

# U.S. Government Budget and Fiscal Policy

## Spending, Taxing, Deficits and the Debt

**I wonder if the guy who  
lives in this big house is  
aware of how much money  
he is spending ... and  
borrowing?**

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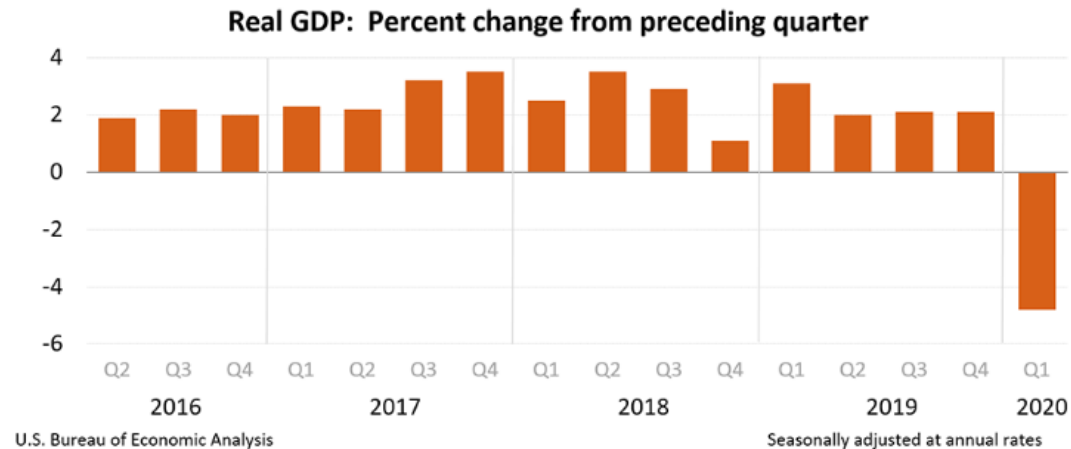


# ... and the recession (or worse) officially begins

## Gross Domestic Product, 1st Quarter 2020 (Advance Estimate)

**Real gross domestic product** (GDP) decreased at an annual rate of 4.8 percent in the first quarter of 2020 (table 1), according to the "advance" estimate released by the Bureau of Economic Analysis. In the fourth quarter of 2019, real GDP increased 2.1 percent.

The GDP estimate released today is based on source data that are incomplete or subject to further revision by the source agency (see "Source Data for the Advance Estimate" on page 2). The "second" estimate for the first quarter, based on more complete data, will be released on May 28, 2020.



EMBARGOED UNTIL RELEASE AT 8:30 A.M. EDT, Wednesday, April 29, 2020

[bea.gov/news/2020/gross-domestic-product-1st-quarter-2020-advance-estimate?mod=article\\_inline](https://bea.gov/news/2020/gross-domestic-product-1st-quarter-2020-advance-estimate?mod=article_inline)

# THE WALL STREET JOURNAL.

## U.S. Economy Shrank at 4.8% Pace in First Quarter

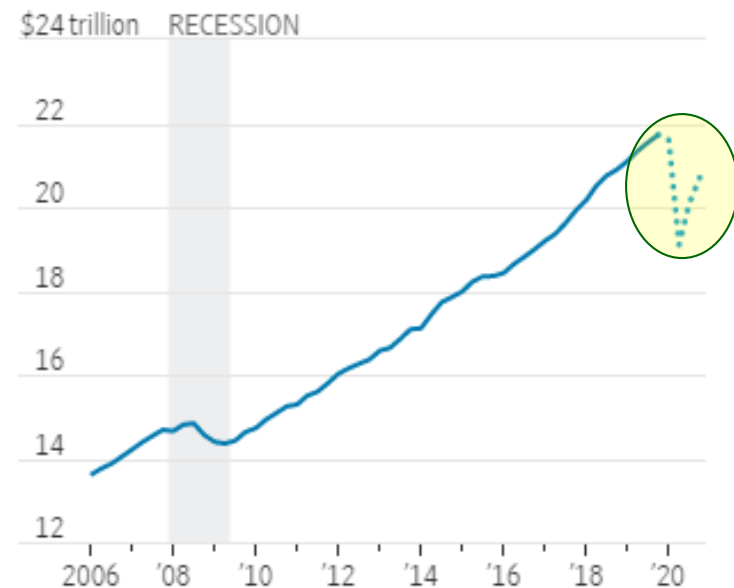
By [Harriet Torry](#)

Updated April 29, 2020 8:49 am ET

Gross domestic product recorded steepest contraction since the last recession

### U.S. gross domestic product

■ Actual ■ Forecast



Note: Figures for 2020 are a Congressional Budget Office forecast.

Sources: Commerce Department, CBO

... and the CBO thinks this will be the first ever “V” shaped recession!



# Lecture Objectives

- ✓ Review categories of spending and taxing
  - ✓ Define deficits and surpluses
  - ✓ Define connection between deficit and debt
  - ✓ Show how the debt is financed
- 
- ✓ Discuss entitlements and long-term commitments
  - ✓ Discuss the special problem of Social Security and Medicare
  - ✓ Blend modern fiscal and monetary policy.
  - ✓ Discuss topical issues as much as possible.

# Policy Actors

- **Fiscal policy**
  - concerns itself with the **spending** and **taxing** practices of the U.S. Government
- **The policy body**
  - two houses of **Congress**, **President**, and Congressional Budget Office (**CBO**) and Office of Management and Budget (**OMB**)
- **Policy agencies**
  - U.S. Treasury and agencies of the U.S. Government (such as Social Security Agency)

# Definitions

- **Outlays**
  - Monetary disbursements of the U.S. Government.
- **Revenues**
  - Net receipts of the U.S. Government from parties outside of government, typically from taxes.
- **Deficit/Surplus**
  - The total of all outlays minus revenues. When negative, the difference is the deficit, when positive, a surplus.
- **U.S. Public Debt**
  - The total sum of all outstanding U.S. Treasury securities. Net debt refers to the amount in public hands (some debt is held internally by agencies)

# Useful facts about the federal budget

- Each fiscal year starts on October 1. FY 2020 started on Oct. 1, 2019.
- Budgetary timetable
  - Early February President submits his budget: advisory
  - **April 15: Congress submits their version of budget**
  - June 30: Deadline for passage of 13 appropriations bills (never met)
- Federal debt ceiling, established in 1941, has been raised more than 70 times!!

