

*Osher Lifelong Learning Institute, Fall 2019*  
**What Economists Know About Important  
 Policy Issues**

## **Lecture 2: The Federal Budget**

January 29, 2020

**Jon Haveman, Ph.D.**  
 National Economic Education Delegation

1

## **National Economic Education Delegation**

- **Vision**

- One day, 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.

2

## Course Outline

- **What Economists Know About Important Policy Issues**

- Week 1 (1/22): US Economic Update
- **Week 2 (1/29): Government Budgets**
- Week 3 (2/5): Climate Change
- Week 4 (2/12): Income Inequality
- Week 5 (2/19): Trade and Globalization
- Week 6 (2/26): Housing Policy



3

## Federal Budget

### Lecture 2



4

# What Does the U.S. Gov't Budget Look Like?

## 2019 Budget Summary

Revenue	Billions	Expenditures	Billions
Income Taxes	\$1,718	Mandatory	\$2,735
Payroll Taxes	\$1,243	Discretionary	\$1,336
Corporate Taxes	\$230	Interest	\$376
Other	\$271		
<b>Total</b>	<b>\$3,462</b>	<b>Total</b>	<b>\$4,447</b>

Budget Deficit **\$984 Billion**

5

# Outline

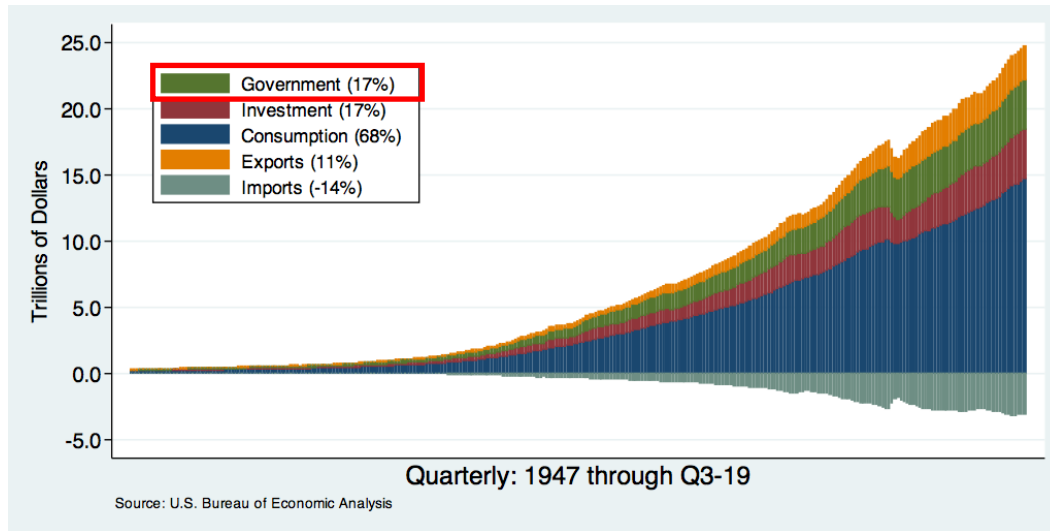
- **Government Spending**
- **Government Revenues**
- **Government Debt**

6

# U.S. Government Spending

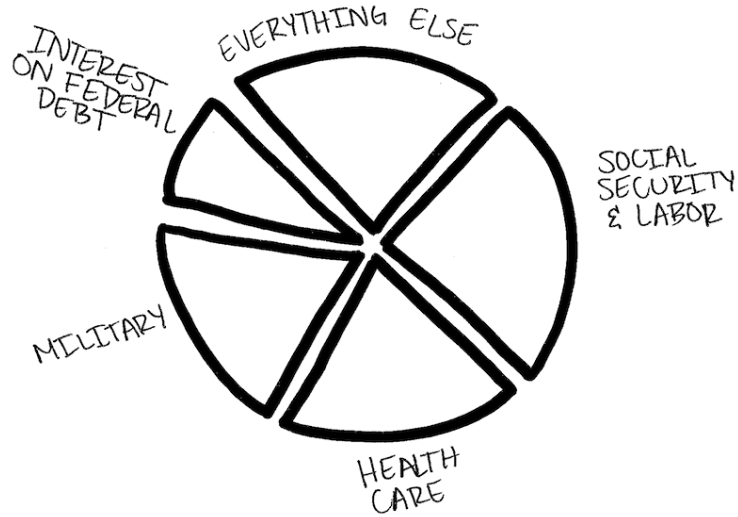
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## Government Spending and the US Economy



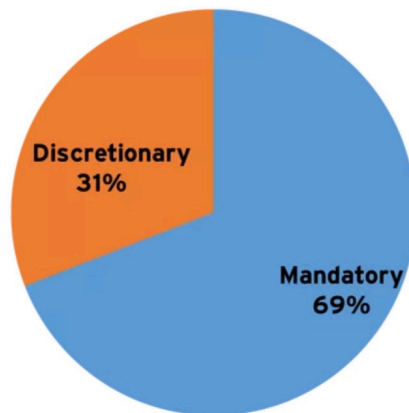
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## Where Does the Money Go?

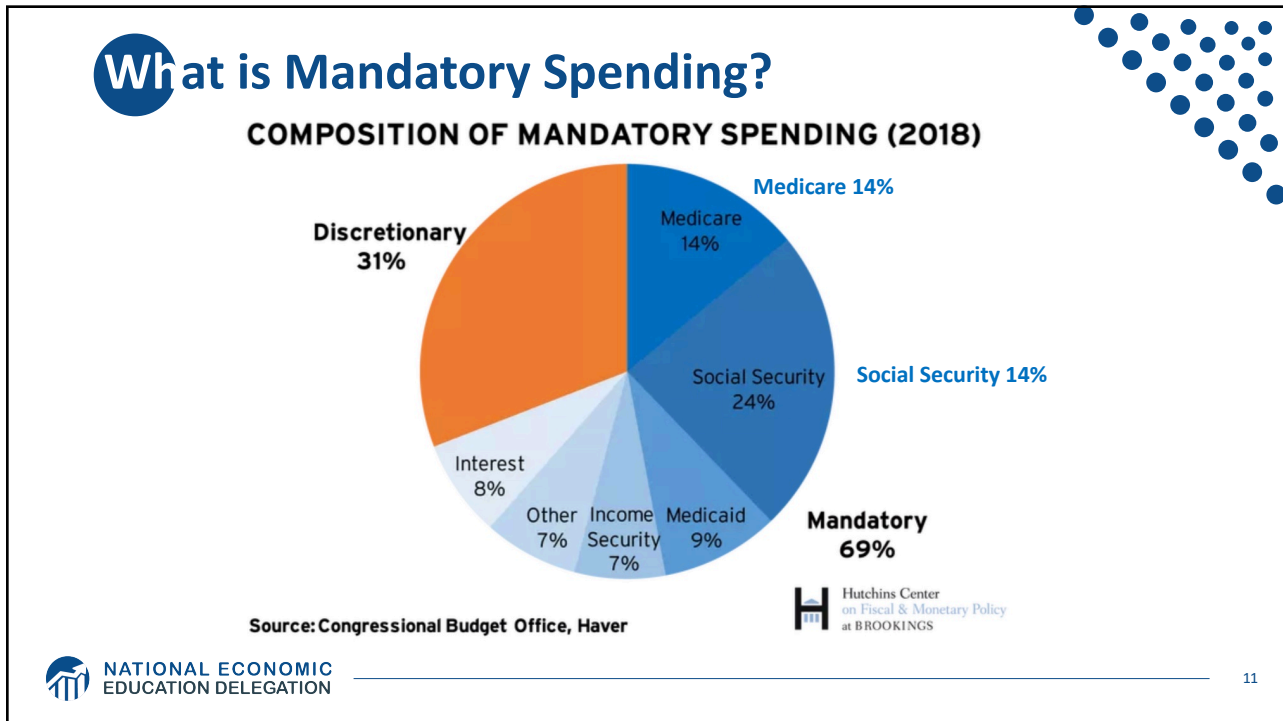


## Two Important Categories

### COMPOSITION OF FEDERAL SPENDING (2018)



Source: Congressional Budget Office, Haver



11

## Mandatory Spending: Social Security (24%)

- **Retirement**
  - Covers 96% of US workers.
  - Retirement age is increasing from 65-67.
- **Survivors**
  - A worker's spouse and dependents may be eligible for survivors' benefits if the worker dies.
- **Disability**
  - A medical condition expected to last at least one year or to be fatal.

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12

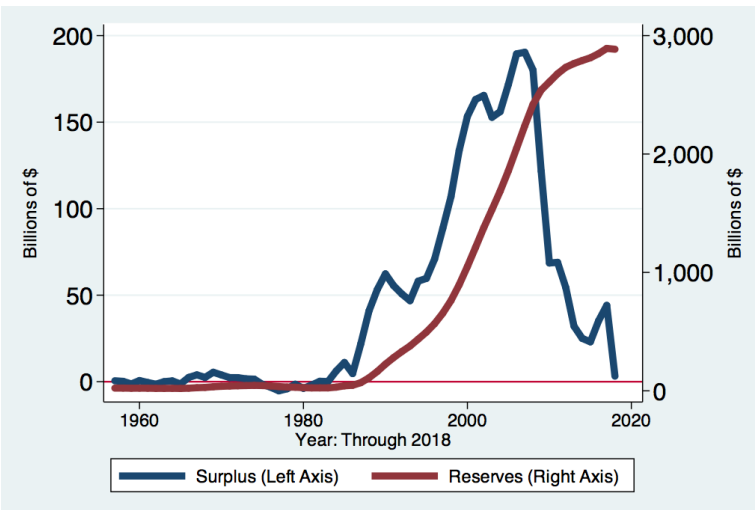
## Where Do Social Security Funds Come From?

- **Payroll taxes**
  - Tax rates:
    - Employee: 6.2%
    - Employer: 6.2%
    - Self Employed: 12.4%
  - Cap in 2019: \$132,900
- **Taxes on OASDI benefits**
  - Not all benefits are taxed.
- **Interest earnings**

**Key Question:  
Who pays?**

13

## Social Security Trust Fund



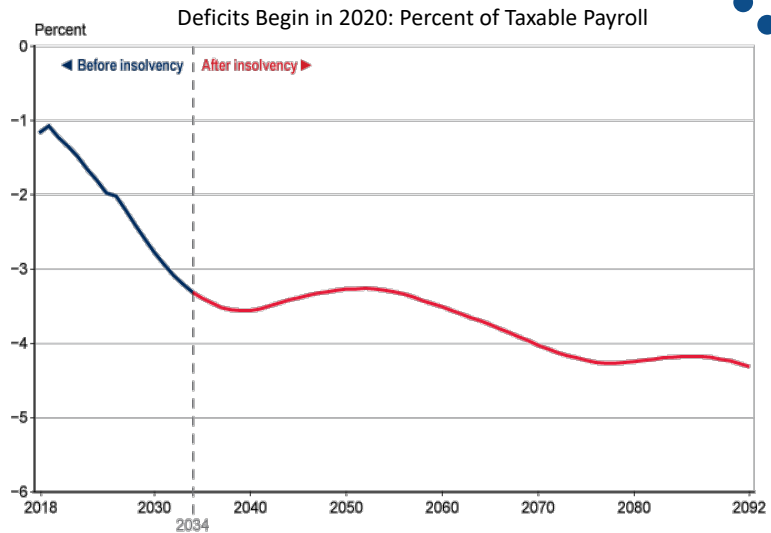
- **Spending in 2018**
  - OASI: \$854 billion
  - DI: \$147 billion
- **Income in 2018**
  - OASI: \$831
  - DI: \$172
- **Surplus in 2018**
  - OASI: \$-22
  - DI: \$25
- **Total Surplus: \$3 Billion**

14

## In 2018: Deficits As Far As the Eye Can See

### • Trust Fund Solvency

- Annual deficits after 2019
- Fund insolvent after 2036



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SOURCE: 2019 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds, Table IV.B1

15

15

## Options for Eliminating the Soc Sec Deficits

### Problem is 1-1.5% of GDP

- **Raise the retirement age**
- **Increase the tax rate**
  - 4 percentage pt increase raises 0.6% of GDP
- **Raise the amount of income subject to tax**
  - Tax all wages raises 1.1% of GDP
- **Reduce benefits**



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16

16



## Mandatory Spending: Medicare (14%)

- **Part A: Hospital Insurance**
- **Part B: Physician, outpatient, home health, and other services.**
- **Part D: Subsidized access to pharmaceuticals.**
  
- **Part C: Medicare Advantage Plans – offered by private companies approved by Medicare.**
  - Medicare Advantage Plans may offer extra coverage, such as vision, hearing, dental, and/or health and wellness programs.



