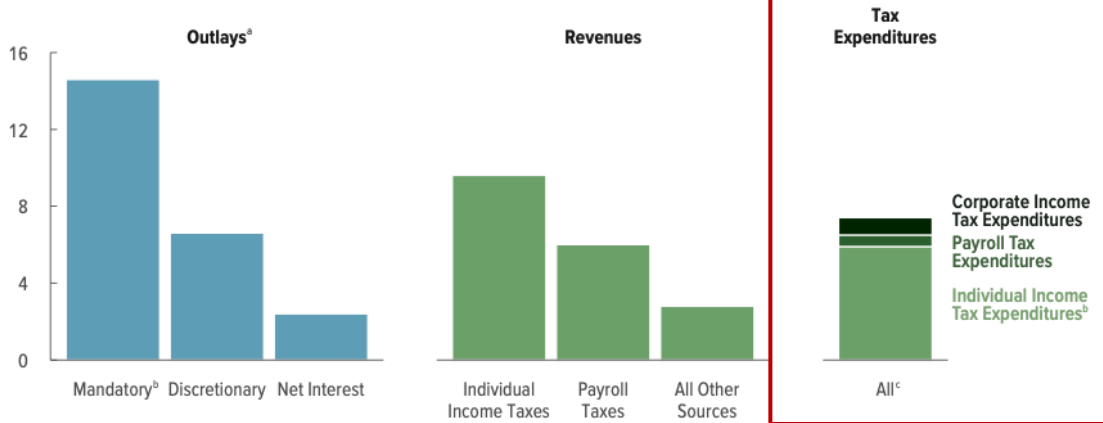
Budget Deficit **\$1,373 Billion**

6

But There is More to The Budget!

Estimated Outlays, Revenues, and Tax Expenditures in 2023

Percentage of GDP

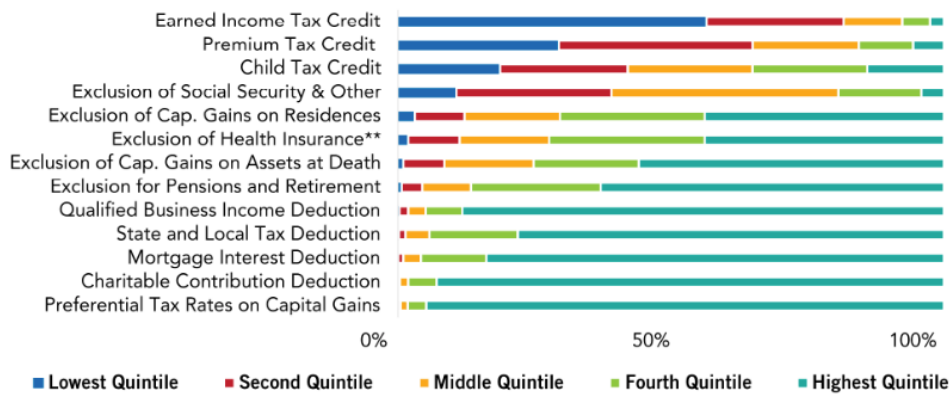


Source: <https://www.cbo.gov/system/files/2023-02/58848-Outlook.pdf>

7

What Are Tax Expenditures?

SHARE OF MAJOR TAX EXPENDITURES* (%)



SOURCE: Congressional Budget Office, *The Distribution of Major Tax Expenditures in 2019*, October 2021.



Source: https://www.pgpf.org/Chart-Archive/0199_distribution_tax_expenditures

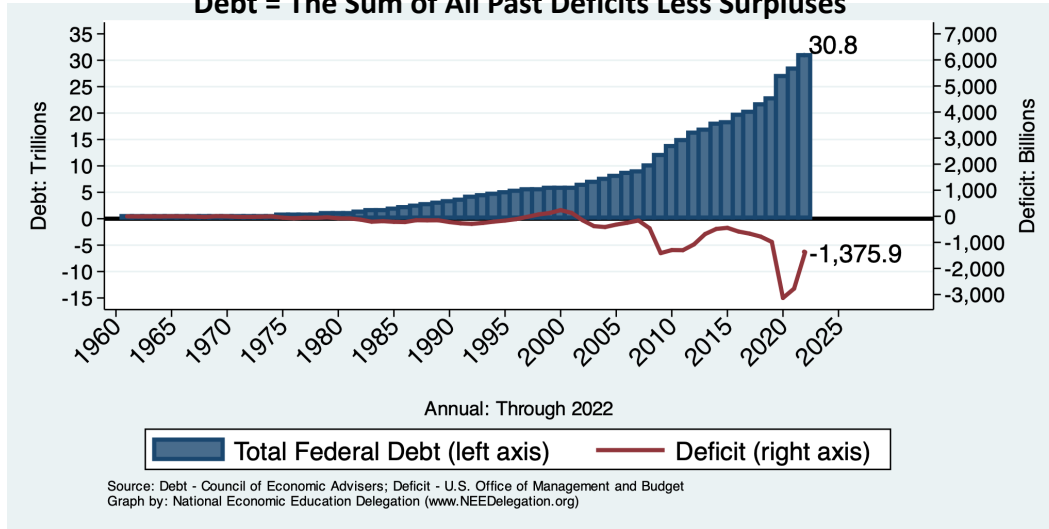
8

And Now: The Debt

9

Debt vs. Deficit

Debt = The Sum of All Past Deficits Less Surpluses



10

Of Debt, Deficits, and Surpluses

• FLOW

- **Deficit:** The excess of outlays over revenues in a year.
- **Surplus:** The excess of revenues over outlays in a year.

• STOCK

- **Debt:** The accumulation of debt over time.
 - The sum of all past deficits and surpluses.



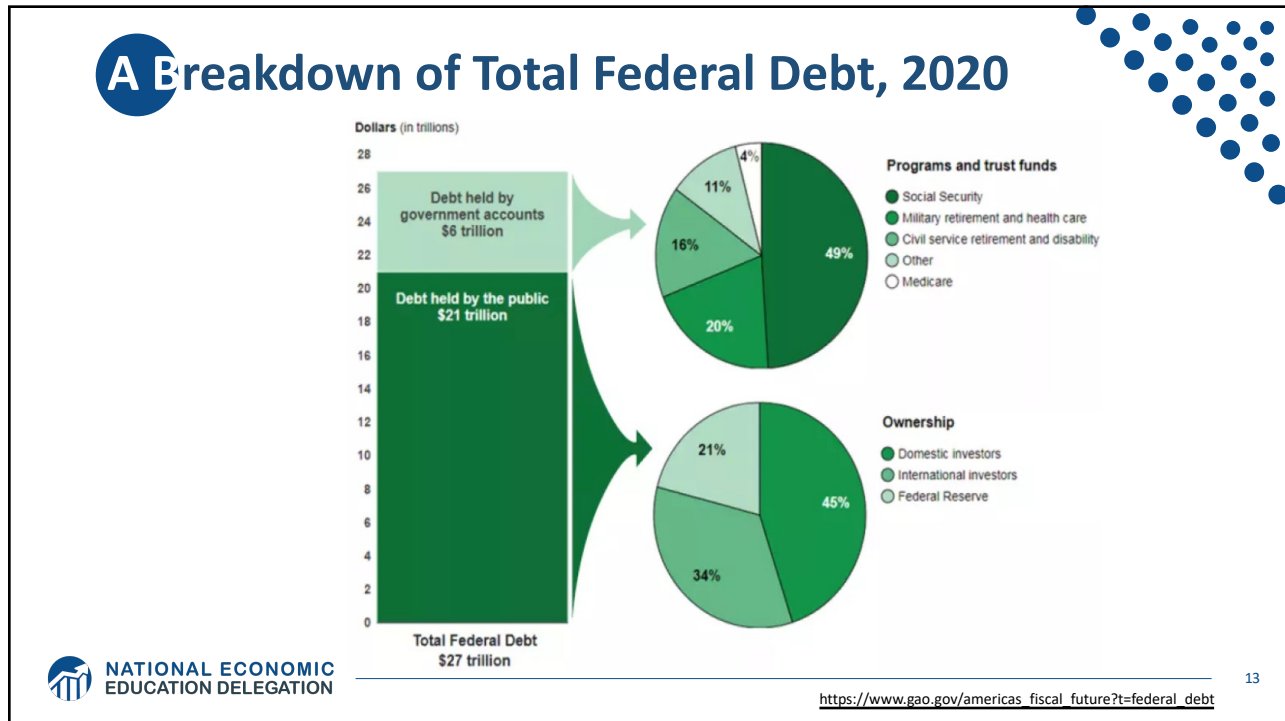
How Does the US Government Borrow?