**Unified Budget of the United States Government  
Net Outlays by Function, \$ Billions, Select Years**

Outlays by Function	Number	1990	2000	2010	2019	% Out 90	% Out 19	%Grth 90
Social Security	650	248.6	409.4	706.7	1,107.1	19.8%	24.4%	345.3%
National defense	050	299.3	294.5	693.6	737.9	23.9%	16.3%	146.5%
Medicare	570	98.1	197.1	451.6	685.2	7.8%	15.1%	598.5%
Health (excluding Medicare)	550	57.7	154.5	369.1	616.0	4.6%	13.6%	967.6%
Income Security	600	147.0	253.6	622.2	514.2	11.7%	11.4%	249.8%
Net Interest	900	184.2	222.9	196.2	478.8	14.7%	10.6%	159.9%
Veterans benefits	700	29.1	47.0	108.4	217.5	2.3%	4.8%	647.4%
Educ, trmg, employment	500	38.8	53.8	127.7	112.4	3.1%	2.5%	189.7%
Transportation	400	29.5	46.9	92.0	100.9	2.4%	2.2%	242.0%
Justice	750	10.0	28.5	53.4	69.0	0.8%	1.5%	590.0%
International affairs	150	13.8	17.2	45.2	53.1	1.1%	1.2%	284.8%
Natural resources envirmnt	300	17.1	25.0	43.7	43.7	1.4%	1.0%	155.6%
Comm and regn dvlpmnt	450	8.5	10.6	23.8	35.7	0.7%	0.8%	320.0%
Gen science, space, techn	250	14.4	18.6	31.0	34.6	1.1%	0.8%	140.3%
General government	800	10.7	13.0	23.0	31.6	0.9%	0.7%	195.3%
Agriculture	350	12.0	36.5	21.4	19.5	1.0%	0.4%	62.5%
Energy	270	3.3	-0.7	11.6	3.5	0.3%	0.1%	6.1%
Housing credit	370	67.1	3.2	0.0	0.0	5.4%	0.0%	-100.0%
Undistributed offsetting receipts	950	-36.6	-42.6	-82.1	-110.4	-2.9%	-2.4%	201.6%
<b>Total Outlays</b>		1,252.7	1,789.1	3,456.2	4,529.1			
<b>Total Revenues</b>		1,031.3	2,025.2	2,162.7	3,437.7			
<b>Budget Deficit</b>		221.4	236.1	1,293.5	1,091.5	17.7%	24.1%	

*Source:* Budget of the United States Government, various years, Tables 1.1 & 3.1 Historical Tables of the U.S. Budget  
The top 5 categories plus interest equal 87.2% of the budget.



# Outlays, Revenues and Deficit

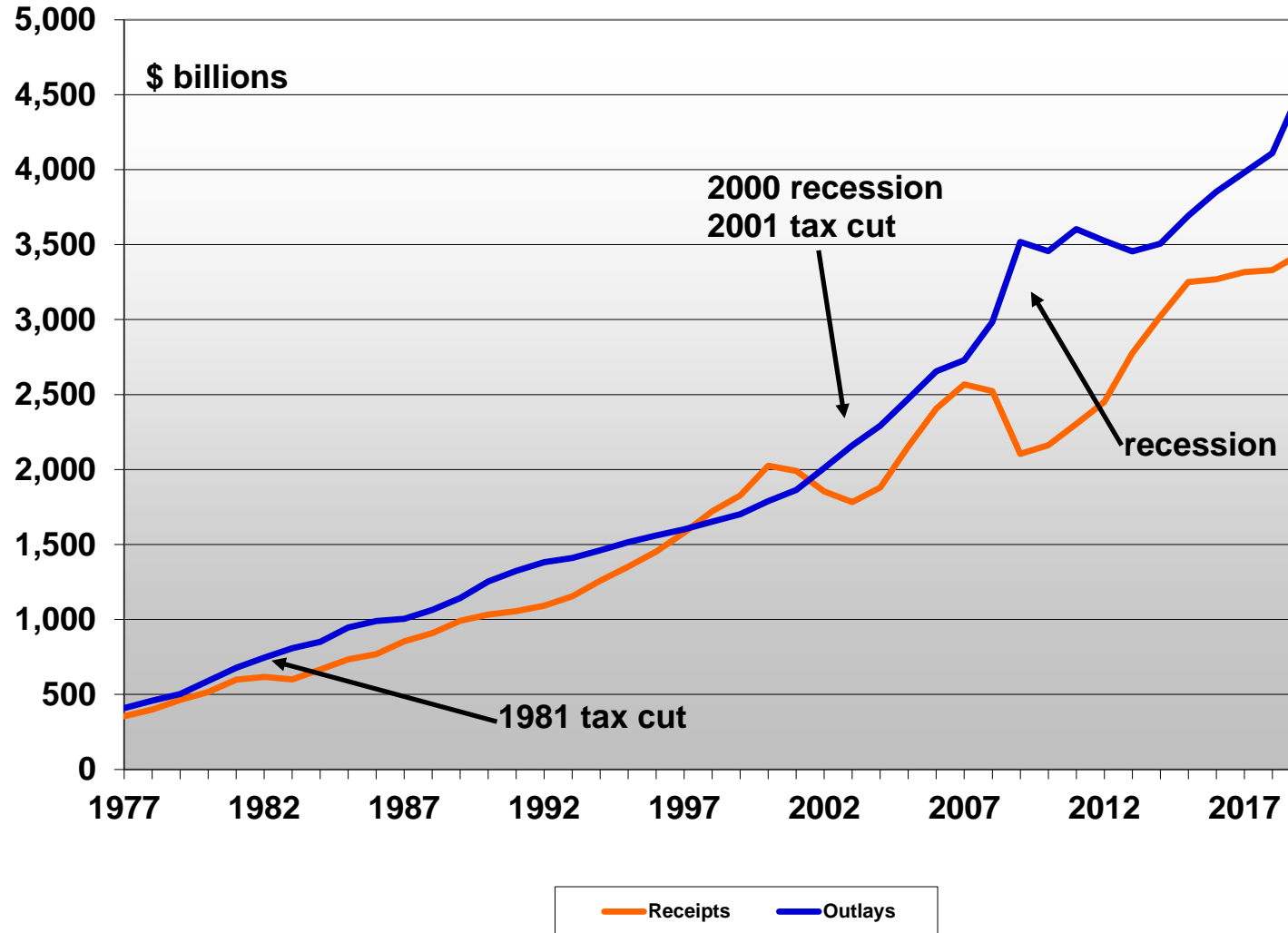
## Major outlay categories by function

	1998	2005	2010	2019	2019%
Social Security	379.2	523.3	706.7	1,107.1	24.4
Defense	269.5	495.3	693.6	737.9	16.3
Medicare	192.8	298.5	451.6	685.2	15.1
Other Medical	131.4	250.6	369.1	616.0	13.6
Income Security	237.7	345.8	622.2	514.2	11.4
Interest on Debt	241.1	184.0	196.2	478.8	10.6
Other	200.9	374.7	416.8	389.9	8.6
<b>TOTAL OUTLAYS</b>	1,652.6	2,472.2	3,456.2	4,529.1	100.0
<b>less REVENUES</b>	1,721.8	2,153.9	2,162.7	3,437.7	75.9
<b>equals SURPLUS/DEFICIT</b>	<b>69.2</b>	<b>318.3</b>	<b>1,293.5</b>	<b>1,091.5</b>	<b>24.1</b>

Source: Budget of the United States Government, various years, Tables 1.1 & 3.1 Historical Tables of the U.S. Budget  
 The top 5 categories plus interest equal 87.2% of the budget.