17

## Where Do Funds Come From?

- **Payroll taxes**
  - Tax rates:
    - Employee: 1.45%
    - Employer: 1.45%
    - Self Employed: 2.9%
  - No Cap
- **Interest earnings**
- **General revenues**
- **Beneficiary premiums**



18

## Medicare Finances in 2018

- **Part A:**
  - Income in 2018: \$299 billion
  - Expenses in 2018: \$297 billion
  - Surplus: \$2.8 billion
- **Part B and Part D:**
  - Income in 2018: \$406 billion
  - Expenses in 2018: \$414 billion
  - Surplus: **-\$7.9 billion**
- **Long term sustainability:**
  - Deficits began in 2016
  - For as far as the eye can see



19

## Mandatory Spending: Medicaid (9%)

- **Medicaid provides medical insurance for those whose income and resources are insufficient to pay for health care.**
- **It is a program with costs shared with the states.**
- **Amount spent in 2017: \$576.6 Billion**
  - Federal: 61.5% or \$354.6 Billion
  - States: 38.5% \$222.0 Billion
- **People served in 2017: 72 million (22% of Americans)**



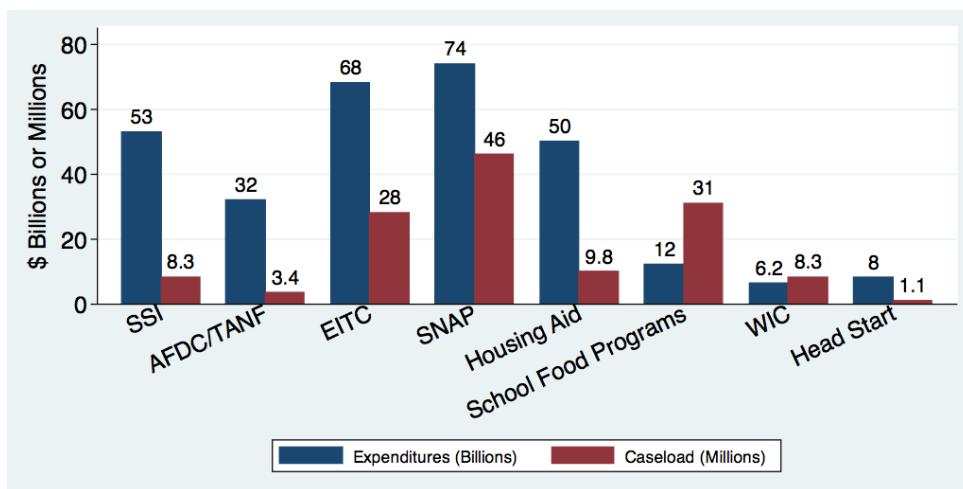
20

## Mandatory Spending: Income Security (7%)

- EITC
- SNAP
- SSI
- TANF
- Housing
- WIC
- School Lunches
- Head Start

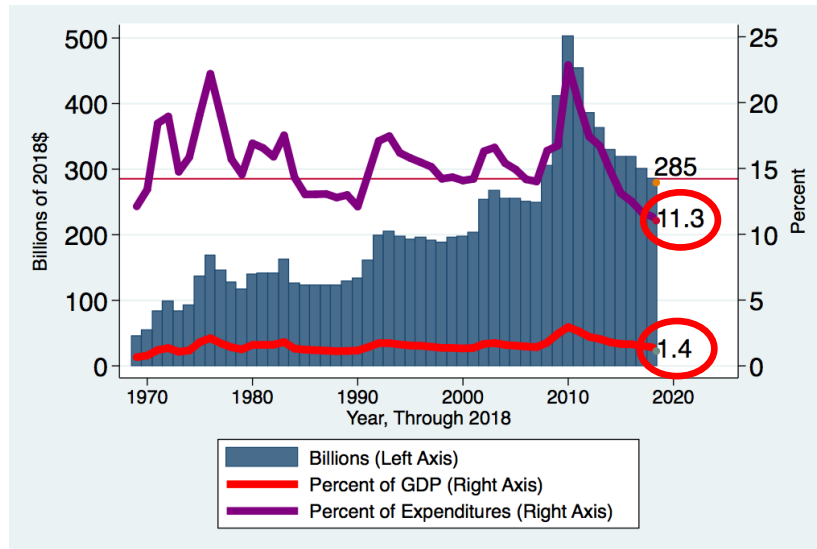
21

## U.S. Safety Net Expenditures (\$ Billions) and Caseload (Millions) – No Medicaid, 2014 or 2015



22

## Income Security Spending Over Time



23

## Mandatory Spending: Interest (8%)

- **Interest costs in 2018: \$325 Billion**  
- 1.6% of GDP, or 8% of the Federal Budget
- **Forecast to increase to \$928 Billion in 2049**  
- 3.0% of GDP, or 22% of the Federal budget

24

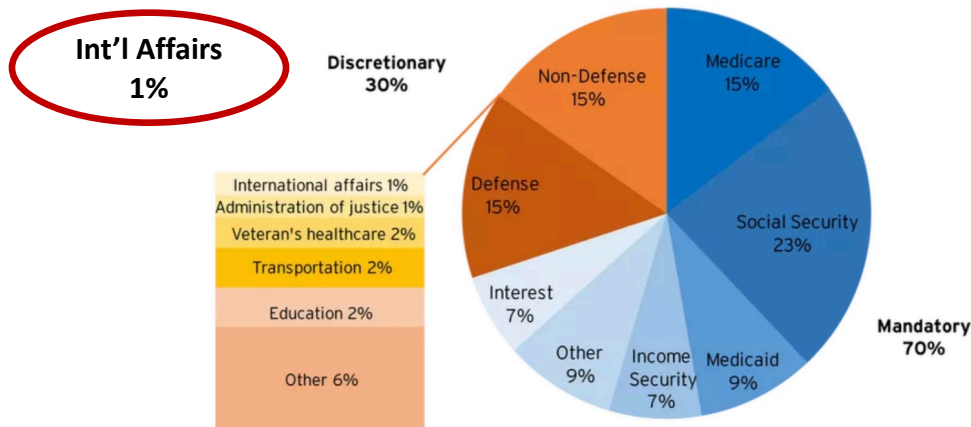
## Mandatory Spending: Other (7%)

- Food and agriculture
- Veterans' Benefits
- Transportation
- Other

25

## What is Discretionary Spending?

COMPOSITION OF DISCRETIONARY SPENDING (2017)



Source: Congressional Budget Office, Haver. Data are for 2017.  
 Note: Numbers may not add up due to rounding.

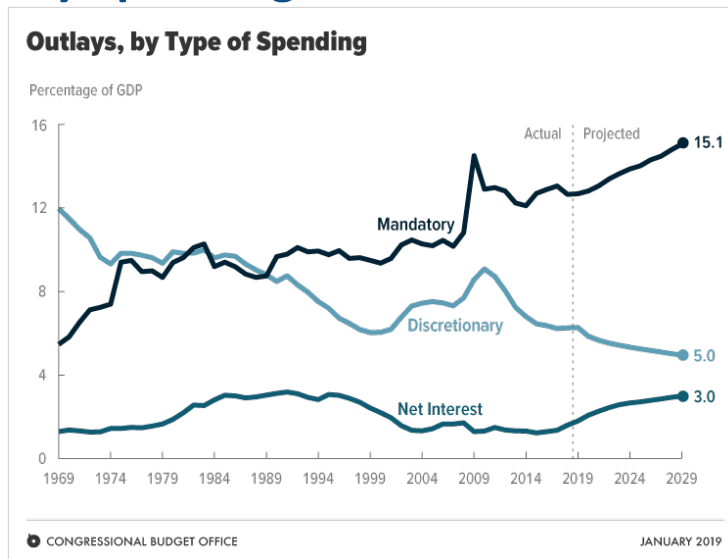
26

## Discretionary Spending: Other (6%)

Category	Amount (Millions)
Energy	4,412
Agriculture	5,800
Medicare	5,906
General government	17,403
General science, space and tech	30,289
Natural resources and environment	36,766
Housing Assistance	45,711
Health	60,326

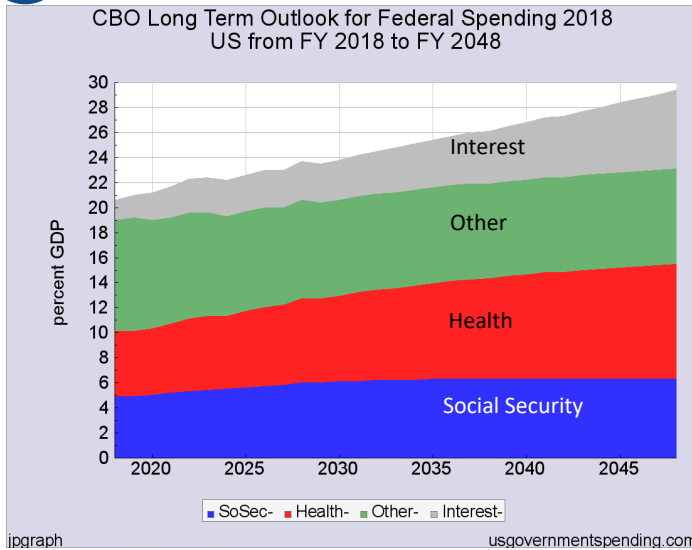
27

## Mandatory Spending Dominates Forecasts



28

# Forecast Spending



What trends do you see?

29

# Aging and Health Care Costs

Percentage of GDP

	Outlays		Change (Percentage points)	Major Reasons for Change
	2020	2030		
Social Security	4.9	6.0	1.1	Aging of the population
Major Health Care Programs*	5.4	7.0	1.6	Aging of the population; rising costs of health care
Other Mandatory Spending	2.6	2.2	-0.4	Inflation rate is less than nominal GDP growth
Discretionary Spending	6.4	5.6	-0.8	Caps on funding; inflation rate is less than nominal GDP growth
Net Interest	1.7	2.6	0.8	Accumulating debt; rising interest rates

30

## Another Category of Spending: Tax Expenditures

- **Description**

- Social policies that are implemented and paid for through the tax code.

- **List of the largest tax breaks:**

- Mortgage interest deduction
- Retirement contributions
- State and local taxes
- Health insurance
- Low tax rates for Capital Gains
- Child related tax credits
- Charitable gifts
- Lifetime Learning

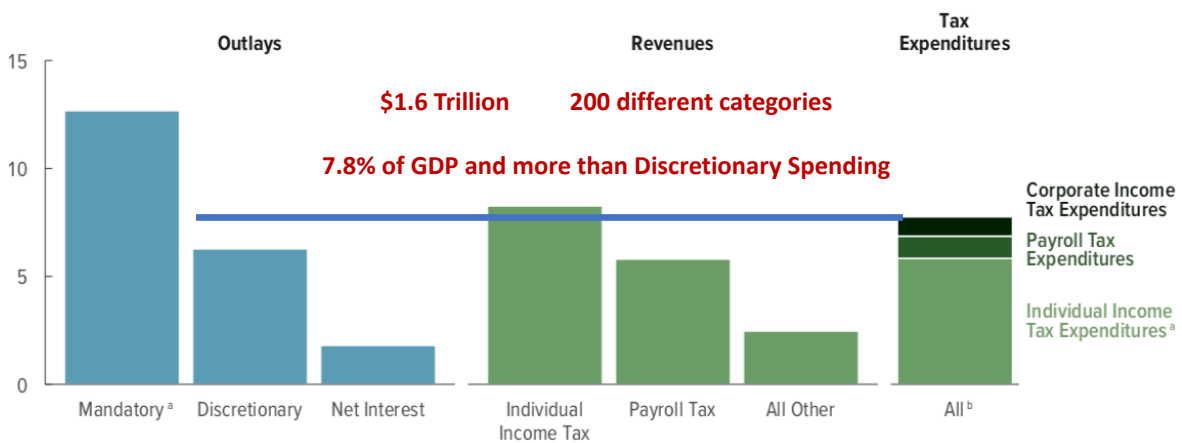
- **Evidence of who they benefit**

- Regressive

31

## Tax Expenditures are Significant

Percentage of Gross Domestic Product



32



## Tax Expenditures Tend to be Regressive

Percent Change in After-Tax Income due to Tax Expenditures, 2007 (with no AMT)*							
	Tax Exclusions	Lower capital gains and dividends rates	Itemized deductions	Above-the-line deductions	Non-refundable credits	Refundable credits	All provisions
Bottom 20 percent	0.54%	0.00%	0.02%	0.01%	0.05%	5.81%	6.97%
Second 20 percent	Income Group		Benefits			5.26%	8.89%
Middle 20 percent	Bottom 20%		7.0%			2.25%	7.25%
Fourth 20 percent						1.00%	7.28%
Top 20 percent	Top 20%		12.8%			0.29%	12.82%
Total Cost (no AMT)	\$326 billion	\$99 billion	\$153 billion	\$6.6 billion	\$11.3 billion	\$89 billion	\$746.7 billion
Total Cost (with AMT)	\$344 billion	\$96 billion	\$154 billion	\$6.4 billion	\$8.2 billion	\$89 billion	\$760.5 billion

Source: Center on Budget and Policy Priorities calculations based on TPC calculations of effect of eliminating tax expenditures.  
\*Note: These figures take into account the interaction among individual tax expenditure provisions.