• It issues debt.

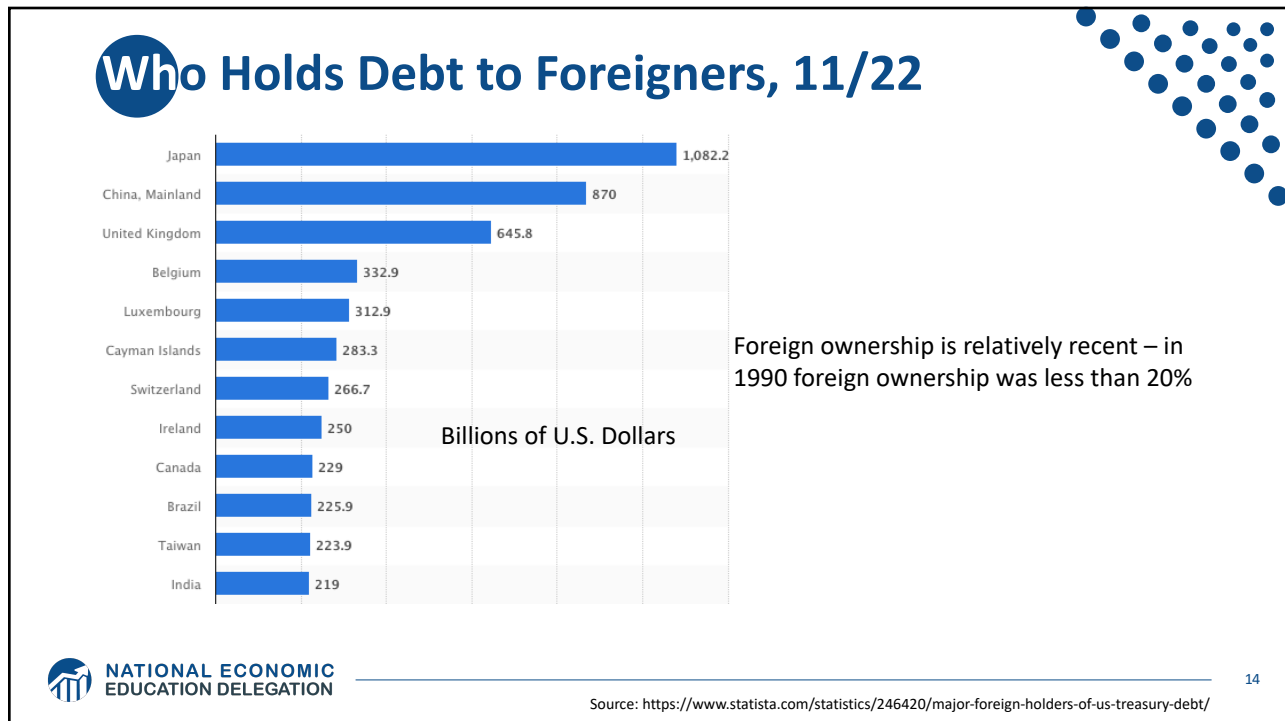
- Treasury marketable securities:
 - Treasury bills, notes, and bonds
 - TIPS: Treasury inflation-protected securities
 - Savings bonds

• Who buys the debt?

- Other federal agencies
- Individuals and businesses
- State and local governments
- Foreign government and individuals
- Federal Reserve



13



14

Why Do Foreign Investors Buy US Treasuries?

- **Market for Treasuries is the deepest, most liquid capital market in the world.**
- **The US economy has a history of political and economic stability.**
- **The dollar is the largest international reserve currency.**
 - Most trade transactions (e.g., oil) are quoted in dollars.
 - With some exceptions, foreign citizens borrow in dollars.

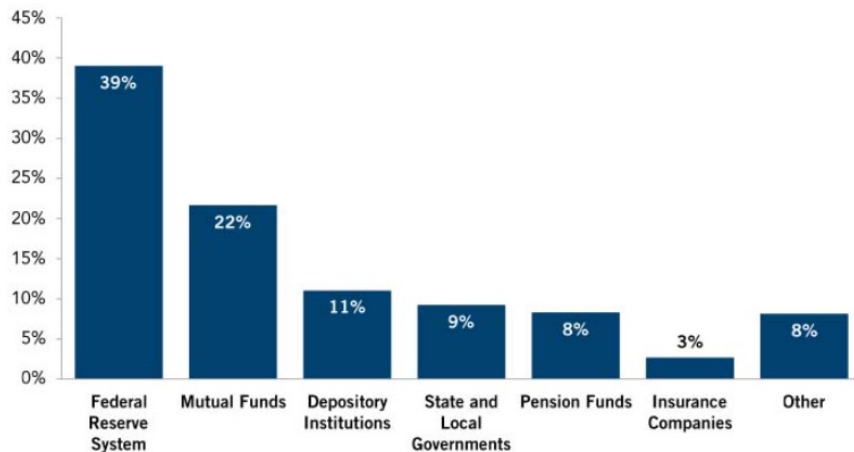


15



The Federal Reserve owns nearly 40 percent of domestically held debt

% OF DEBT HELD BY THE PUBLIC OWNED BY DOMESTIC CREDITORS

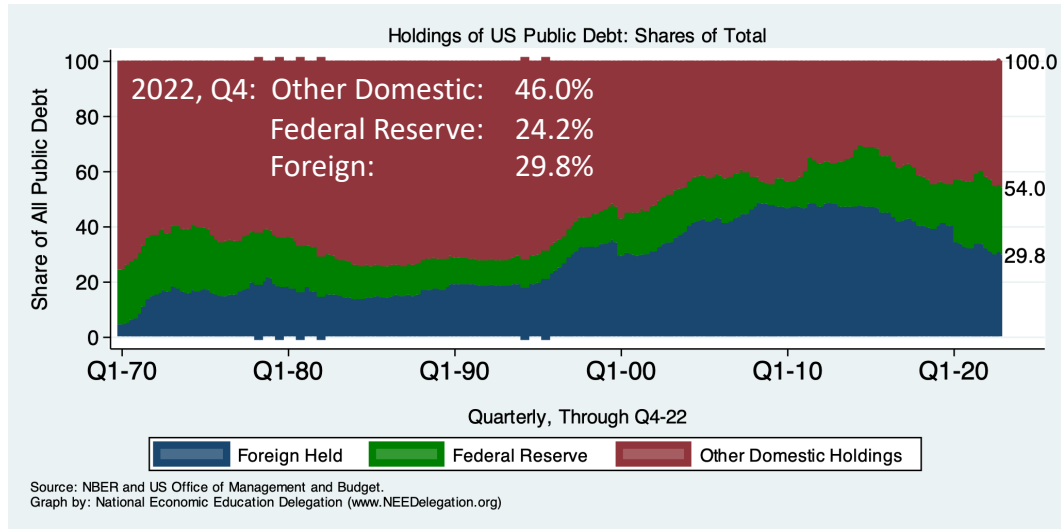


SOURCE: U.S. Department of the Treasury, *Treasury Bulletin*, June 2022.
 NOTES: Data are through December 2021. The Other category is made up of U.S. Savings Bonds and Other Investors.
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16

Trends in US Debt Over Time



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17

17

Not All Debt Is Created Equal

- **Some debt can reduce the availability of investment funds to other borrowers.**
 - Often referred to as “crowding out” private investment.
- **Intragovernmental debt is (important) bookkeeping.**
 - This debt **DOES NOT** crowd out private investment.
- **Debt held by the public.**
 - This debt **MIGHT** crowd out private investment.
- **Most analyses of debt focus on federal debt held by the public.**