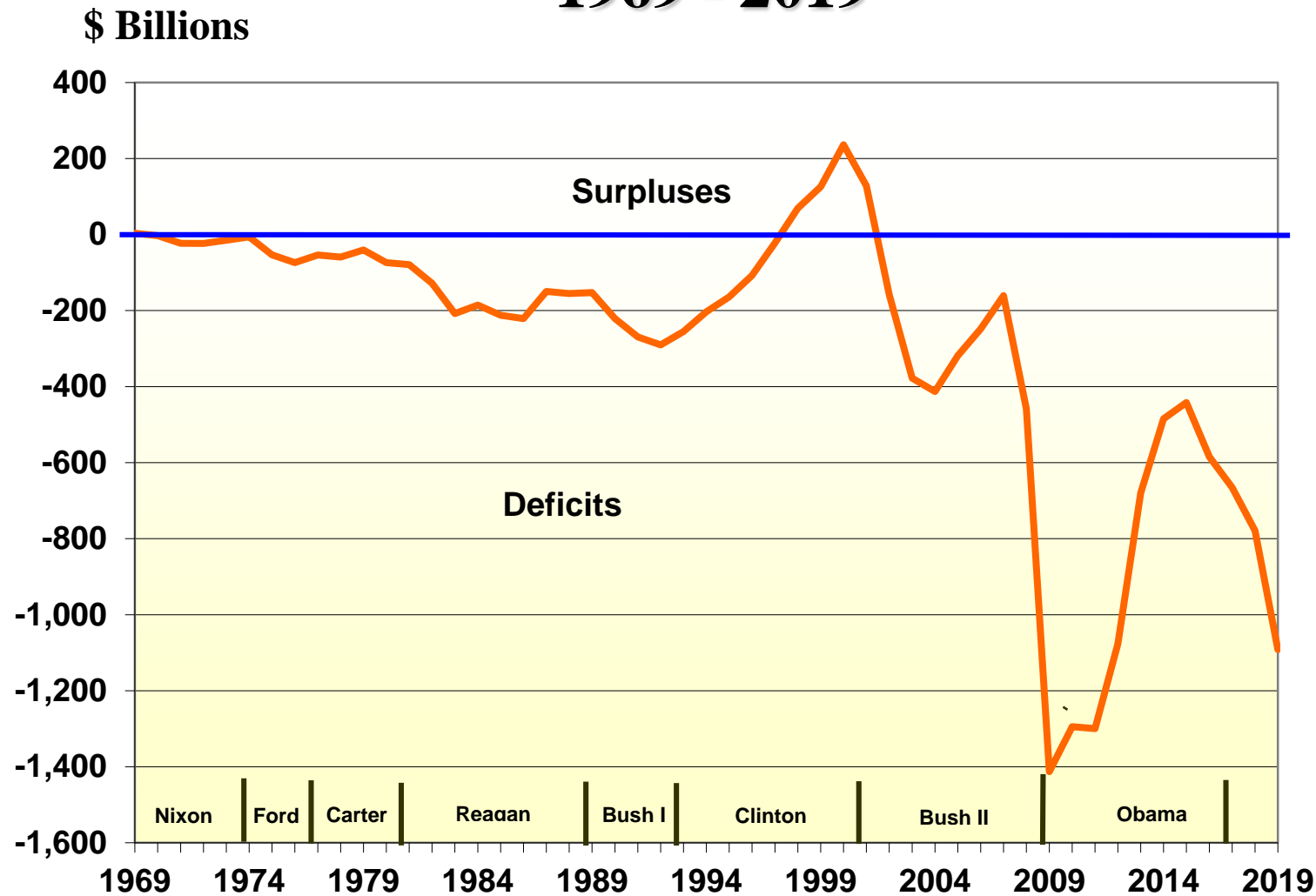
# Federal Receipts and Outlays

## FY 1977-2019



Source: Budget of the United States Government, Historical Tables, Table 1.1.

# U.S. Government Budget Surpluses and Deficits 1969 - 2019



Source: Budget of the United States Government, 2020, Historical Tables, Table 1.1.

# Financing the U.S. Government budget deficit

The budget deficit is financed by the sale of interest-bearing U.S. Treasury securities to the public, including corporations, financial institutions, and foreign investors, including foreign central banks of countries with which we have been running a trade deficit, like the Bank of China, OPEC funds, etc., and to the Federal Reserve System (indirectly) The securities differ largely by the maturities. These are the classes of securities sold:

Figure 3 U.S Treasury Securities Offered to the Public		
Security	Maturity	Now Offered
<b>Bills:</b>	Less than one year	28,91,182,364 days
<b>Notes:</b>	More than one to ten years	2,3,5,7,9 and 10 <sup>*</sup>
<b>Bonds:</b>	20 to 30 years	30 years <sup>*</sup>
<b>Floating Rate Notes:</b>	2 years	2 years <sup>**</sup>
<b>Inflation Indexed:</b>	5, 10, and 20 years	All <sup>*</sup>
<sup>*</sup> These are sometimes approximate: e.g. a 10 year notes might have a maturity of 9 years and 10 months a 30 year bond might have a maturity of 29 years and 11 months. <sup>**</sup> These were first introduced in January 2014 and pay variable interest rates.		

These are sold at competitive interest rates and they vary from maturity to maturity and the vary over time as market interest rates change.

Note: When a debt security matures, it is "rolled over" by issuing a new one.

# Total U.S. Treasury Debt

## Total Marketable Treasury Debt (external, \$ billions) Dec 2019

<b>Bills:</b>	2,416.4
<b>Notes:</b>	9,920.8
<b>Bonds:</b>	2,373.5
<b>TIPS and floating rate:</b>	1,947.2
<b>Total Marketable Debt:</b>	16,657.9

TIPS are Treasury Inflation Protected Securities.