33

## Important things that people get from gov't

- Roads and highways
- Public education
- Defense
- Research and development
- Space exploration
- Income Security
- Improved public health
  - Sanitation
- Investments in communications
- Energy
- Many, many, inventions
  - Microchips
  - GPS
  - Wind turbines
  - Tang
  - Touch screens
  - Internet
  - Bar Codes
  - Wii

34

# US Government Revenues

35

## Federal Government Revenues in 2018

Funds collected from the public that arise from the government's exercise of its sovereign powers

AT A GLANCE

**\$3.3 Trillion**

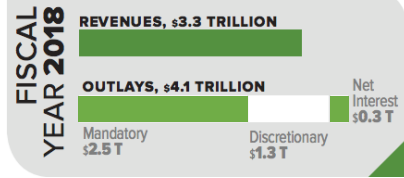
Revenues received by the federal government in **2018**

**\$1.7 Trillion**

Receipts from individual income taxes, the largest source of revenues, in **2018**

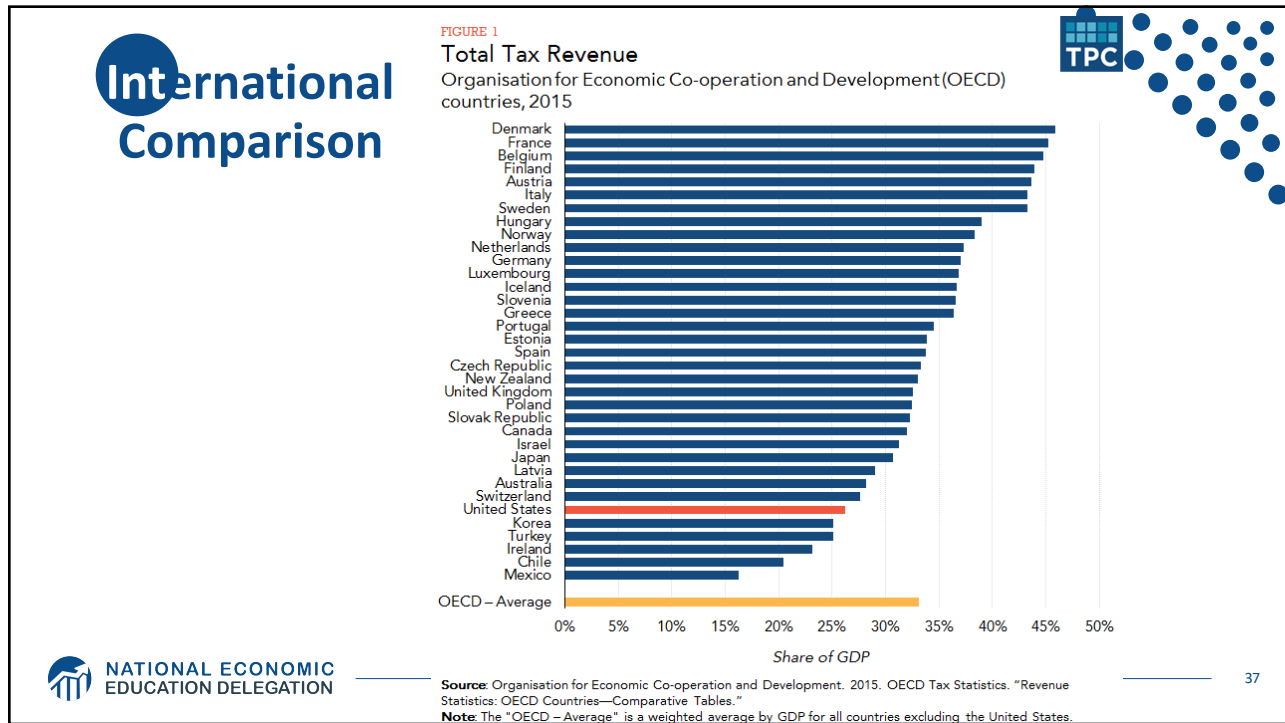
**16.5%**

Revenues as a percentage of GDP in **2018**

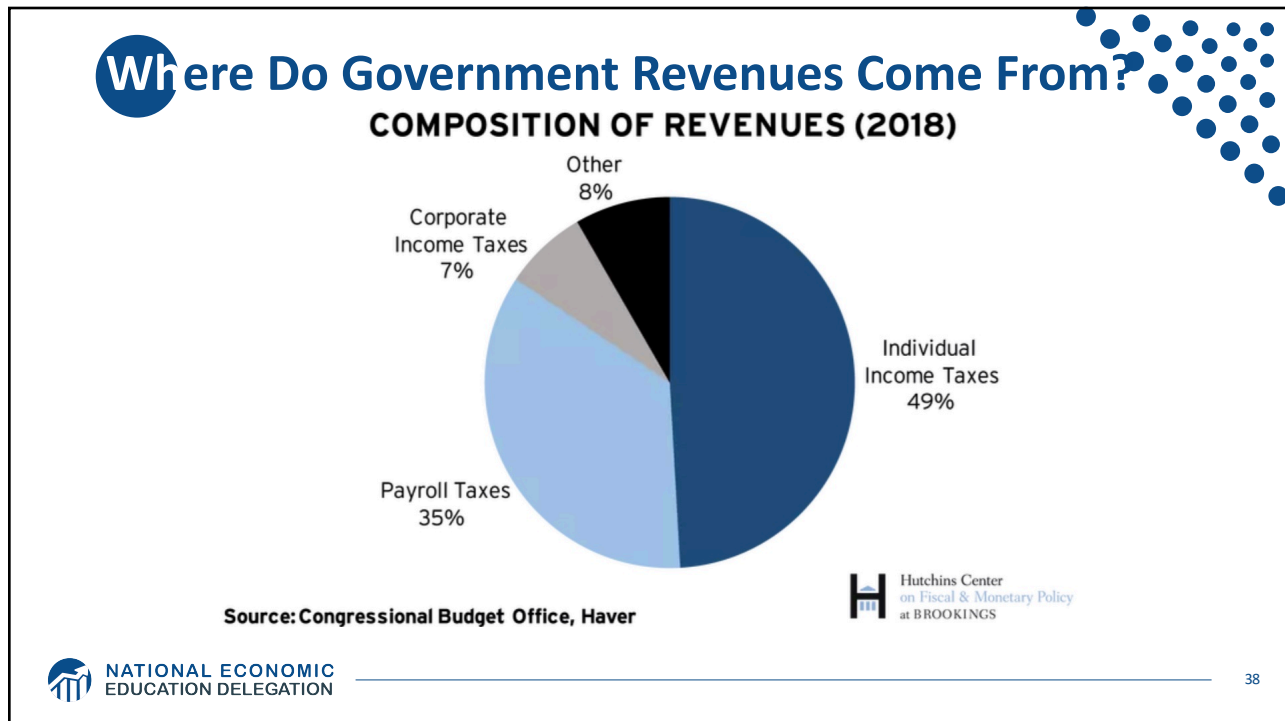


U.S. GDP: \$20.6 Trillion  
In 2018

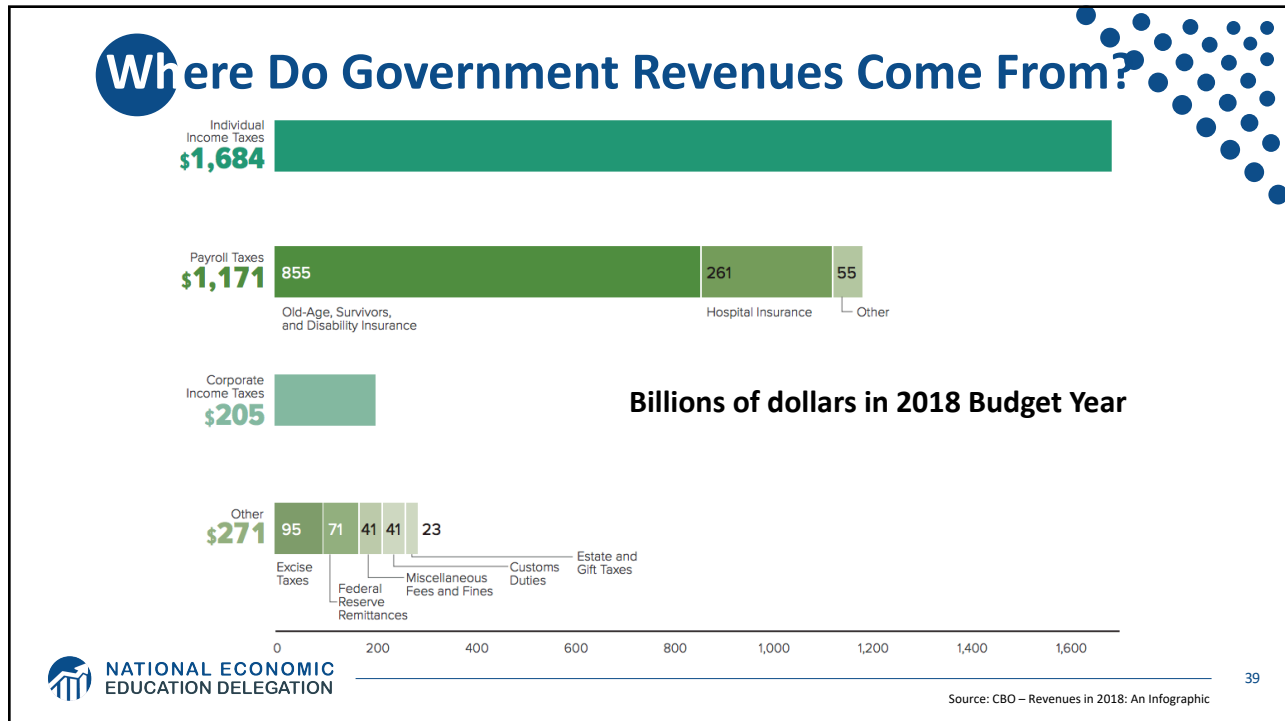
36



37



38



39

## Individual Income Taxes

- **Marginal tax rates**
- **Not all income is subject to the same tax rates**
  - capital gains
- **Deductions**
  - Talked about as Tax Expenditures

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40

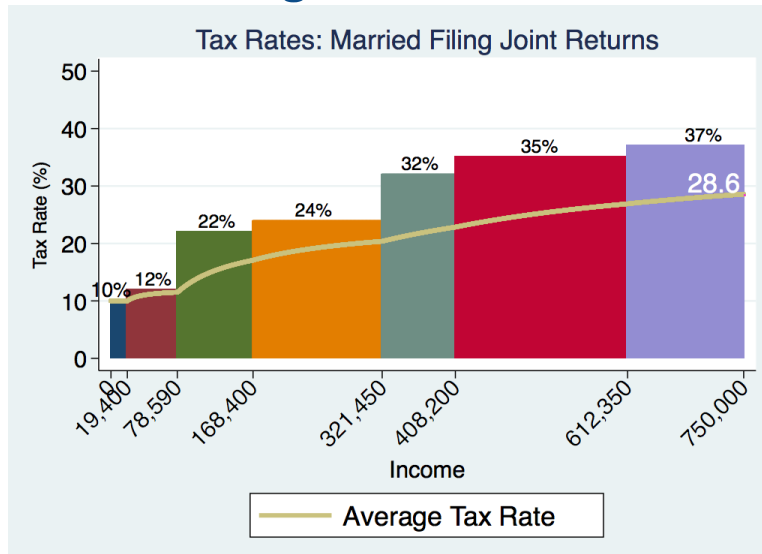
## Marginal Tax Rates: Married Filing Jointly