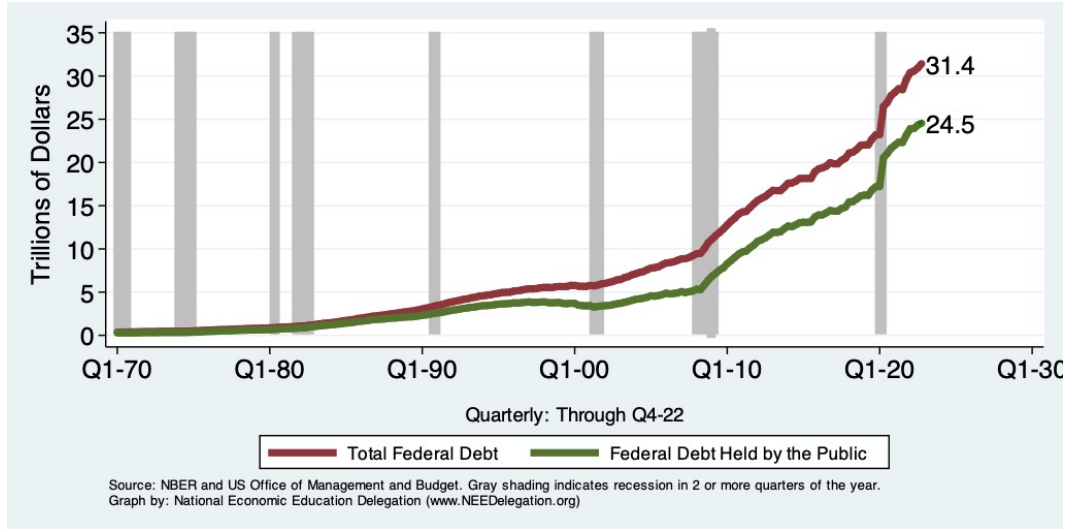


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18

18

Two Measures of the Debt

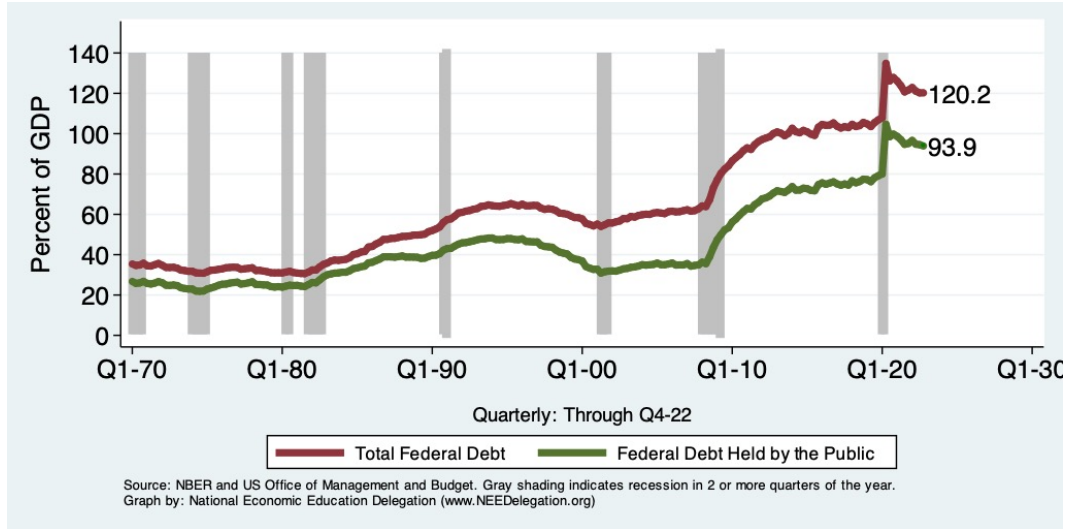


The All-Important *Relative* Debt

- CBO analyzes the debt *relative* to GDP because:
 - To the extent that debt and deficits have burdens, these burdens depend on the size of the debt *relative* to the size of the economy.

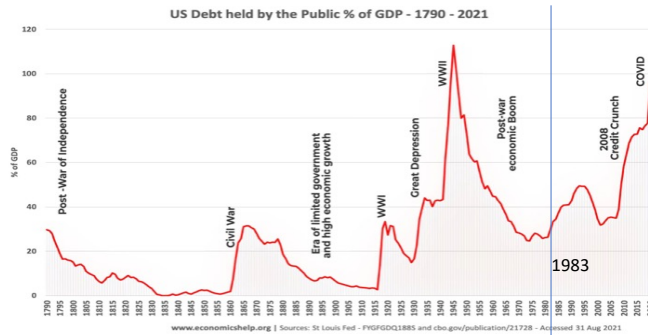
	Total Public Debt	Relative Debt Debt/GDP
United States	\$31.4 Trillion	120%
Greece	\$0.20 Trillion	252%

Two Measures of RELATIVE Debt



21

Key Points About US Relative Debt



1. Prior to 1983, relative debt rose purposefully (wars and recessions) and then fell.
2. Relative debt peaked during World War II, followed by a long decline.
3. Relative debt has been and is expected to rise for the next 30 years w/o a strategic purpose.

22

Debt Dynamics

- **Surprising (?) Facts**

- From 1945 to 1979, relative debt fell from 100% of GDP to 25% of GDP.
- During this period, the federal budget was in surplus only 8/35 years!

- **Relative debt is a fraction: Debt/GDP; fractions fall if:**

- The *numerator* falls (budget surplus)
- The *denominator* rises (nominal GDP growth)
- The *denominator* **grows** faster than the *numerator*
 - *GDP growth is greater than the interest rate on borrowing.*
 - *CAN still run deficits and reduce the relative debt.*



23

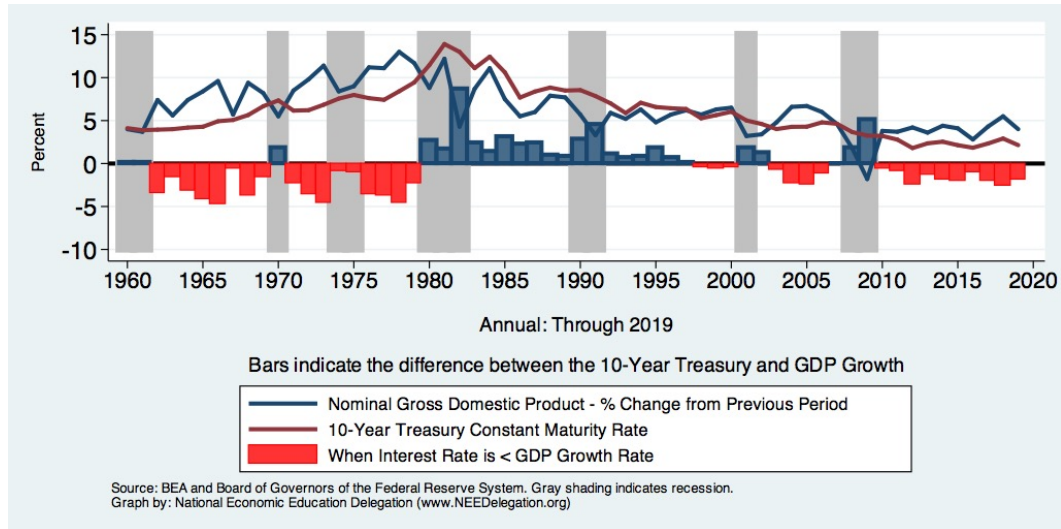
An Almost Free Lunch

- If the interest rate is **less** than the growth rate of GDP, then the contribution from the primary budget can be positive, hence...
- Debt to GDP can be stabilized with a (small) primary **deficit**.



24

Evidence? Does This Happen?



25

Is Stabilizing Relative Debt Good Enough?

- **This means that the absolute level of the debt would continue to increase.**
- **Yes, it is probably good enough.**
 - It is a reflection of the economy's ability to support the debt.
 - Stability will avoid bond market scares.
- **More on this later.**

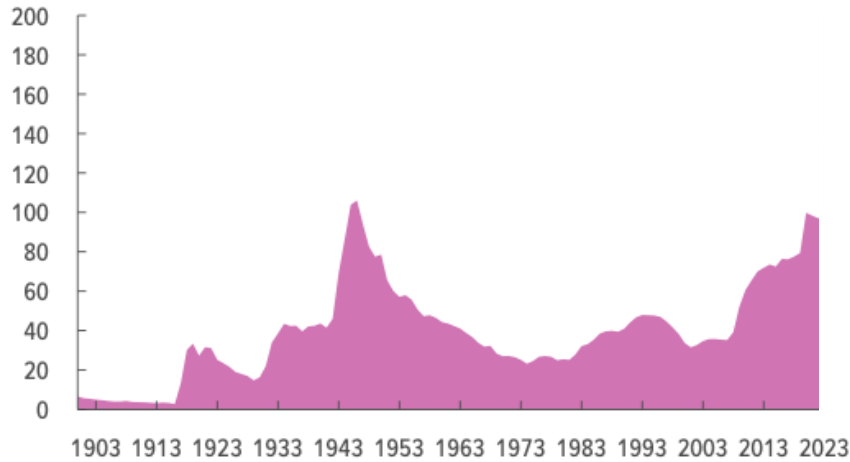


26

But Let's Think About Today

Federal Debt Held by the Public, 1900 to 2053

Percentage of Gross Domestic Product



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27

27

Why Has the Federal Debt Risen So Much?