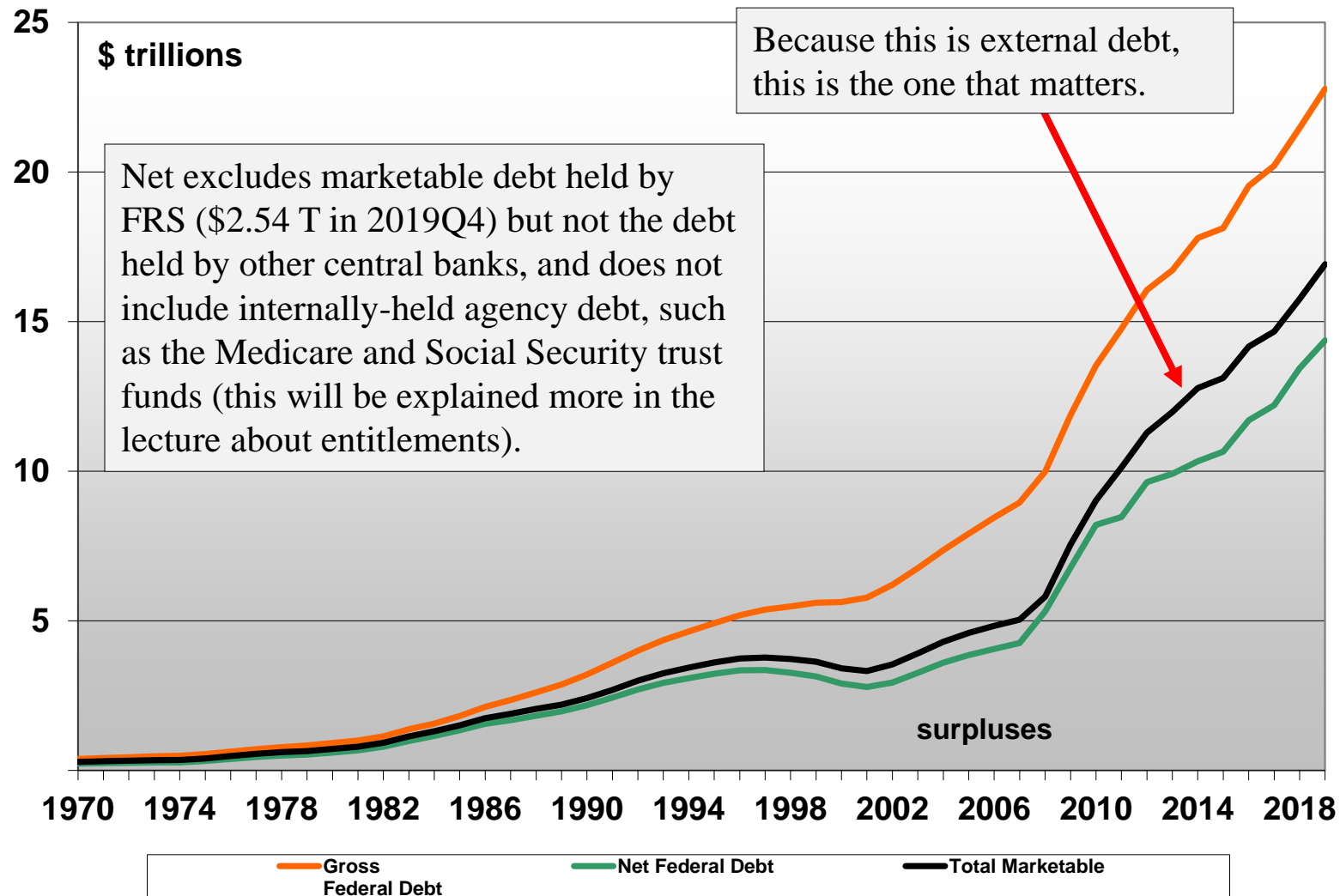
Source: Treasury Bulletin, March 2020, Table FD-2

Data are kept with 104 data.

This is the amount of the debt that is sold to the public, foreign governments, investment funds etc. This is marketable, meaning that the debt instruments can be sold and resold on private markets, just like stocks and corporate bonds.

# Total Public Federal Debt

## 1970-2019



Source: Budget of the United States Government, 2020, Historical Tables, Table 7.1.

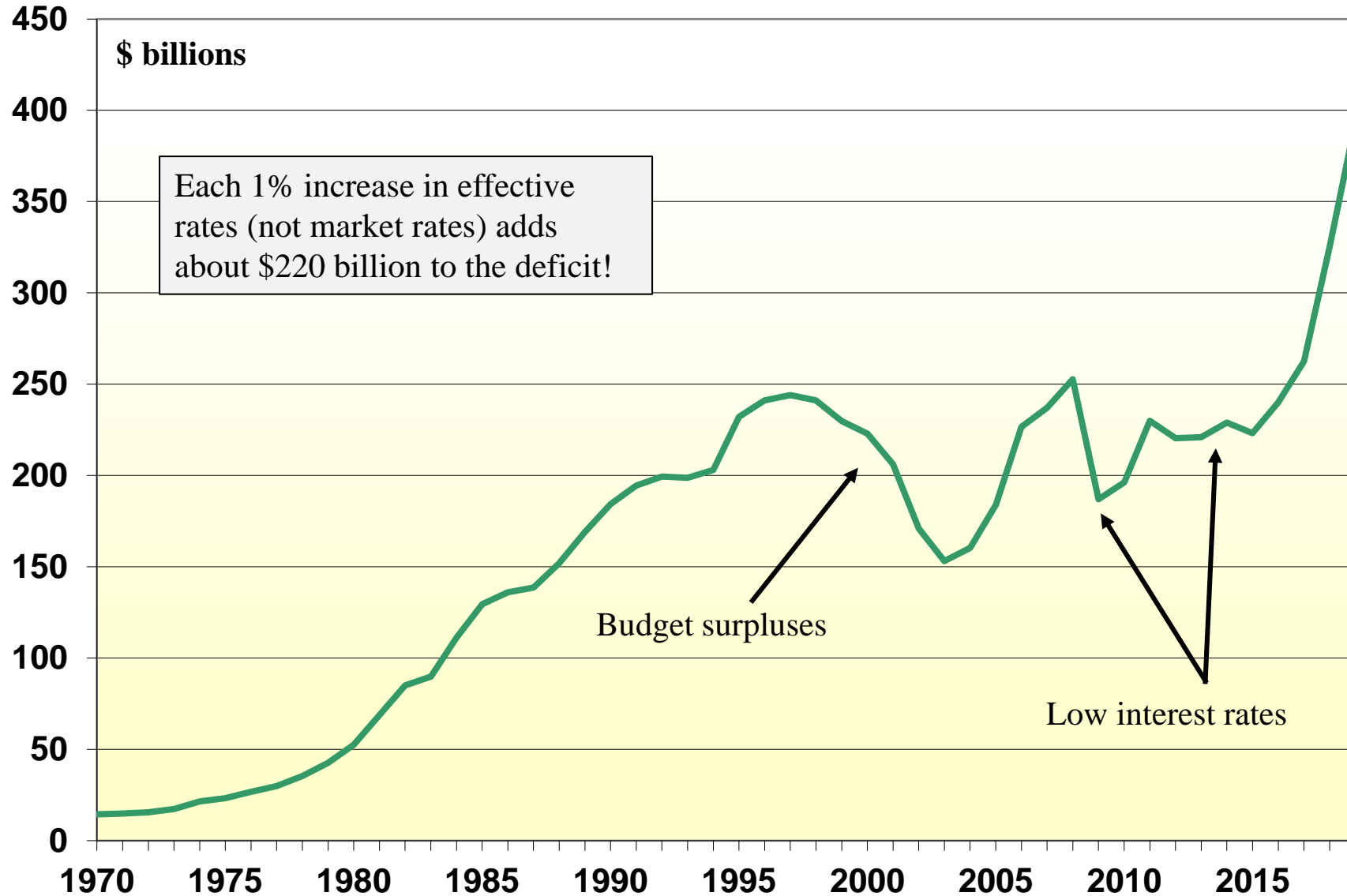
# Who owns the marketable U.S. Treasury Debt?