- Income is taxed differently at different levels.
- Individuals are taxed the same way, regardless of overall income:
  - First dollar is taxed at 10%
  - 19,401st dollar is taxed at 12%
  - Millionth dollar is taxed at 37%

Income Above	Tax Rate
0	10%
19,400	12%
78,590	22%
168,400	24%
321,450	32%
408,200	35%
612,350	37%

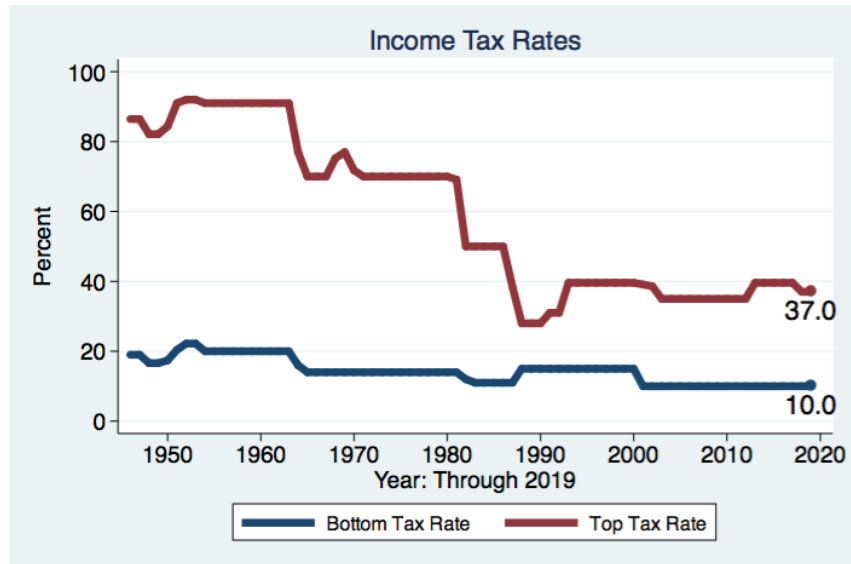
41

## Marginal and Average Tax Rates: 2019



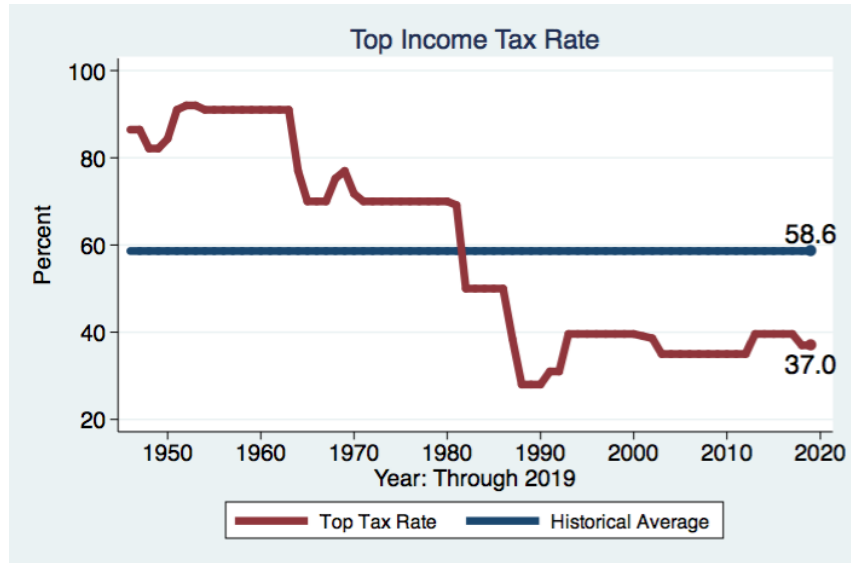
42

## Tax Rates Over Time



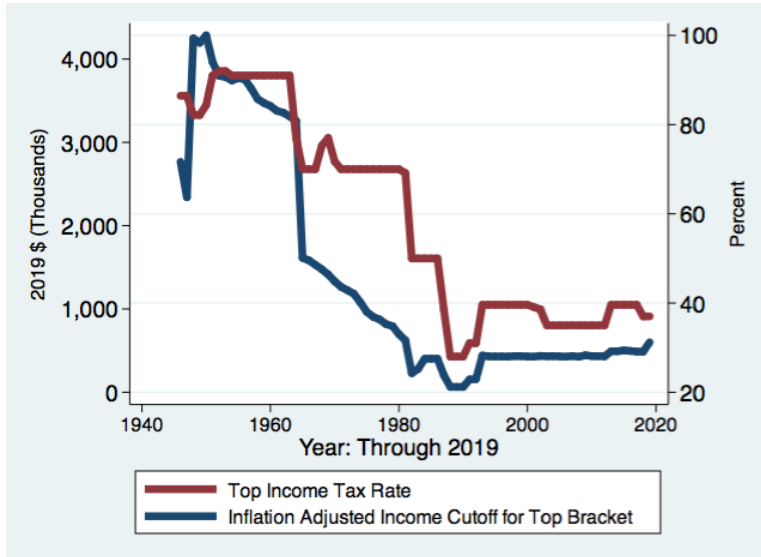
43

## Top Income Tax Rates



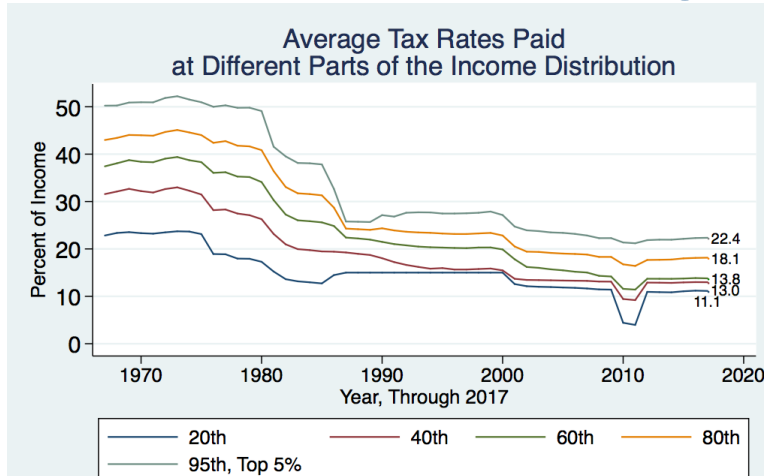
44

## Income at Which Top Rate Kicks In



45

## Average Tax Rates Across Income Categories



Each line represents that average tax rate for the given percentile of the income distribution in each year. Income cutoffs change over time.  
 Source: <https://www.tax-brackets.org/federaltaxtable>, and BLS for historical income levels.

46

## Tax Deductions and Exemptions

- **Exemptions and Deductions**

- Standard deduction
- Personal exemption
- Child Tax Credit

- **Other tax expenditures**

- E.g., charitable giving, mortgage interest, state and local taxes, and many more.

- **Refundable Tax Credits**

- EITC: Earned Income Tax Credit

## Why do we have a Progressive Tax System?

- **Our options are:**

- Progressive: increasing average tax with income
- Neutral or flat: same share of income at all income levels
- Regressive: decreasing average tax of income

- **Additional income is of greater consequence to those with lower incomes.**

- **Other parts of the tax system are regressive.**

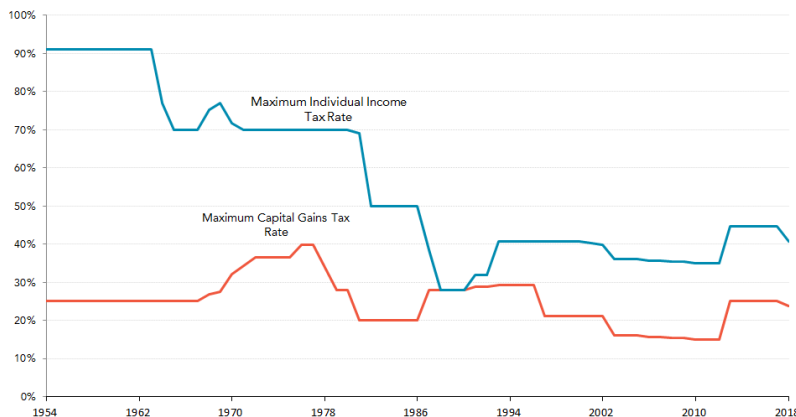


## Capital Gains Taxes (2020)

- Capital gains taxes can apply on investments, such as stocks or bonds, real estate (though usually not your home), cars, boats and other tangible items.
- **Short term**
  - Held for more or less than a year – taxed as regular income.
- **Graduated rate – for long term capital gains**
  - 0% < \$38,600
  - 15% \$38,601 - \$425,800
  - 20% \$425,801+

## Capital Gains vs Income Taxes: Maximum Rates

**FIGURE 1**  
Maximum Capital Gains and Individual Income Tax Rate  
Tax years 1954–2018



Sources: US Department of the Treasury, Office of Tax Analysis (2016); Urban-Brookings Tax Policy Center calculations.  
Note: The maximum rates include the 3.8 percent tax on net investment income (2013) and adjusts for the phaseout of itemized deductions (1991–2009, 2013–2017).

## Revenues: Other (8%)

- **Federal Reserve Remittances**
- **Miscellaneous Fees and Fines**
- **Customs Duties**
- **Estate and Gift Taxes**
- **Excise Taxes**
  - Motor fuel
  - Airline tickets
  - Tobacco
  - Alcohol
  - Health-related goods



51

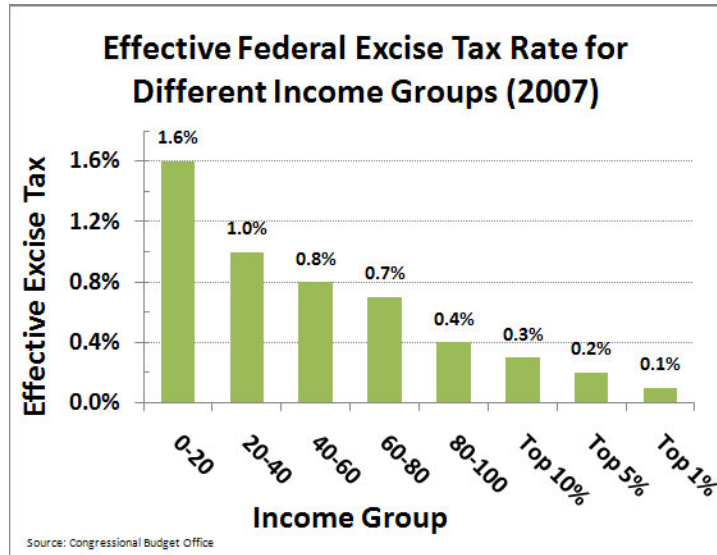
## Estate Taxes

- **\$23B in revenues in 2018**
- **Exemption: \$11.2 million for singles    \$22.4 million for couples**
- **Tax rate: 40%**
- **Top 10% pay more than 90%,                      Top 1% pays nearly 40%**
- **1,900 estates**
- **Businesses and farms: 140 subject to tax**
  - **No** Small businesses or farms because of the \$11.2 million exemption