• Expenditures UP:

- Social Security
- Health-care costs
- Economic stimulus
 - In particular, during the Great Recession & COVID.
- Military engagements overseas

• Revenues DOWN:

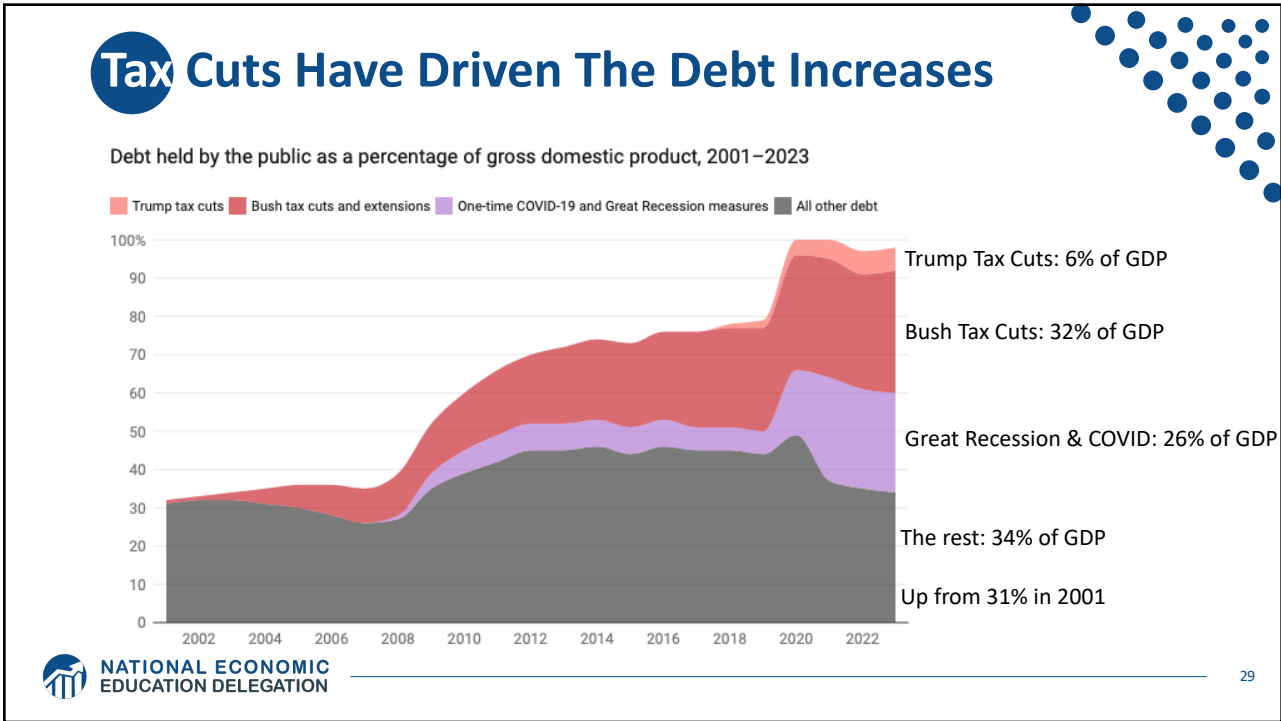
- Declining income tax revenues
 - Stagnant wages
 - Tax cuts
- Social security
 - Declining revenues



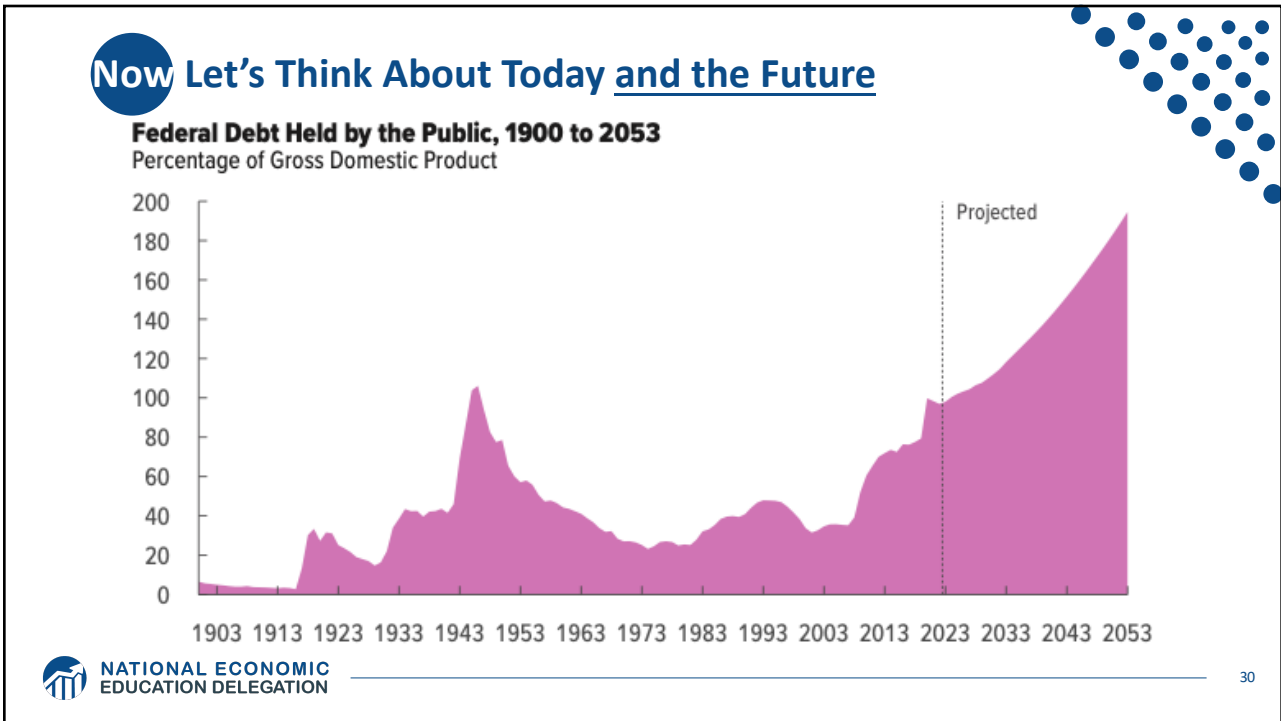
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28

28

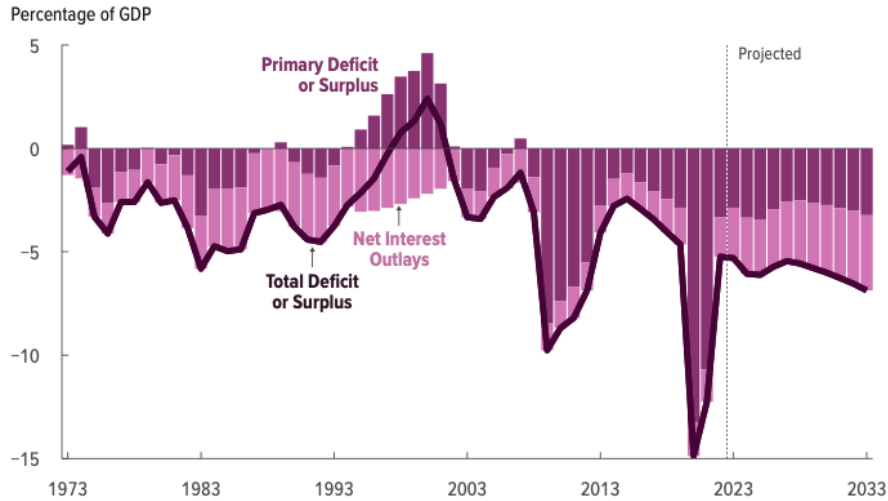


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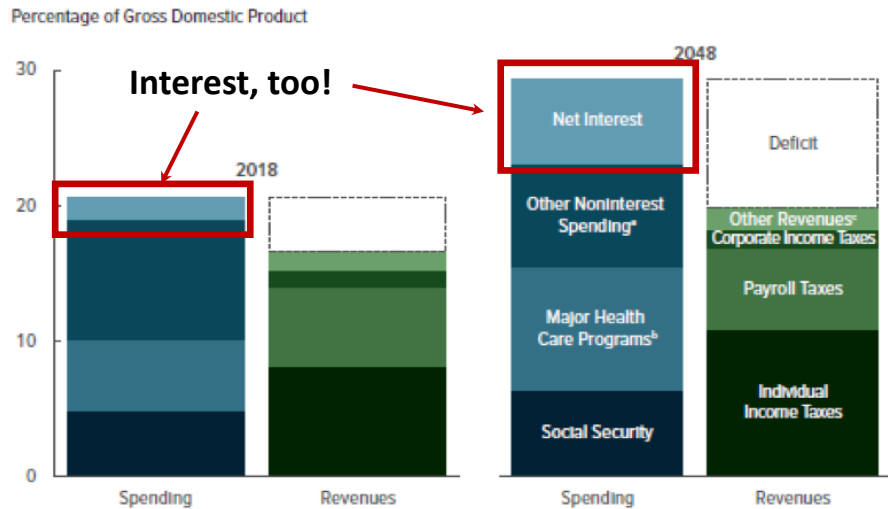
30

Rising Debt Levels Due to a Future of Deficits



31

Spending to Grow Much Faster Than Revenue



Source: Congressional Budget Office.