**Figure 5**  
**Ownership of Marketable U.S. Treasury Debt**

	December 1995		September 2019	
	Billions \$	% total	Billions \$	% total
Deposit institutions	315.4	9.5%	909.9	6.2%
US Savings Bonds	155.0	4.7%	152.3	1.0%
Private pension funds	142.9	4.3%	727.5	5.0%
S&L govt pension funds	208.2	6.3%	424.5	2.9%
Insurance companies	241.5	7.3%	208.2	1.4%
Mutual funds	225.1	6.8%	2,173.5	14.8%
State & local governments	289.8	8.8%	676.7	4.6%
Foreign holdings	835.2	25.3%	6,779.2	46.1%
Other (mostly individuals)	864.6	26.1%	2,644.0	18.0%
Total privately held	3,307.7	100.0%	14,695.8	100.0%
Memo:				
Total Debt:			22,719.4	
Held by Federal Reserve System:			2,436.4	10.7%
Memo: Federal Reserve Ownership of Marketable Debt:				14.2%

Source: U.S. Treasury Bulletin, March 2020, tables OFS-1, OFS-2.

# Interest on the Debt



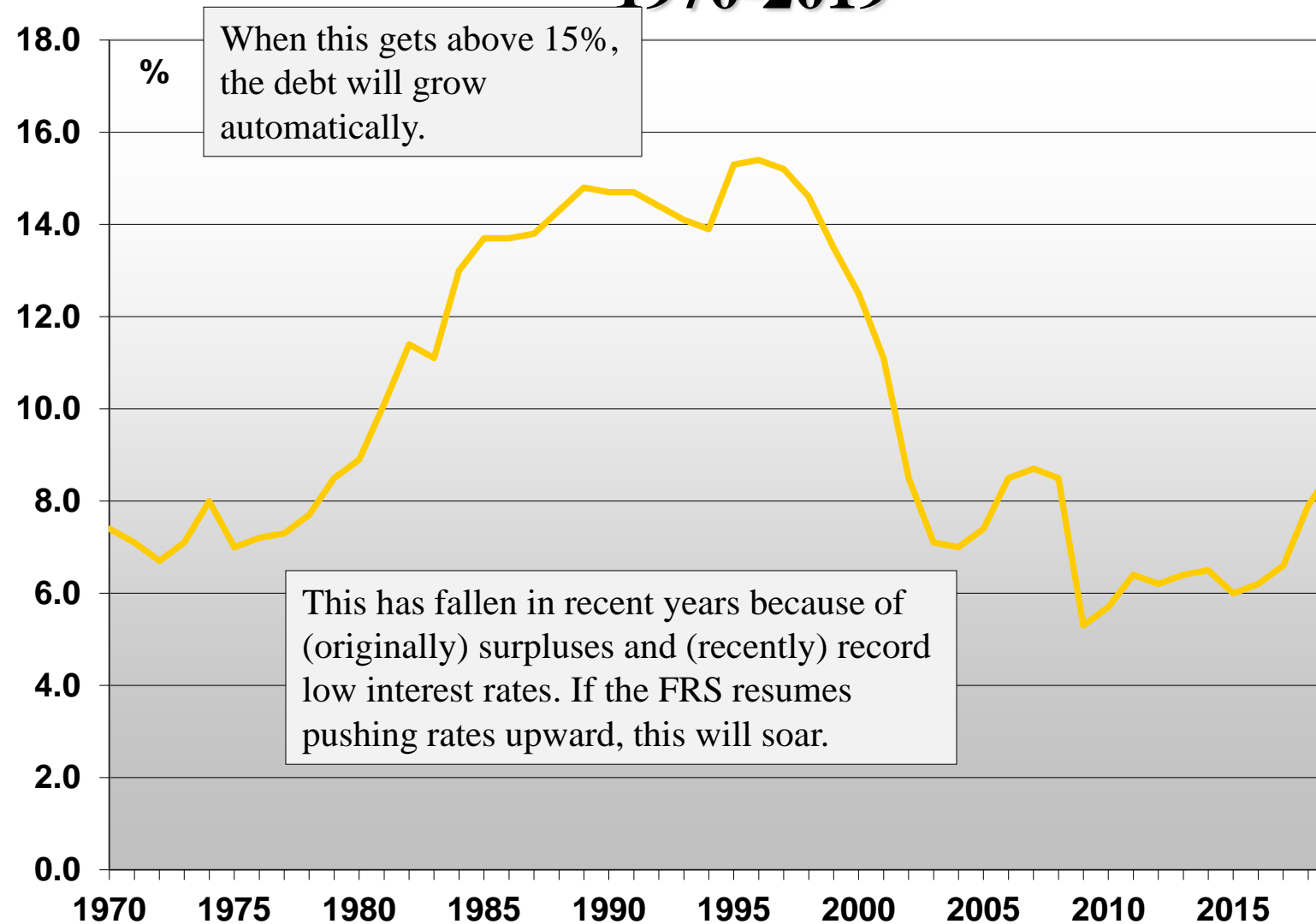
**Herein lies a long-term problem:** the government is obliged to pay this, with a large chunk going overseas

Source: Budget of the United States Government, Historical Tables, Table 3.1.