52

## Excise Taxes are Regressive

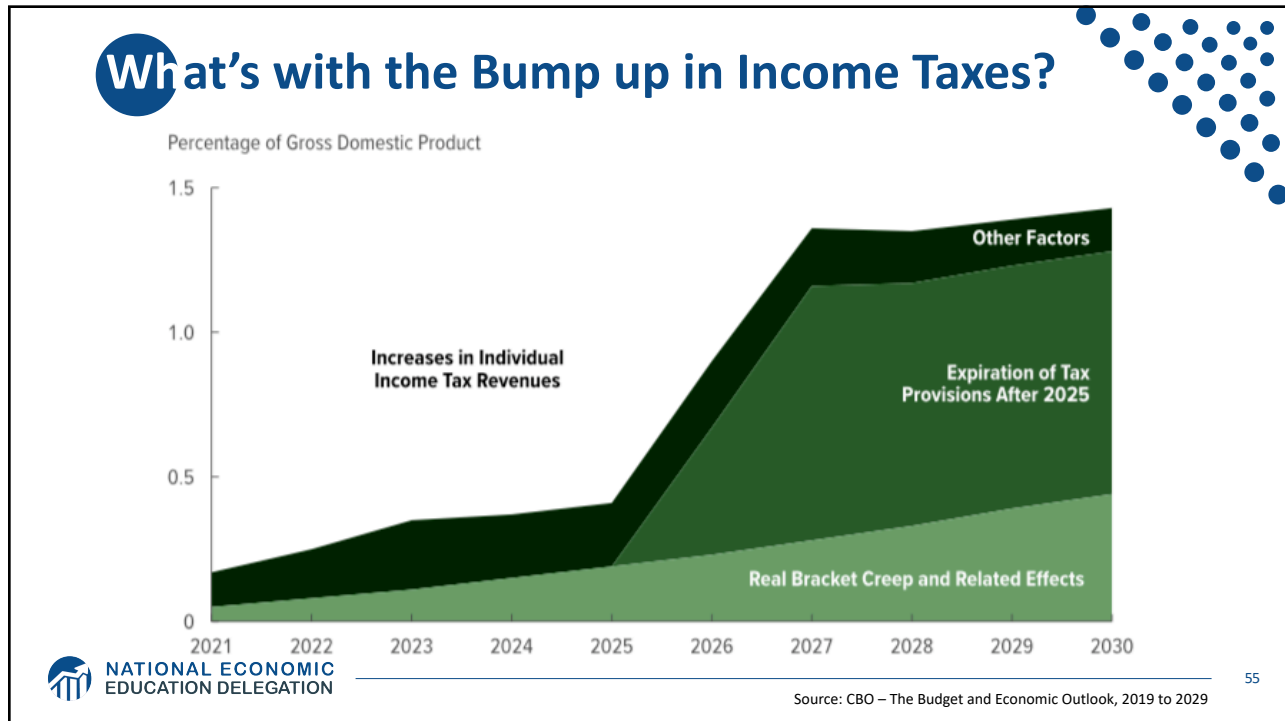


53

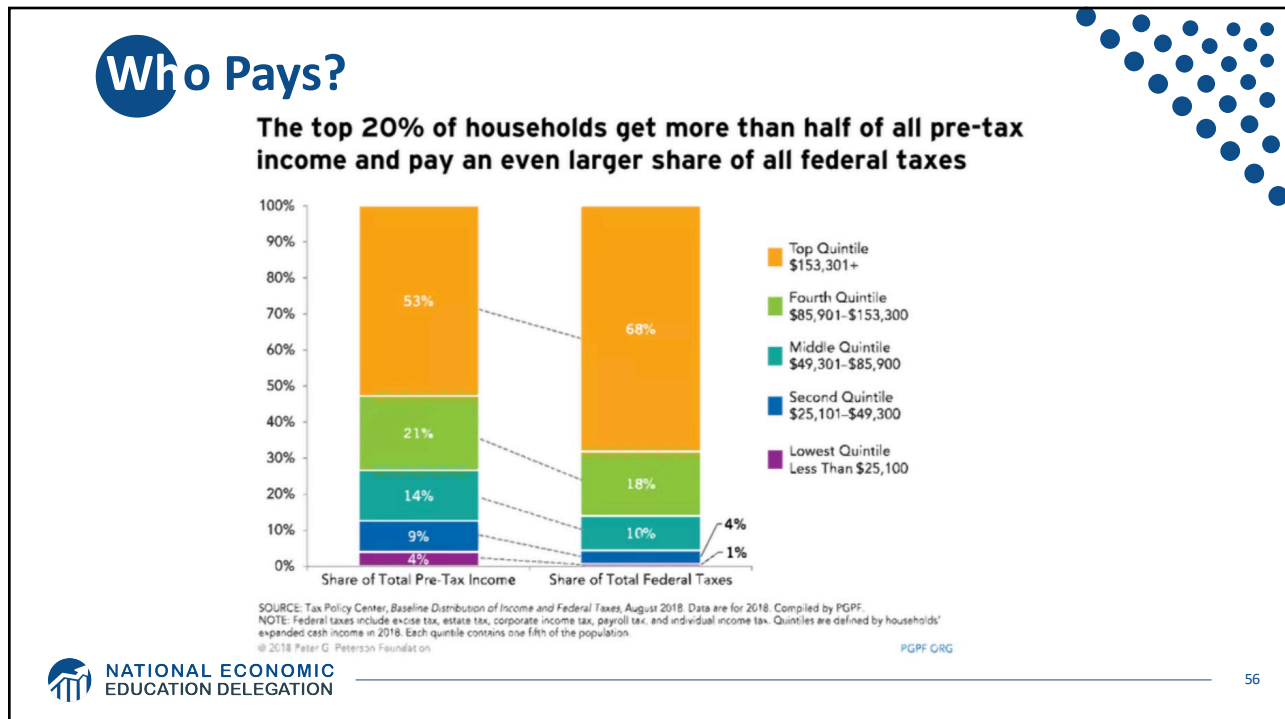
## Revenue Sources: Share of GDP over Time



54



55



56

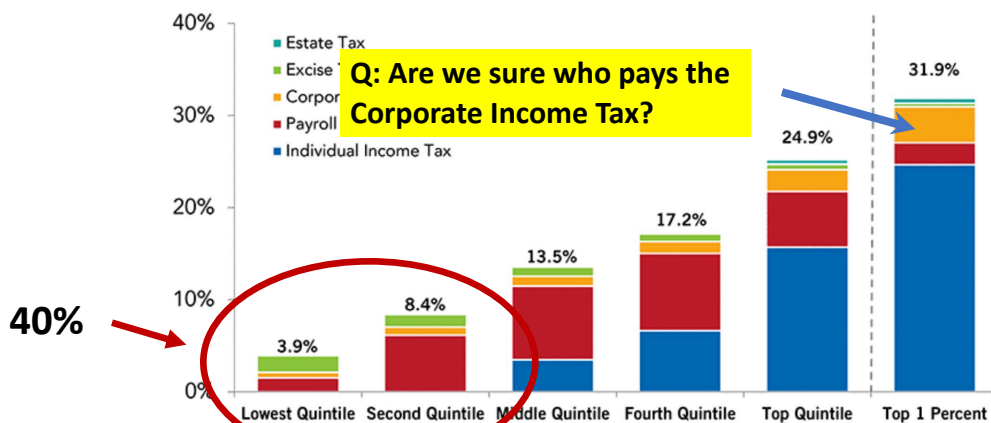
## The Bottom 40% Don't Pay Income Taxes

- There is a common narrative that the bottom 40% don't pay income taxes.
- But they pay other taxes and they also pay state and local taxes
  - Payroll
  - State and local taxes
  - Excise taxes – see the slide 4 slides ago
- Does it matter from what source tax revenues are derived?
- Should the income tax be used to make the system progressive?

57

## The Bottom 40% Does Pay Other Taxes

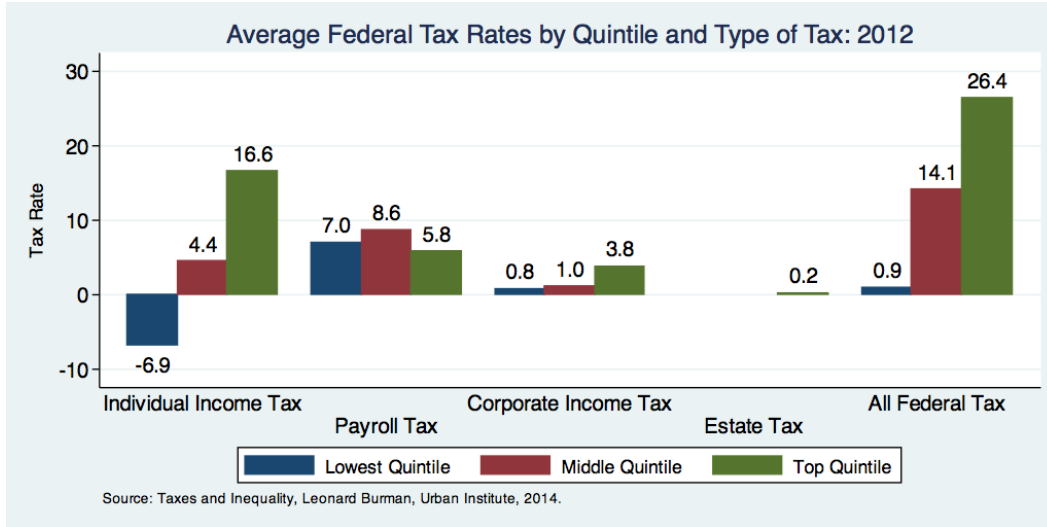
EFFECTIVE FEDERAL TAX RATE (% OF CASH INCOME IN 2016)



SOURCE: Tax Policy Center, *Effective Federal Tax Rates by Expanded Cash Income Percentile*, March 2017. Data are for 2016. Compiled by PGPF.  
 NOTE: Individual income tax and excise taxes for the lowest and second lowest quintiles are negative and are netted against the payroll tax rate. A quintile is one fifth of the population. In 2017 dollars, the income breaks are: 20% \$24,600; 40% \$47,700; 60% \$84,300; 80% \$147,700; 99% \$717,900. Includes both filing and non-filing units but excludes those that are dependents of other tax units.

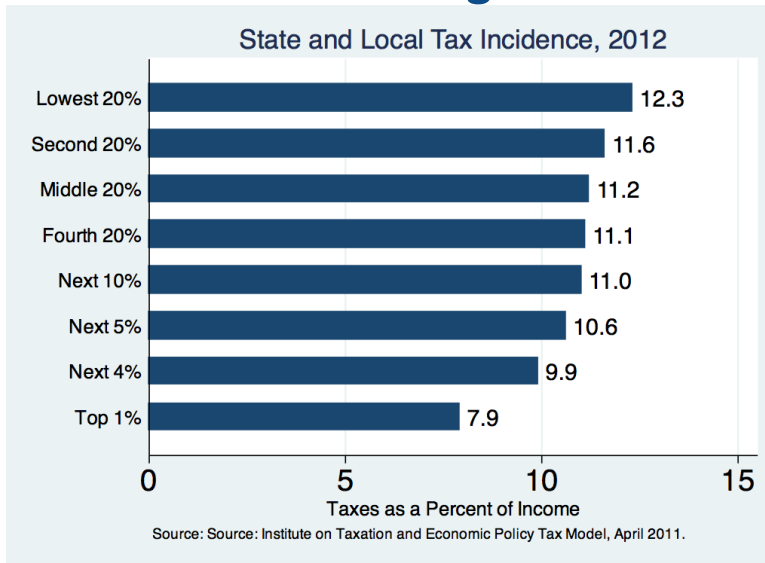
58

## Regressivity in Federal Taxes?



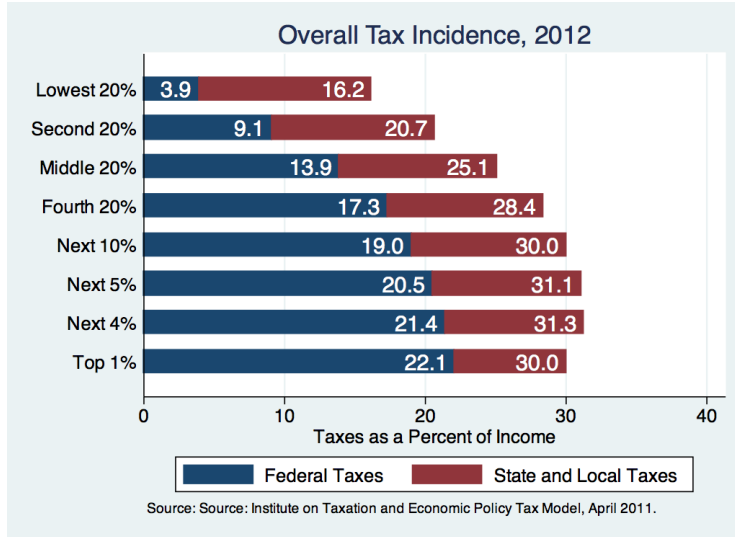
59

## State and Local Taxes are Regressive



60

## Overall, Taxes are (mostly) Progressive



61

## What Does the U.S. Gov't Budget Look Like?

### 2019 Budget Summary

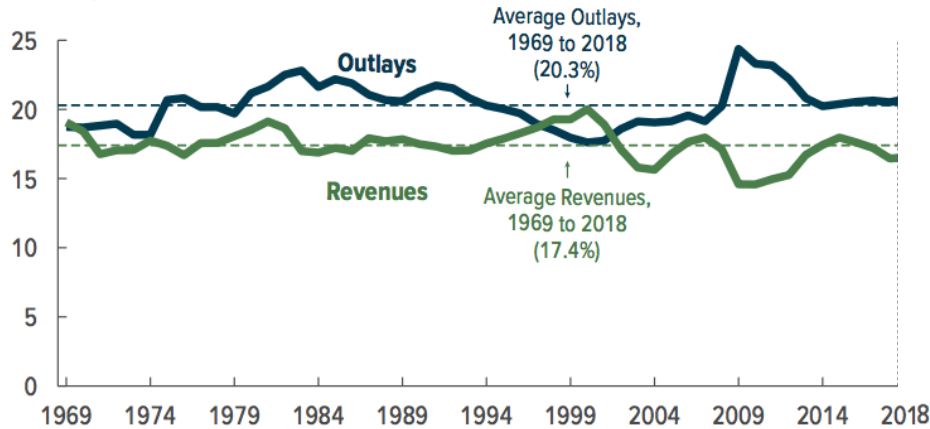
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Other	\$271		
<b>Total</b>	<b>\$3,462</b>	<b>Total</b>	<b>\$4,447</b>