32

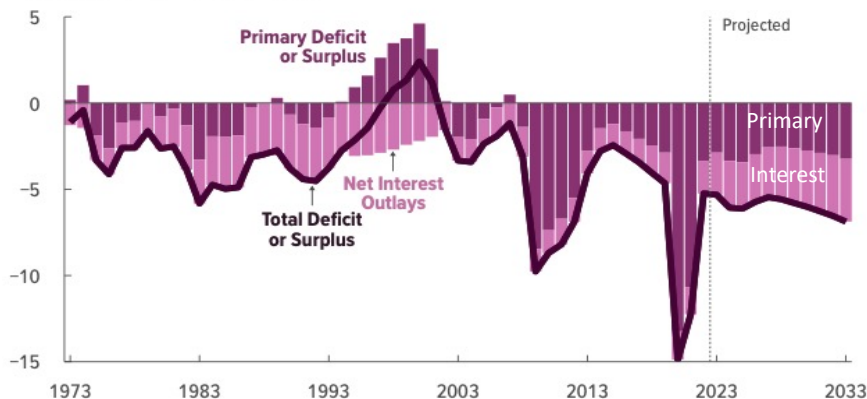
Two Measures of the Deficit

- (1) Primary deficit = current programmatic outlays – revenues
- (2) Total deficit = primary deficit + interest
- Interest on the debt is
 - The part of the total deficit that is due to past deficits.
- This distinction becomes important for understanding:
 - The future course of relative debt.
 - The costs borne by future generations because of the debt.

33

Interest Will Grow as a Share of the Deficit

Total Deficits, Primary Deficits, and Net Interest Outlays
Percentage of Gross Domestic Product



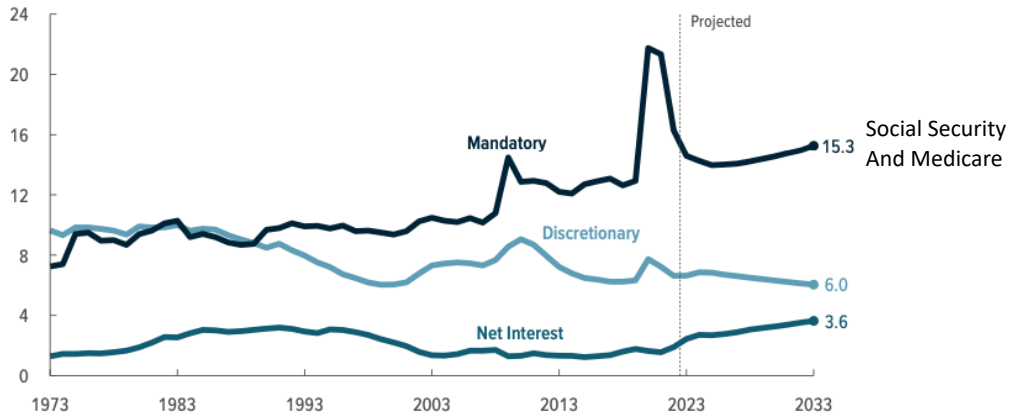
In CBO's projections, net interest outlays increase by 1.2 percent of GDP from 2023 to 2033 and are a major contributor to the growth of total deficits. Primary deficits (that is, revenues minus noninterest outlays) increase by 0.4 percent of GDP over that period.

34

What Are the Primary Drivers Going Forward?

Outlays, by Category

Percentage of GDP



35

How to Think About the Debt

36

Perspectives on Increased Debt

- **Does debt impose a burden on future generations?**
 - Does it inevitably have to be paid off?
- **Government borrowing crowds out private capital and investments.**
 - Weakened by the ability to borrow from other countries.
- **In time, debt service might crowd out other government spending.**
 - Diminishing policy priorities in the budget.
- **Is it reasonable to borrow at low interest rates for investment?**
 - For example, for infrastructure.



37

Is The Debt a Problem Today?

- **Federal government borrows each month with little difficulty.**
- **Very little evidence of "crowding out."**
- **Interest rates are low, but rising – this is becoming a concern.**
- **So, no, other than the debt ceiling, it's not a problem today.**



38

Not All Borrowing Is Bad!

- **Two good reasons to borrow:**

1. During a temporary crisis
 1. Recession
 2. War
 3. Pandemic
2. Productive public investment
 1. Infrastructure
 2. Education



- **These deficits did not and do not permanently increase relative debt.**

- Great Depression, WWII
- Public investment expands GDP and tax revenue



So, Why Worry About it?

- **If debt become too high:**

- Investors might start questioning the creditworthiness of the US government.
 - o Problem: Nobody knows how high is too high.
- It becomes more difficult to borrow in times of crisis.
 - o War, severe recession
 - o “Fiscal space”
 - Impossible to measure how much we have.
 - Clearly, we have less now than in 2007.
- Could start to crowd out investment by consumers and businesses.
 - o Not currently a problem. No idea if/when it might become one.
- Could be inflationary.



So, Why Worry About It?

- **If debt continues to grow:**

- Interest payments will grow with it.
 - 8% of spending in 2018.
 - 22% of spending in 2048.
 - Less room for using the budget for policy priorities.
 - 40% of payments go to other countries.
- The longer we wait to address it, the harder and more disruptive addressing it will be.
- Interest rates are increasing.



Growth in Relative Debt

- **Can be scary to....**

- International investors
- Bond markets



Fiscal Crisis, or a Run on the Dollar

- **With an exploding relative debt, what happens if foreigners lose confidence in the stability of the dollar?**
- **CBO (*Federal Debt: A Primer*, March 2020):**
 - because the United States currently benefits from the dollar's position as the world's reserve currency and because the federal government borrows in dollars, a financial crisis—similar to those that befell Argentina, Greece, or Ireland—is less likely in the United States.
 - Although no one can predict whether or when a **fiscal crisis** might occur or how it would unfold, the risk is almost certainly increased by high and rising federal debt.
- **Crises of confidence, in addition to being unpredictable, happen very quickly.**



What Is a Fiscal Crisis?

- **Increased perception of risk in government debt.**
- **Potential manifestations:**
 - Sudden significant increase in interest rates
 - Plunging exchange rates
- **Why?**
 - Increased expectation of default
- **Potential results:**
 - Dramatic budget reforms may be quickly necessary to stave off actual default.
 - Recession from declines in:
 - o investment (interest rates)
 - o consumption (interest rates)
 - o Government spending
 - Higher interest bill on existing debt



The Key: Stabilization of Relative Debt

- **Stabilization of relative debt might forestall the consequences of chronic deficits.**
- **Problem: The US federal debt is in no way stable.**
- **W/o stability, interest rates might rise, causing crowding out of:**
 - policy priorities
 - domestic investment
- **Budget surpluses are not necessary, but budget control is.**



45

Shall we manufacture our own fiscal crisis?



46

Existential Threat: Coming This Summer!



5 Things to Know about the Debt Ceiling

1. The debt limit has been raised continually for more than a century.
2. Raising the debt limit is not about new spending; it is about paying for previous choices policymakers legislated.
3. The uselessness of a debt limit is exhibited by the fact that only one other advanced country—Denmark—has a separate debt limit rule like ours.
4. If debt hits the ceiling, the Treasury Department uses several accounting gimmicks to postpone the day of reckoning, but these typically last only a few months.
5. The economic consequences of a large-scale, intentional default are unknown, but predictions range from bad to catastrophic.

Lessons from 2011 & 1979

- **2011: Government shutdown was very costly:**
 - Stock markets plunged (17%).
 - Employment growth stuttered.
 - Treasuries – downgraded credit ratings.
 - Borrowing costs rose.

- **The Debt Ceiling may be a very effective bargaining tool, but...**
 - It is costly.
 - It is unnecessary.

- **Accidental partial default in 1979:**
 - increased borrowing costs by \$40 Billion!



Bottom Line: We Need to Worry about the Debt

1. Interest rates are rising.
2. A fiscal crisis should be avoided at all costs.
3. Stabilizing relative debt would substantially reduce the possibility of a crisis.
4. The good news is we might be able to stabilize relative debt without a primary surplus.

But we must substantially reduce primary deficits.

We MUST MUST MUST raise the debt ceiling.