# Net Interest as a % of Outlays

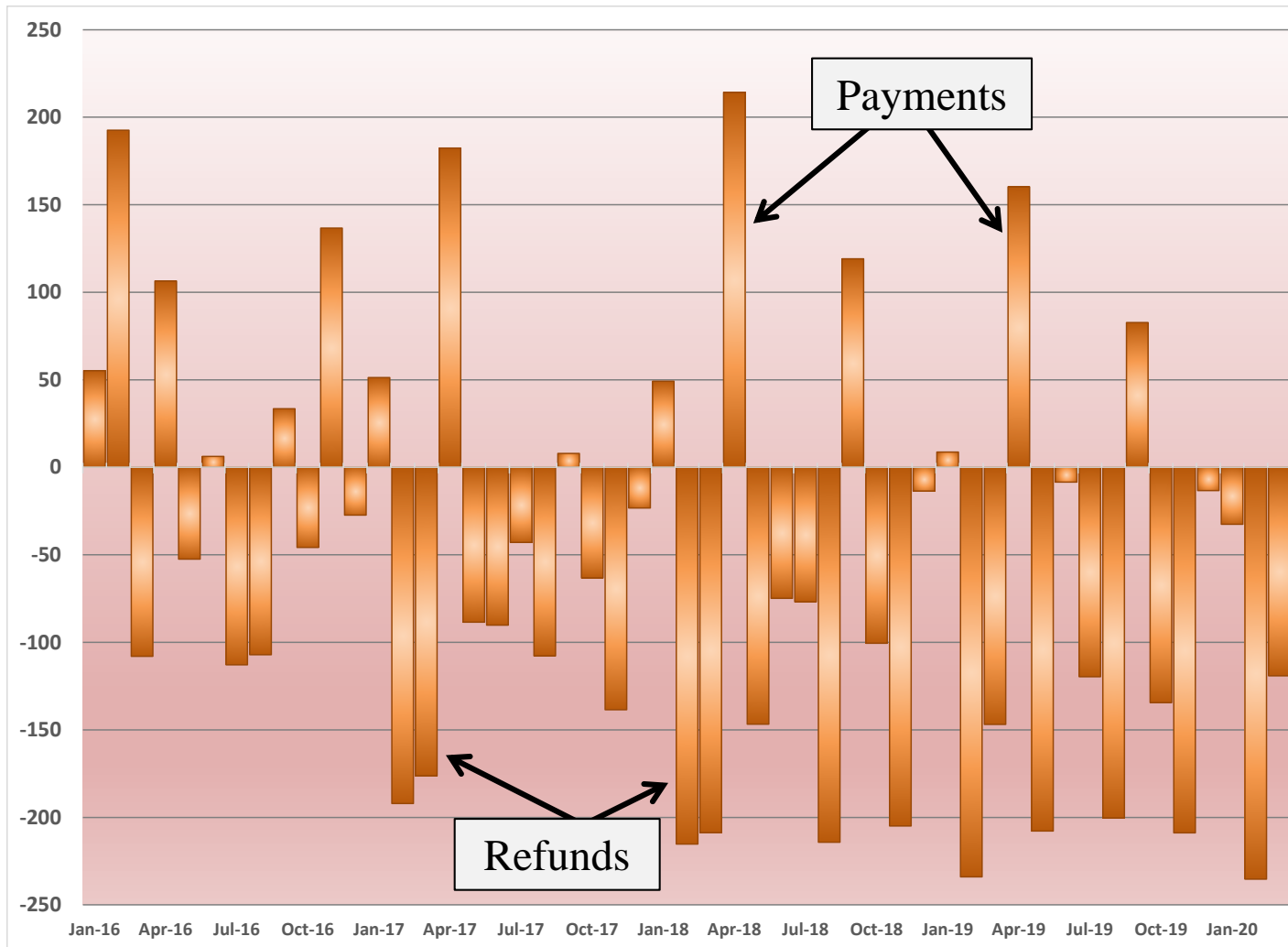
## 1970-2019



# Monthly (Seasonal) Budget Deficits

(January 2016 – March 2020)

**Total: \$2,886 billion**  
... for this time frame



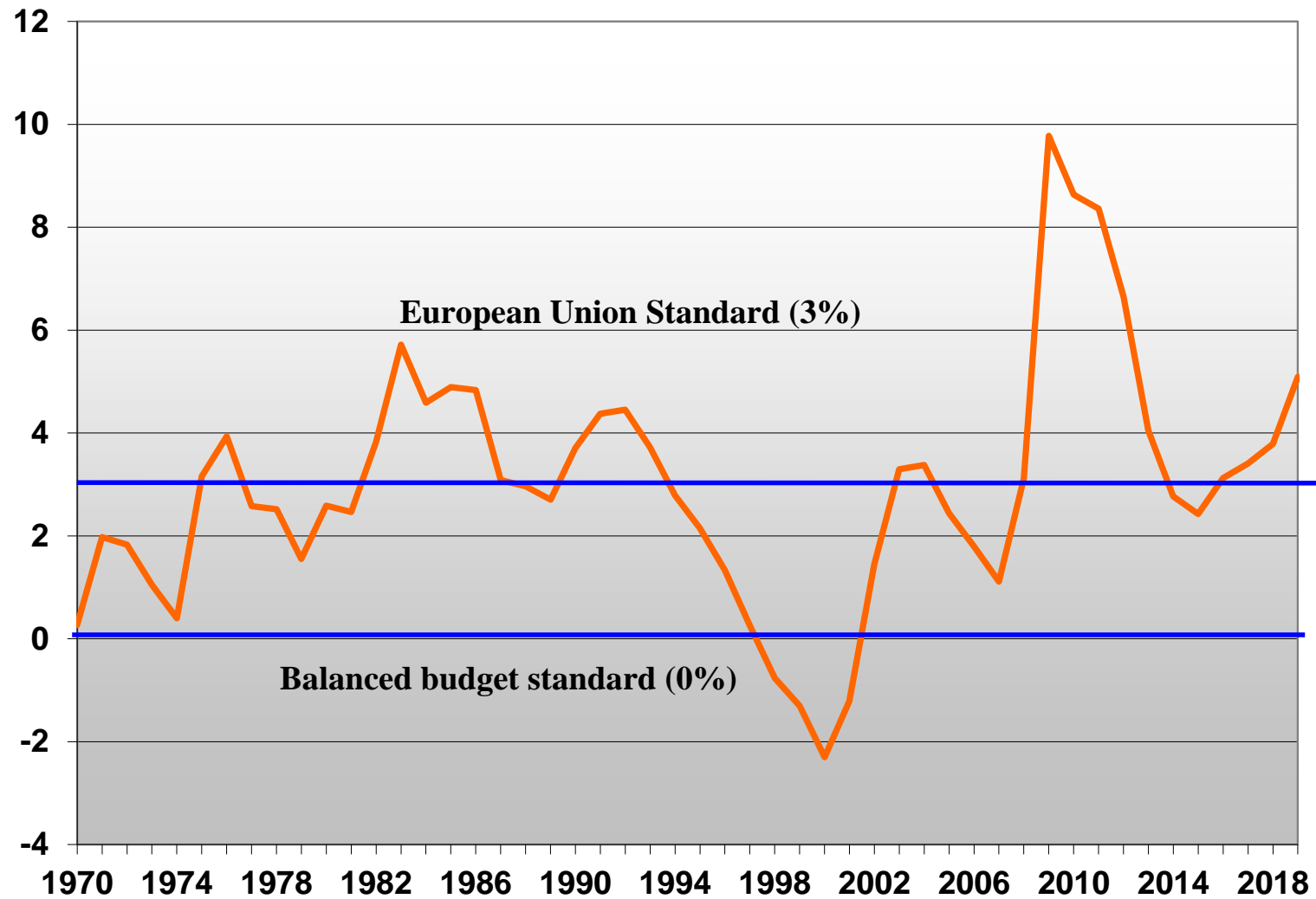
February and March are heavy deficit months because personal income tax filers are requesting refunds as soon as possible.