**Budget Deficit \$984 Billion**

62

## How has the Size of Government Changed?

Percentage of Gross Domestic Product



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63

63

## Budget Summary: Slide 1

- **Total Spending: \$4.4 Trillion in 2019**
- **There is remarkably little discretion in the budget:**
  - Mandatory: 69%
  - Discretionary 31%
- **Fastest growing parts of the budget: Health Care and Interest**
- **By 2048:**
  - Debt is forecast to grow to 150% of GDP, from 80% today
  - Interest payments are forecast to grow from 8% to 22% of budget



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64

64



## Budget Summary: Slide 2

- **Categories that get a lot of attention are relatively small**
  - Foreign Aid: 1% of the budget
  - Income support/welfare: 8.7%
- **Or are not forecast to grow significantly**
  - Social security
  - Most other categories of spending

## Budget Summary Slide: Tax Expenditures

- **Are policy enacted through the tax code.**
- **Are not explicitly on the books.**
- **They add > 25% to actual government expenditures.**
- **Reduce the progressive nature of the tax code.**
- **Are larger than all of “Discretionary Spending”.**



# Of Debt, Deficits, and Surpluses

- **FLOW**

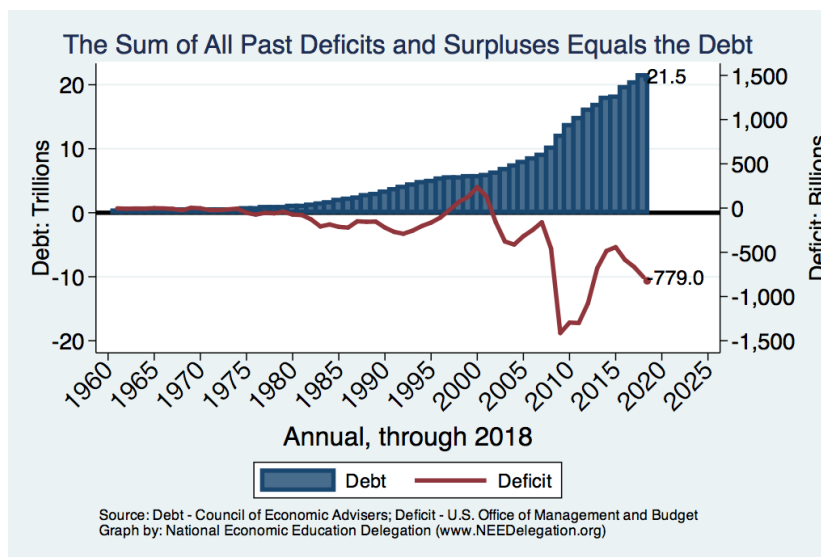
- **Deficit:** The amount of debt accrued in a single year.
- **Surplus:** The excess of revenues over expenses in a single year.

- **STOCK**

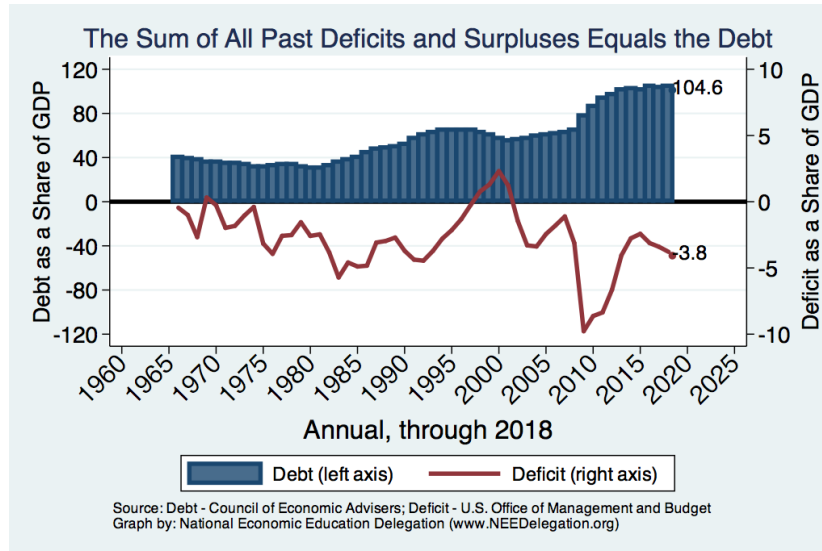
- **Debt:** The accumulation of debt over time.
  - The sum of all past deficits and surpluses.



# Debt vs. Deficit



## Debt vs. Deficit: Share of GDP



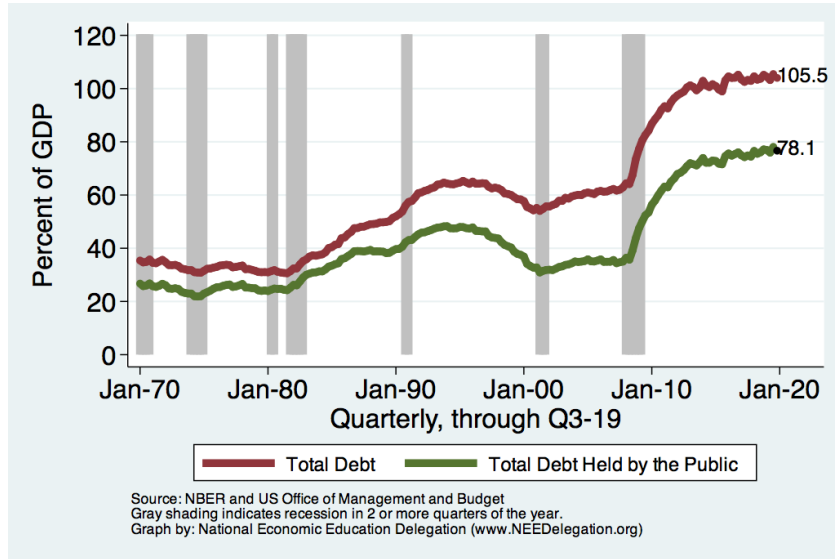
71

## Record Levels of Debt are Forecast



72

## Two Measures of the Debt

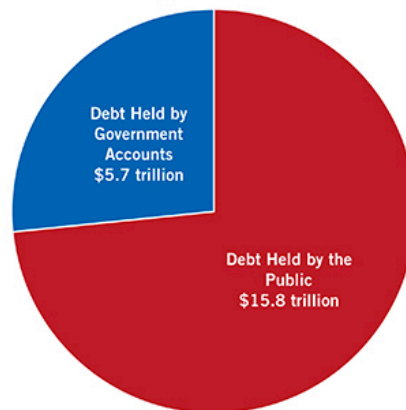


73



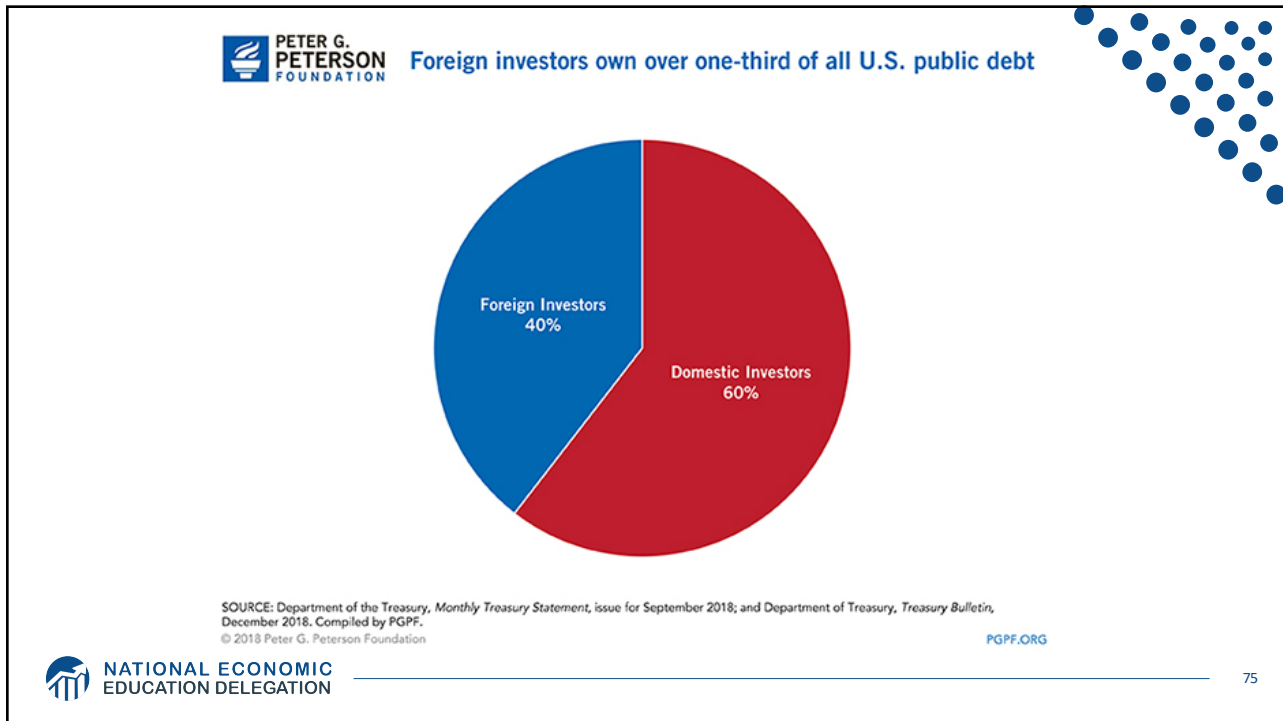
### What makes up gross federal debt?