Bottom-Line Takeaways

- **Relative debt must be stabilized, so it is imperative to reduce primary deficits after the virus has been defeated.**
- **Given the fiscal challenges of an aging population and climate change, it is better to do this sooner rather than later.**
- **But high debt levels should not deter:**
 - Productive infrastructure investment.
 - Fiscal responses to crises:
 - When the house is on fire, you don't worry about being in a drought; you just put it out.
- **Debt ceiling – what is it good for?**



51

Bottom Line

- Question is not **WHETHER** the US will have to act...
but **WHEN**.
- Some combination of the following **WILL** be necessary:
 - **Raising taxes**
 - **Cutting spending**
 - **Reining in health-care costs**



52

Thank you!

Any Questions?

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Economists' Views on the Debt Evolve



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Traditional View: A Non-Issue

- **The analogy between household and government debt is inaccurate.**

- The government does not have to pay back the debt.
 - Retirees cash in maturing bonds, which are financed with new bond issues sold to younger people.
 - Interest on the debt is essentially paid by the young to their parents.
 - When the young are old, their young will do the same for them.



Reagan's Experiment in Supply-Side Economics

- **Tax cuts were supposed to be “investments.”**

- Lower marginal tax rates, and people will work more/harder and save.
- Higher GDP will raise tax revenue to pay for the deficit.

- **Sadly, in 1981-89, debt rises from 25% to 40%.**

- For the first time, relative debt rises during a non-recessionary peacetime.
- Reignites concern about debt and deficits.

- **Failed experiment?**



Traditional View: Four True Costs

- **Crowding out:**
 - The Treasury's borrowing needs compete with private borrowers, so debt and deficits raise interest rates.
- **Higher interest rates lead to foreign capital inflows or foreign borrowing.**
 - With foreign borrowing, some of the interest on the debt goes to foreign countries.
- **Larger primary surpluses are needed to stabilize the relative debt.**
 - The larger the relative debt, the bigger the needed primary surplus.
 - Thus higher taxes or programmatic outlays must be reduced.
- **Government bias toward higher inflation**
 - GDP grows if either prices rise or real output rises.



57

What the Traditional View Got Wrong

- **Stabilizing relative debt, debt/GDP, requires that the growth rate in debt equal the growth rate of GDP.**
- **The growth rate in debt has two parts:**
 1. The growth rate in interest on the debt, or just the interest rate.
 2. A contribution due to the primary surplus (–) or deficit (+).
- **The traditional view assumes that the interest rate on debt is greater than the growth rate of GDP**
 - So, 2 must be negative to offset excess of 1.
 - i.e., debt stabilization requires a primary surplus.



58

Maybe Debt Isn't a Problem After All: MMT

- **Modern monetary theory**

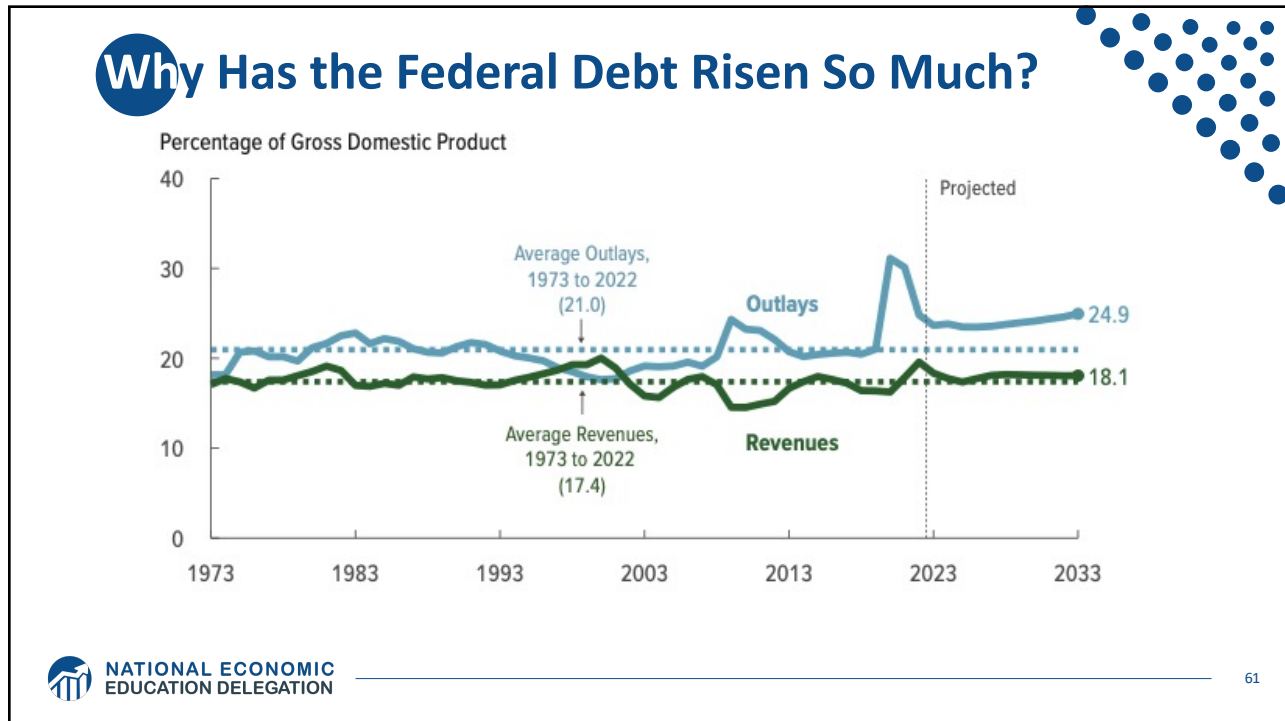
- US Treasury borrows in its own currency and therefore cannot default.
 - o As opposed to countries, such as Greece, which borrow in euros.
- Example: How did we "find the money" for the recent increase in the deficit of about \$1.9 trillion?
 - o Answer: The Fed purchased \$1.7 trillion = 89% of financing
- More generally, MMT argues that we can always find the money to increase federal spending.



MMT's Free Lunch

- **The only limit on deficit spending is when it leads to too much spending, thereby increasing current inflation.**
- **Recognizing this fact, "could free policymakers not only to act boldly amid crises but also to invest boldly in times of more stability."**
 - First part, acting boldly, is important and likely true.
 - Second part, invest boldly, is suspect.





61

Why Has the Federal Debt Risen So Much?

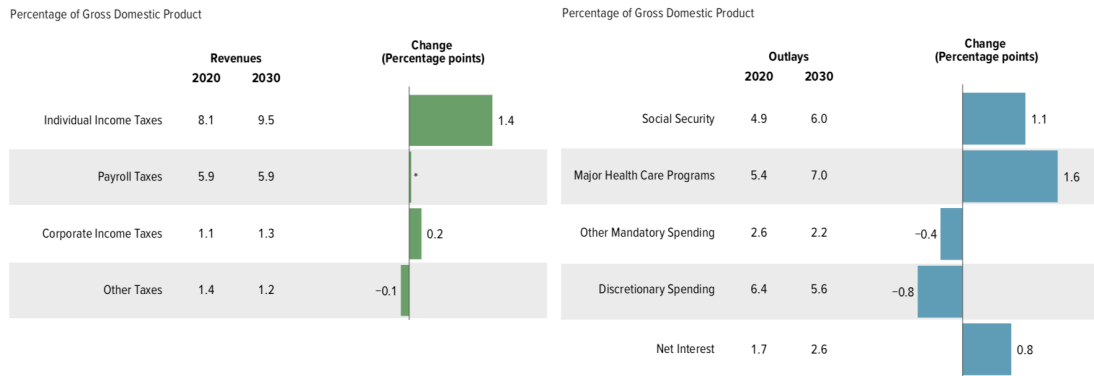
- **Expenditures:**
 - Social Security
 - Health-care costs
 - Economic stimulus
 - In particular, during the Great Recession & COVID.
 - Military engagements overseas

- **Revenues**
 - Declining income tax revenues
 - Stagnant wages
 - Tax cuts
 - Social security
 - Declining revenues

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62

Growth in Outlays Exceeds Revenue



63

OK: Relative Debt Cannot Grow Forever, But

- Does it matter at what level we stabilize relative debt?
- Relative debt stops growing:
 - when the growth of debt is less the growth in GDP (on average).
- Arithmetic: growth rate of the debt equals the interest rate plus the effect of the primary surplus or deficit.
- The bigger the relative debt, the smaller the effect of the primary surplus or deficit.



65

Takeaways (Continued)

- After the virus is defeated, some combination of spending cuts and tax increases must be enacted.
- The particular combination of spending cuts and revenue increases is a political question.
- But high debt levels should not deter:
 - Productive infrastructure investment.
 - Fiscal responses to crises.
- Given the fiscal challenges of an aging population and climate change, it is better to do this sooner rather than later.