April, in contrast, results in massive surpluses because tax filers who owe taxes wait until the last possible moment!

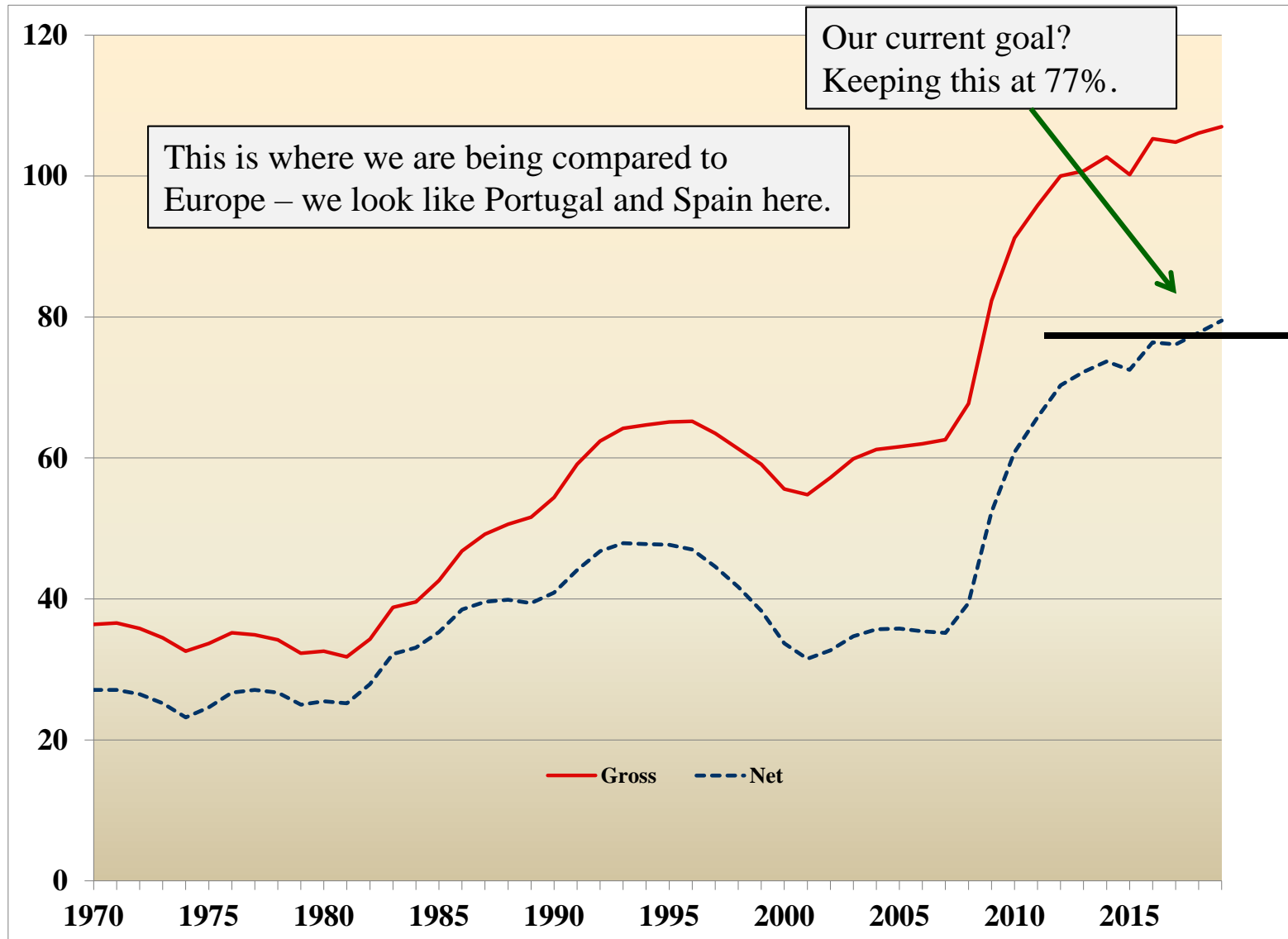
This April (2020), however, in one month will show a hugely negative value!

# The Deficit as % of GDP

## 1970-2019



# The Real Standard: Debt as % of GDP



This will likely go to 100%  
this year.

# From the CBO Budget and Economic Outlook: 2020 to 2030

Figure 1-4.