Gross Federal Debt at the End of Fiscal Year 2018:  
\$21.5 Trillion

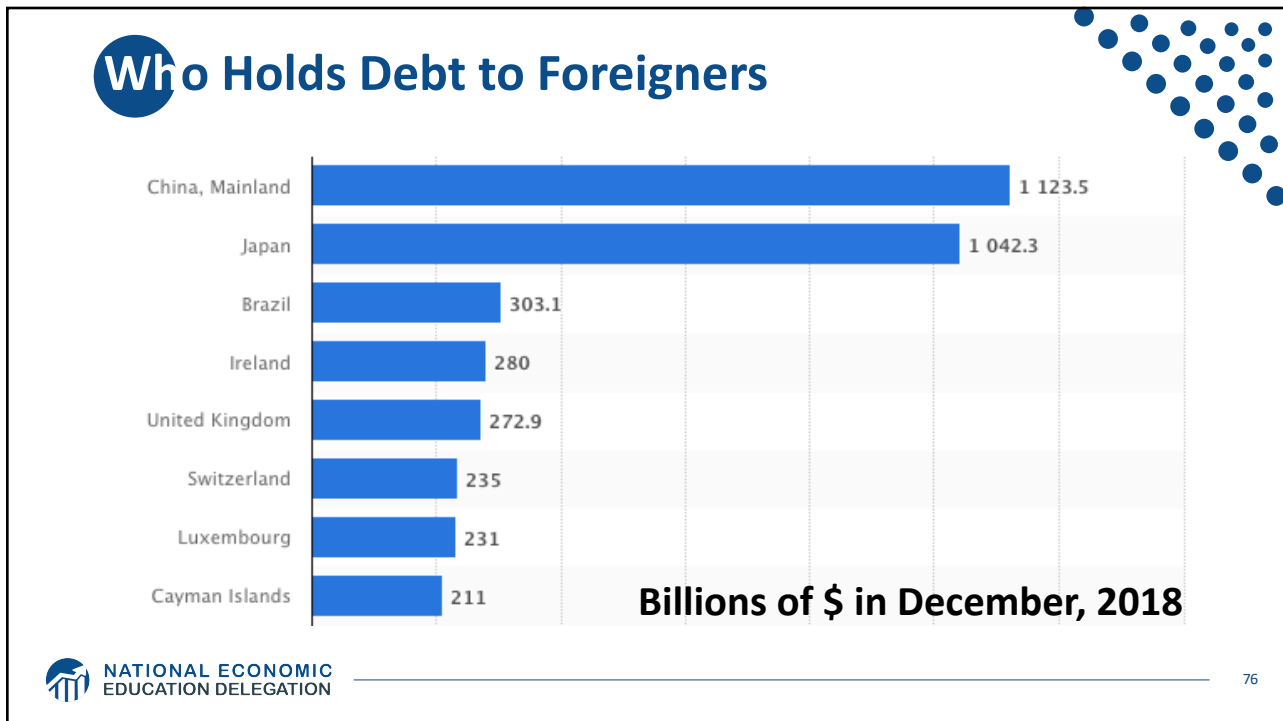


SOURCE: Department of Treasury, *Monthly Treasury Statement*, issue for September 2018. Compiled by PGPF.  
 © 2018 Peter G. Peterson Foundation

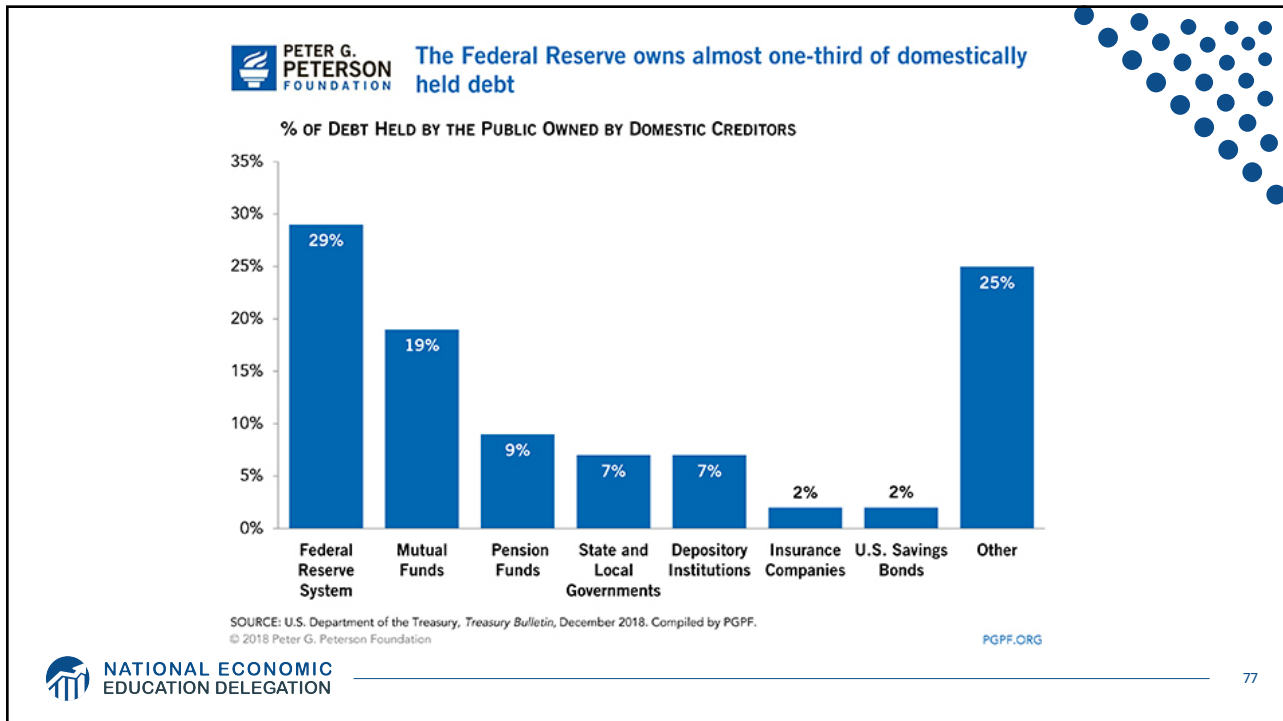
74



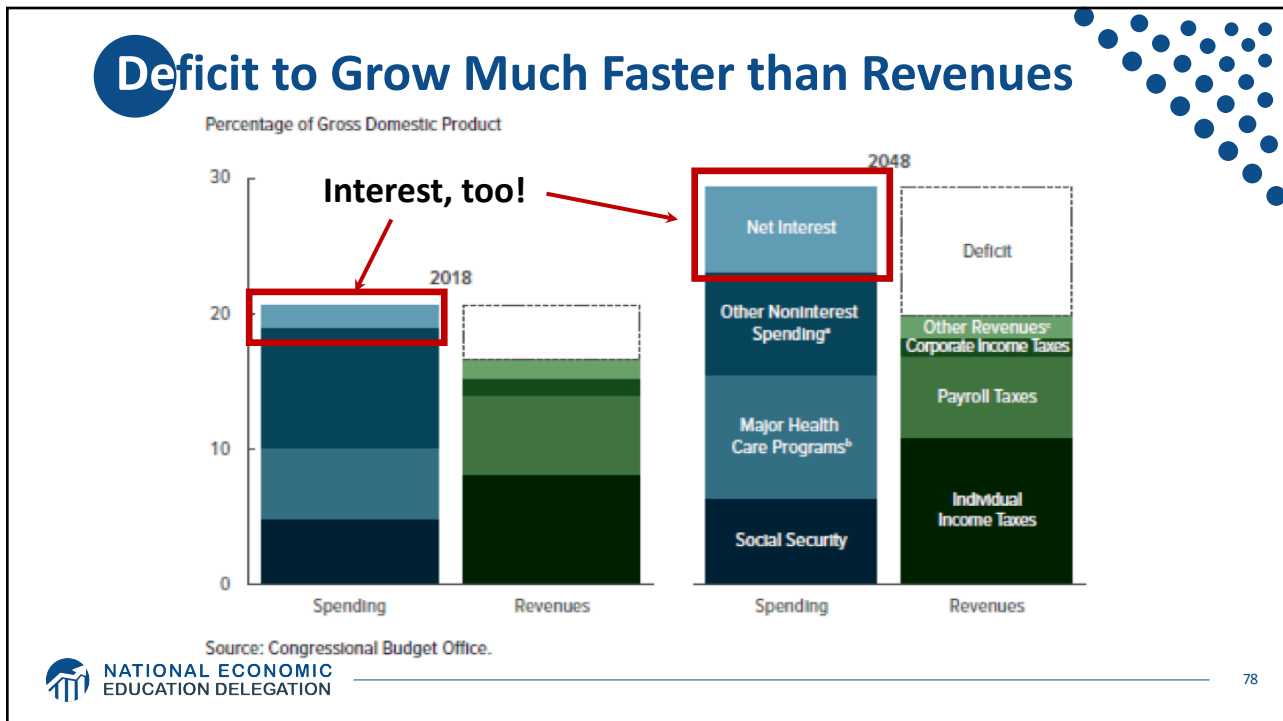
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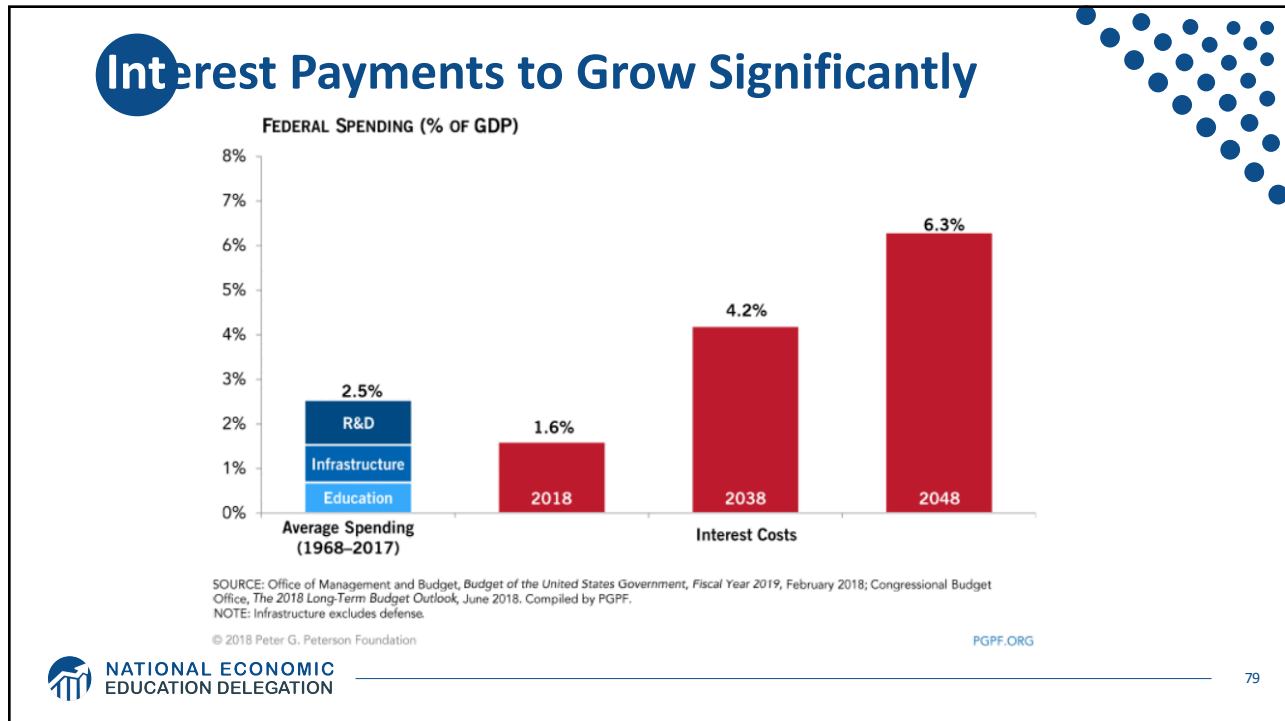
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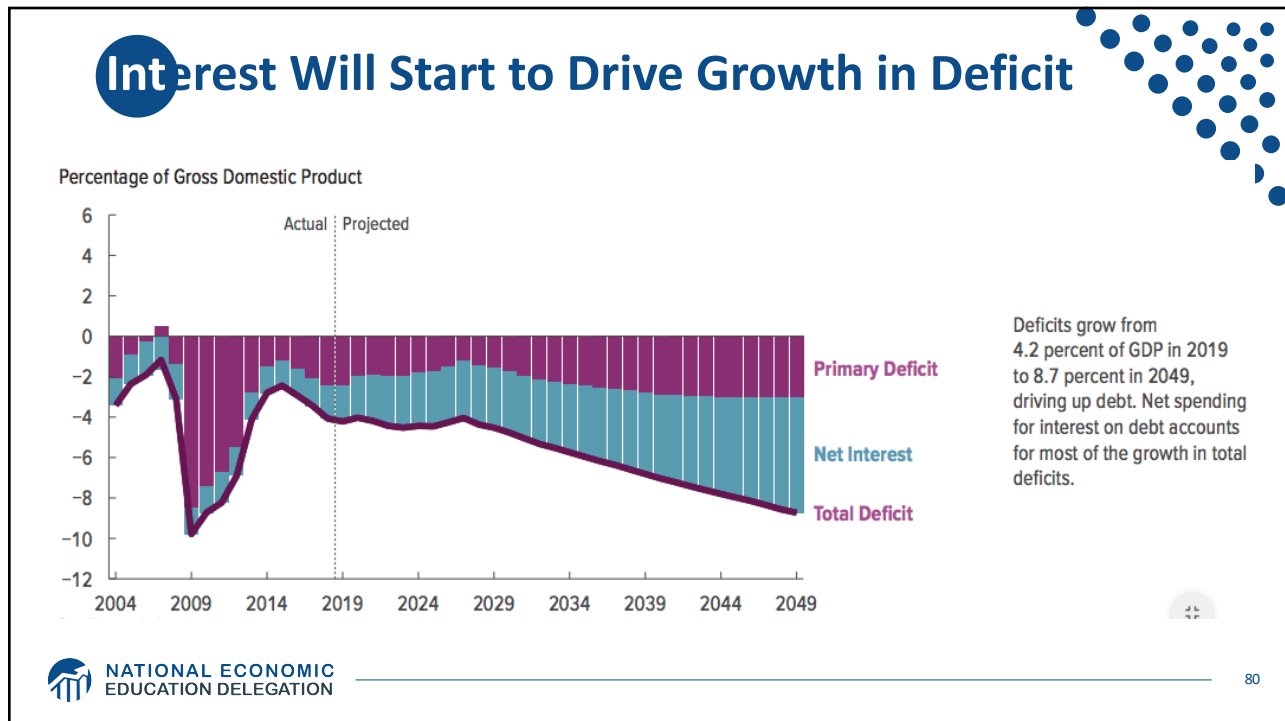
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78



79



80



## Perspectives on Increased Debt

- **Government borrowing crowds out private capital and investments.**
  - Weakened by ability to borrow from abroad
- **It is reasonable to borrow at low interest rates for investments.**
  - For example, infrastructure
- **Debt imposes a burden on future generations.**
  - Does it inevitably have to be paid off?
- **In time, it will start to crowd out other government spending.**
  - Diminishing policy priorities in the budget.