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67

67

Bottom Line

- Question is not **WHETHER** the US will have to act...
but **WHEN**.
- Some combination of the following **WILL** be necessary:
 - Raising taxes
 - Cutting spending
 - Reining in health-care costs



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68

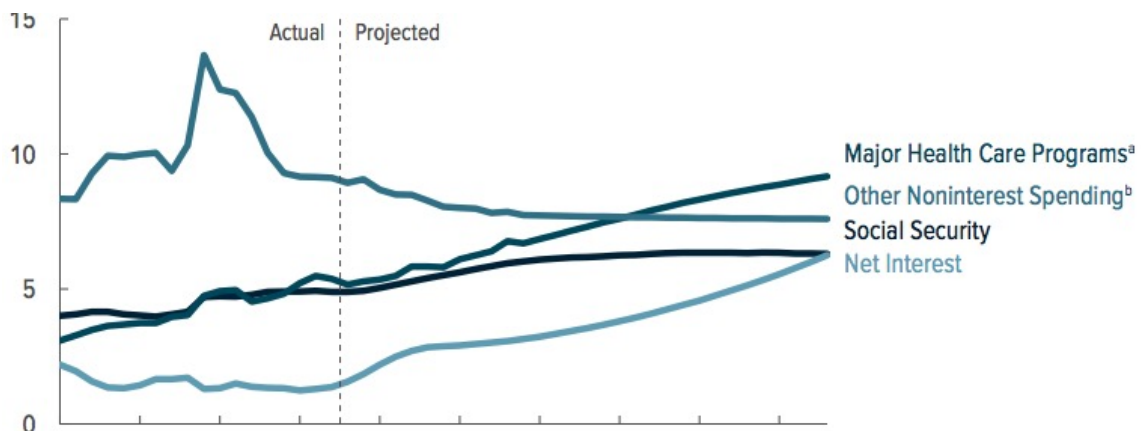
68

Are There Reasons to Wait?

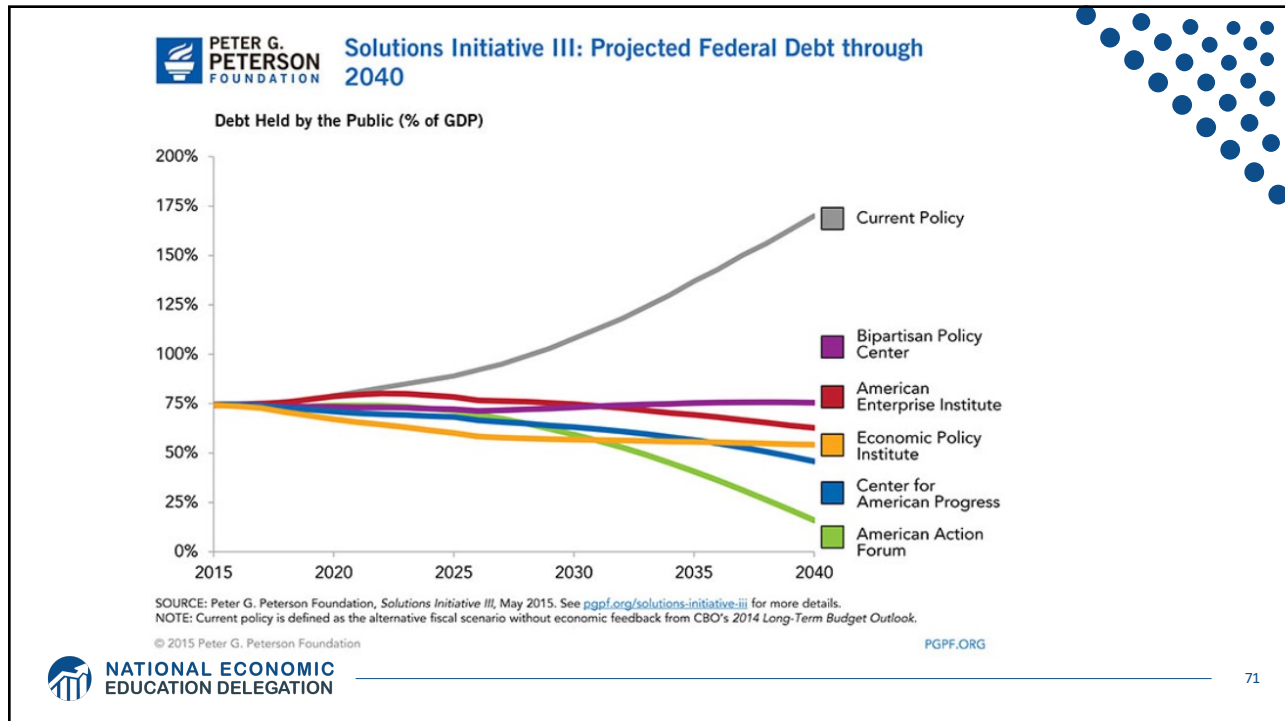
- **Very little evidence of:**
 - Crowding out
 - Inflationary impact
- **Uncertainty about the future**
 - Economic growth might render action today unnecessary.
- **There are a great many investments to be made by the govt.**
 - Infrastructure
 - Education
 - Much, much more ...

69

What Are the Primary Drivers Going Forward?



70



71

There Are Other (Bad/Costly) Solutions

- **Financial repression**
 - Using regulation to force down interest rates.
- **Paying the interest by printing money.**
 - Risks inflation, hyper or otherwise.
- **Or defaulting on the debt.**
 - This will forever raise the cost of government borrowing.

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72

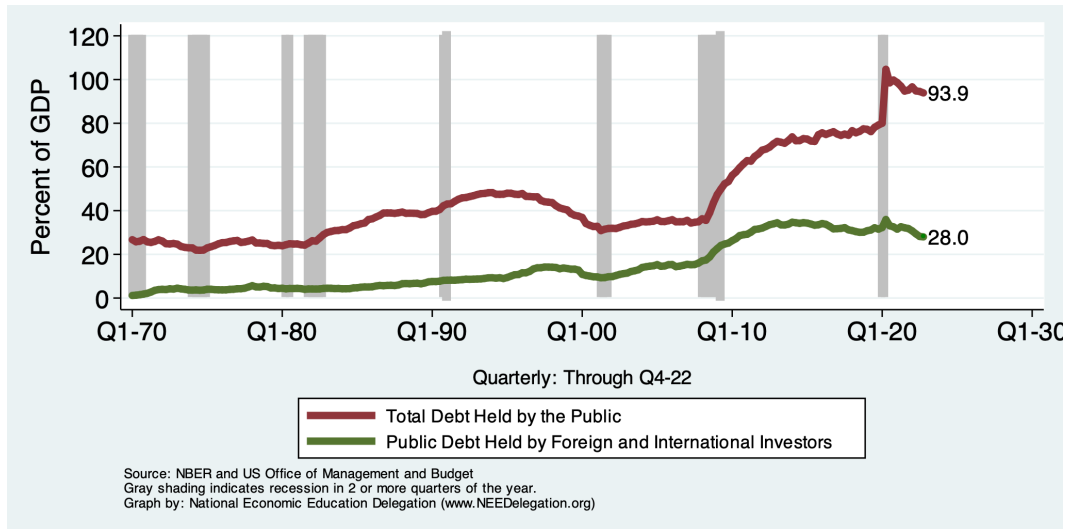
Traditional View: Cost 1

- **Rising debt reduces investment.**

- Deficits and debt raise aggregate demand.
 - o Direct government spending.
 - o Lower taxes lead households to spend more.
- To offset this increase in demand, the Fed has to raise interest rates, reducing investment and future GDP.
- By causing interest rates to rise:
 - o debt and deficits *“crowd out” investment.*

74

The International Appetite for US Treasuries



75

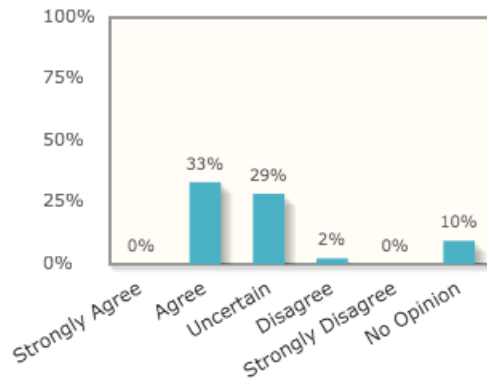
2005: The International Dimension to Debt

- **Interest on foreign-held debt reduces US residents' welfare.**
 - Interest payments go to other countries.
- **When the Fed raises interest rates, the exchange rate of the dollar rises, causing:**
 1. Increases in the trade deficit
 2. Foreign borrowing.
- **Sharp increases in interest rates and the cost of imports raises the possibility of a fiscal crisis or a "run on the dollar."**

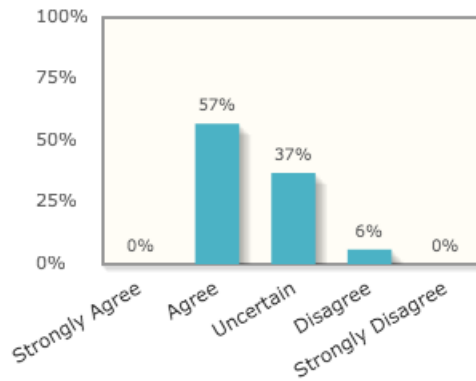
General Agreement Among Economists

If the US reduced its fiscal deficit, then its trade deficit would also shrink.