81

## The Reason for Borrowing Matters

- **Two good reasons to borrow heavily:**
  - To *support the economy* during a recession – fiscal expansion.
  - *Investments* that will increase economic activity in the future.
- **Should not borrow for:**
  - Items consumed today
    - Government salaries
    - Retirement benefits
  - Tax breaks of uncertain benefit to the economy.



82

## Is the Debt a Problem Today?

- **Currently borrow about \$100 million each month with little difficulty.**
- **Interest rates are very low, less than 2% on 10-year notes.**
- **Very little evidence of "crowding out".**



83

## So, Why Worry About it?

- **If debt gets too high:**
  - There is the potential for investors to start questioning the creditworthiness of the U.S. Government.
    - Problem: Nobody knows how high might be too high?
  - It becomes more difficult to borrow in times of crisis.
    - War, severe recession
    - "Fiscal space" – impossible to measure how much we have, but clear that we have less now than back in 2007.
  - Could start to crowd out investments by consumers and businesses.
    - Not currently a problem. No idea if/when it might be come one.
  - Could be inflationary.



84

## So, Why Worry About it?

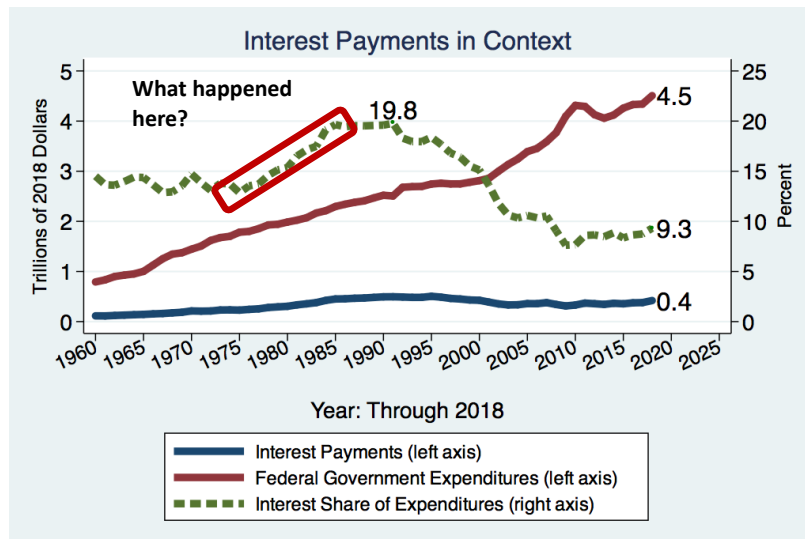
- If debt continues to grow:

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



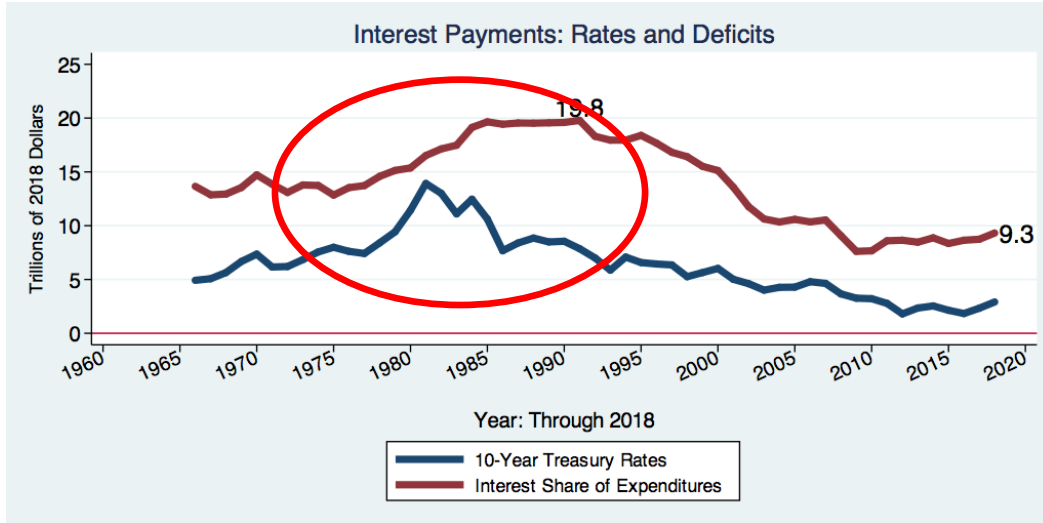
85

## History: A Cautionary Tale?



86

## Interest Payments and Interest Rates



87

## Are There Reasons to Wait?

- **Very little evidence of:**
  - Crowding out
  - Inflationary impact
- **Uncertainty about the future**
  - Economic growth may render action today unnecessary.
- **There are a great many investments to be made by the gov't.**
  - Infrastructure
  - Education
  - Much, much more...

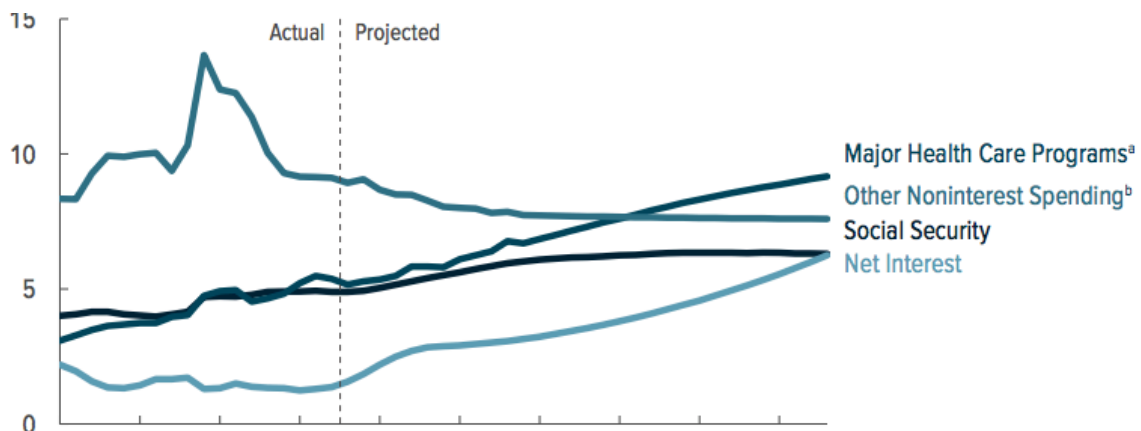
88

## Bottom Line

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



## What Are the Primary Drivers Going Forward?



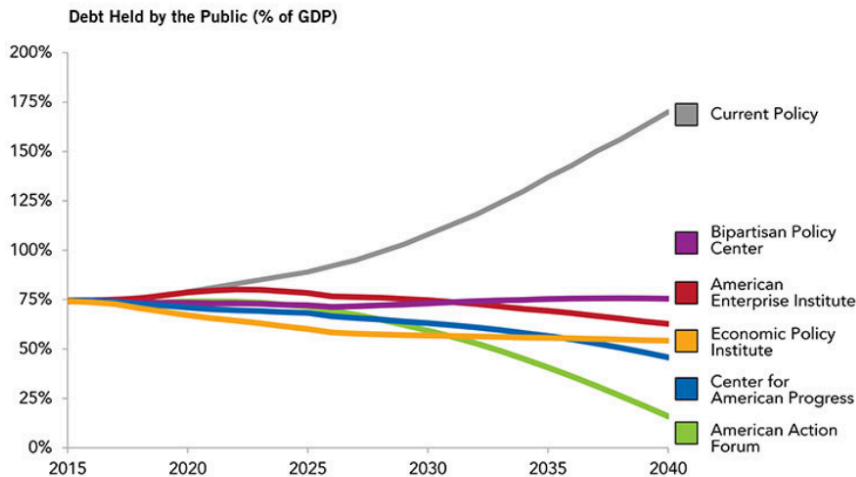
# Proposals Do Exist

- **Simpson-Bowles**
- **Domenici-Rivlin Task Force**
- **Solutions Initiative – Peter G. Peterson Foundation**
  - American Action Forum
  - American Enterprise Institute
  - Bipartisan Policy Center
  - Center for American Progress
  - Economic Policy Institute

91



## Solutions Initiative III: Projected Federal Debt through 2040



SOURCE: Peter G. Peterson Foundation, *Solutions Initiative III*, May 2015. See [pgpf.org/solutions-initiative-iii](http://pgpf.org/solutions-initiative-iii) for more details.  
 NOTE: Current policy is defined as the alternative fiscal scenario without economic feedback from CBO's 2014 Long-Term Budget Outlook.

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PGPF.ORG

92

## Summary: The Debt

- **The jury is (sort of) out on the debt.**
- **Conventional wisdom is being challenged:**
  - Previously: inflationary and crowd out private investment
  - New assertion: these things don't matter for a country that can borrow in its own currency.
- **Upshot?**
  - This is a policy choice.
  - The cautious approach is to reign in the debt.
  - The cautious approach may lead to slower economic growth.



## Summary

- **Debt: \$22.9 Trillion**
- **Deficits drive growth in the debt.**
  - Likely greater than \$1 Trillion per year.
- **Publicly held debt matters most.**
  - Will grow from 78% of GDP today to 144% in 2049.
- **Multiple ways to offset this growth.**
- **Growing interest payments can be a real problem.**



## Summary: Address The Debt?

- **Risks:**

- Inflation
- Slower economic growth
  - o Higher interest rates
  - o Crowding out
- Default

- **Reasons to wait:**

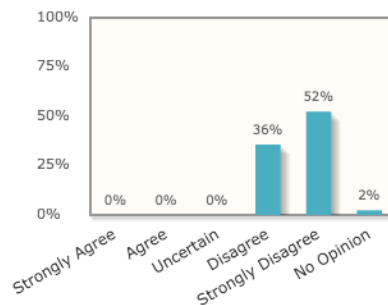
- Interest rates are very low
- Lots of important investments to make
- Economic growth may take care of it

And then there is: Modern Monetary Theory

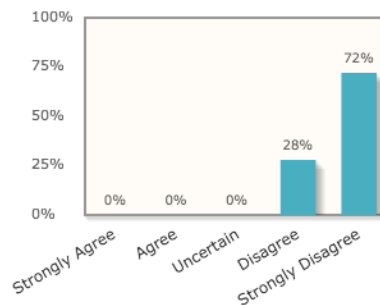
## General Sense on Modern Monetary Theory

**Question A: Countries that borrow in their own currency should not worry about government deficits because they can always create money to finance their debt.**

**Responses**



**Responses weighted by each expert's confidence**

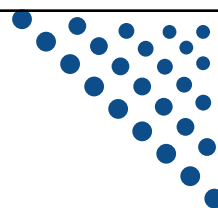


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**Thank you!**



## Any Questions?

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