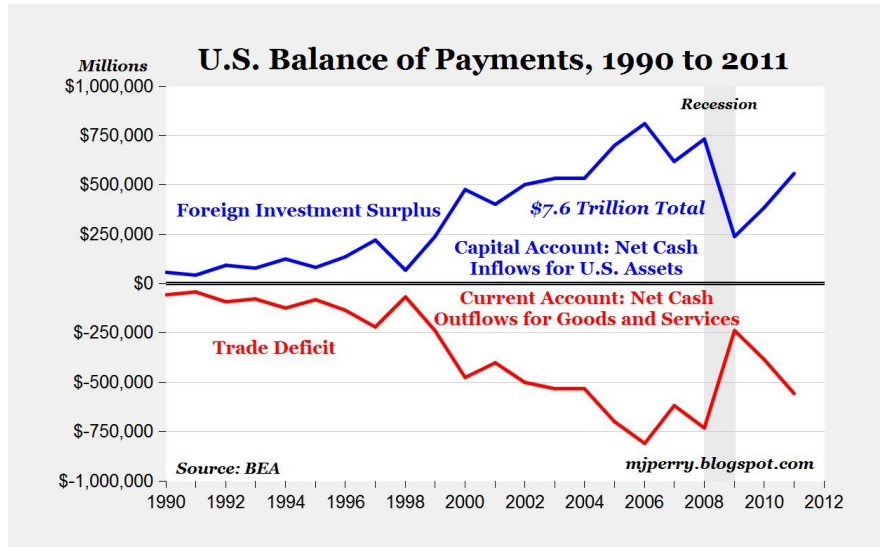
Responses



Responses weighted by each expert's confidence

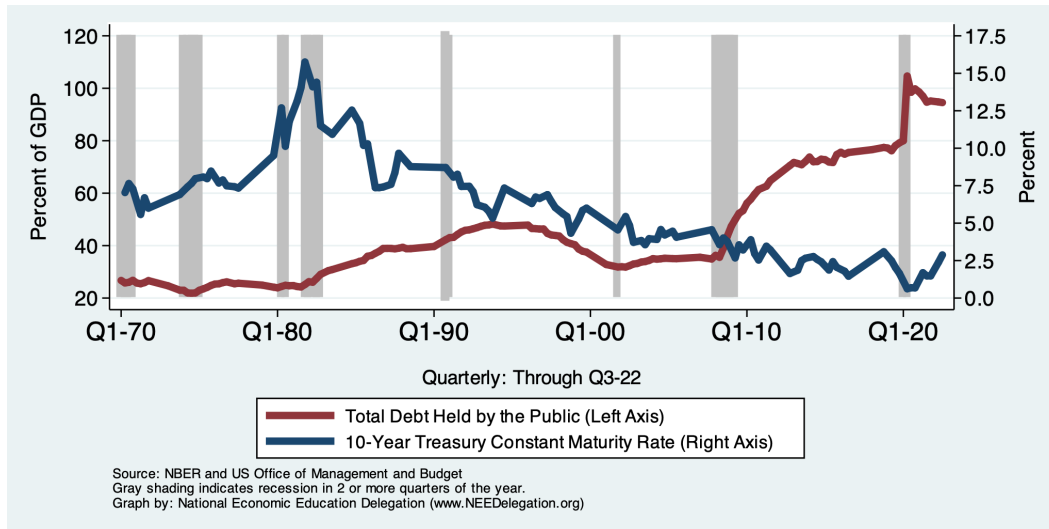


Trade and Investment Flows Balance Out



78

Costs 1-2: The Dog That Didn't Bark



79

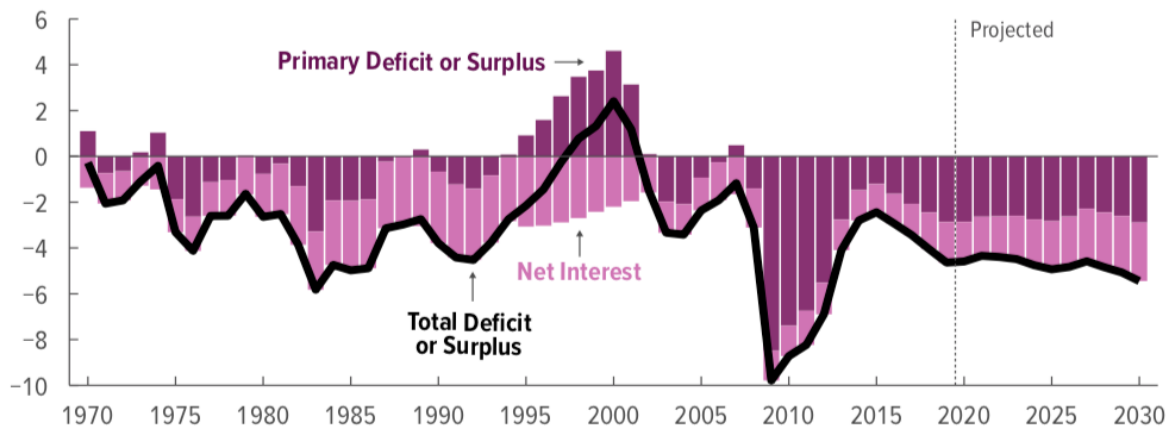
Traditional View: Cost 3

- **Rising debt reduces budgetary options.**

- More debt means higher interest costs.
- Therefore, greater relative debt:
 - o requires a bigger primary surplus to stabilize the relative debt.
- Larger primary surplus means either higher tax rates or less government spending:
 - o “crowding out” of outlays and/or tax cuts.

Cost 3: No Primary Surplus Since 2007!

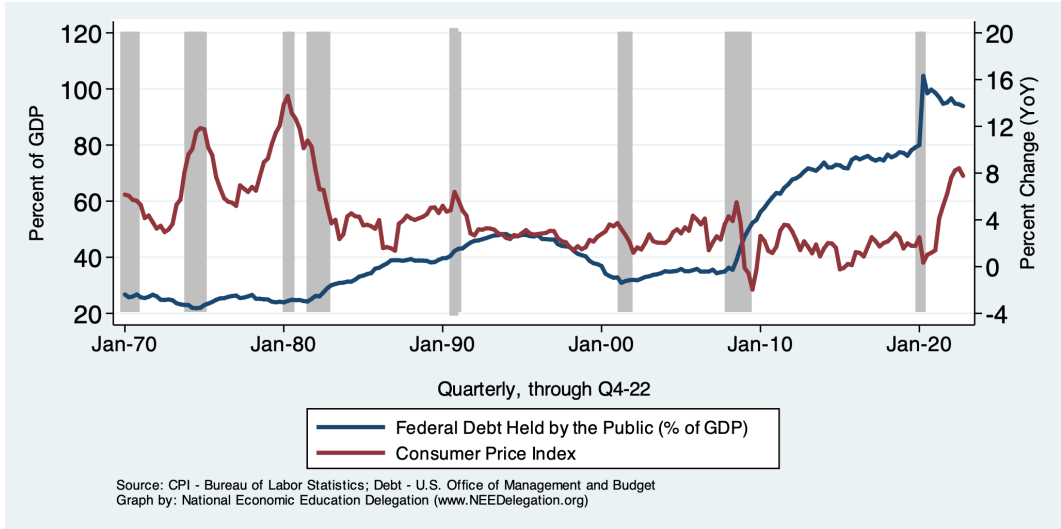
Percentage of Gross Domestic Product



This graph was done before Covid-19

Source: Congressional Budget Office, The Budget and Economic Outlook: 2020 to 2030

Cost 4: Anybody See Any Inflation?



Source: CPI - Bureau of Labor Statistics; Debt - U.S. Office of Management and Budget
Graph by: National Economic Education Delegation (www.NEEDelegation.org)