## Federal Debt Held by the Public

Percentage of GDP



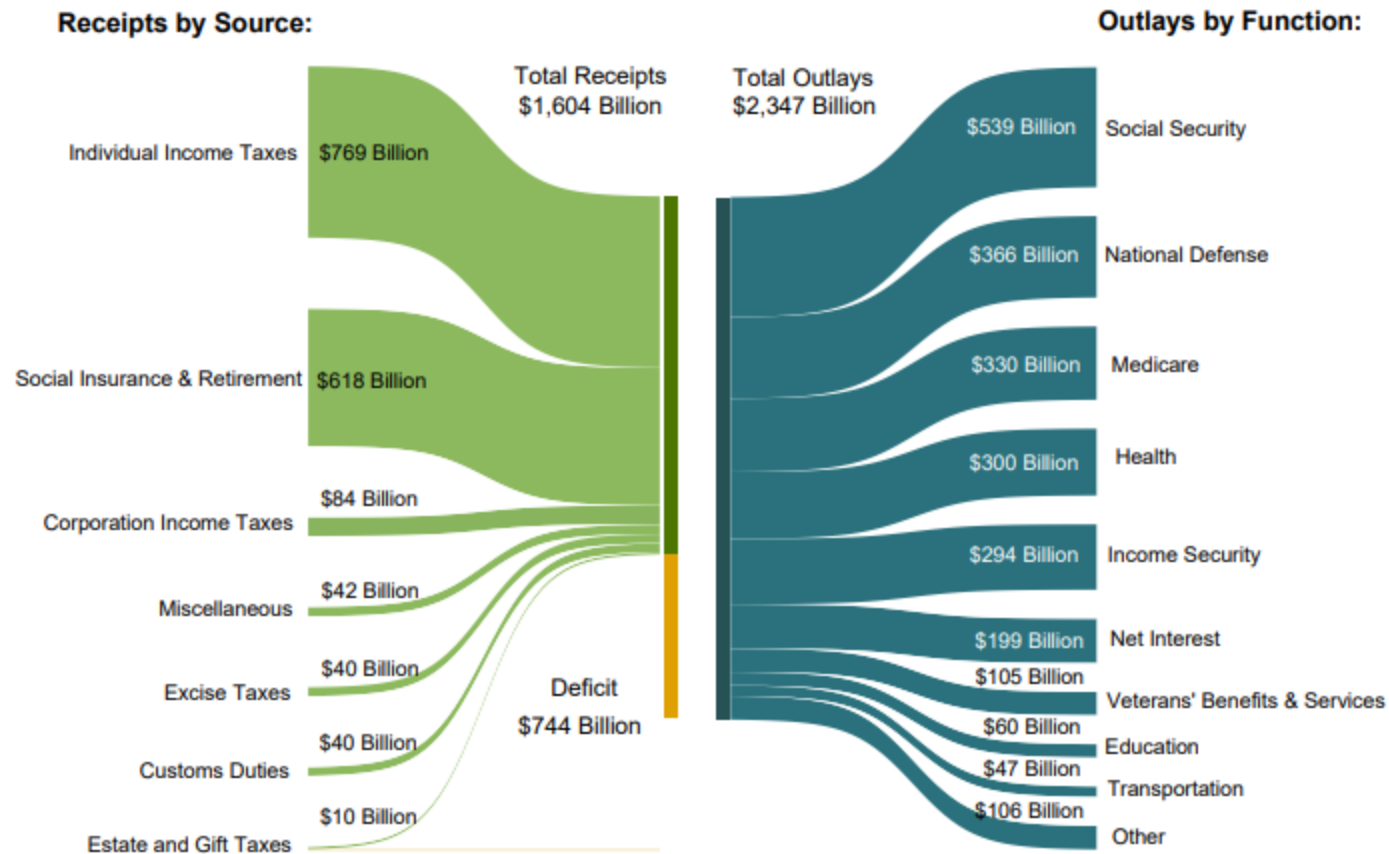
High and rising federal debt would reduce national saving and income, boost the government's interest payments, limit policymakers' ability to respond to unforeseen events, and increase the likelihood of a fiscal crisis.

Source: Congressional Budget Office.

GDP = gross domestic product.

# Relationship between outlays and taxes:

Figure 2. Cumulative Receipts, Outlays, and Surplus/Deficit through Fiscal Year 2020



Source: Monthly Treasury Statement, March 2020

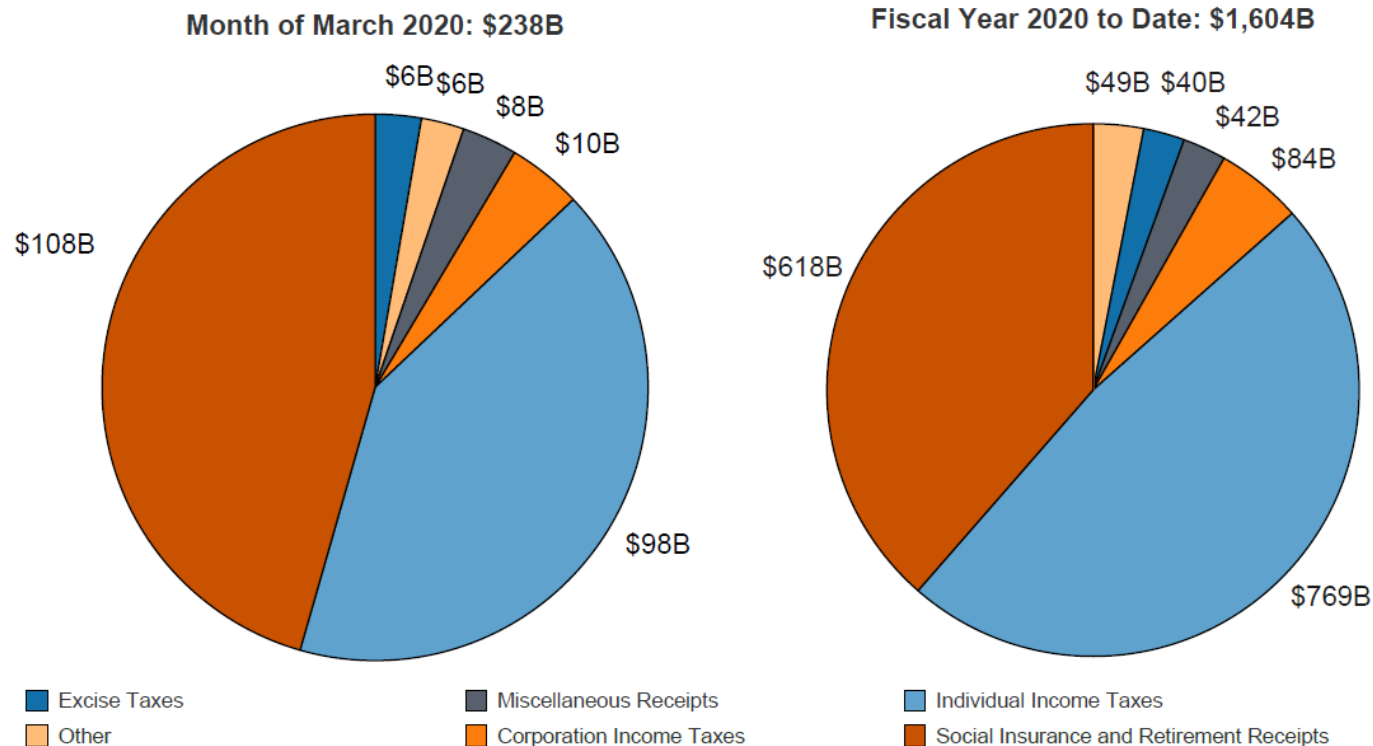
# Tax Sources 2020 est. (\$3,706.3 billion)

Figure 5. Receipts of the U.S. Government, by Source, Fiscal Year 2020

Note: Net Corporate taxes in

2017: 297.048b

2018: 204.734b



**Note: All but about 15% of federal taxes are paid by individuals.**

Source: U.S. Treasury Monthly Statement, March 2020. Figure 5.

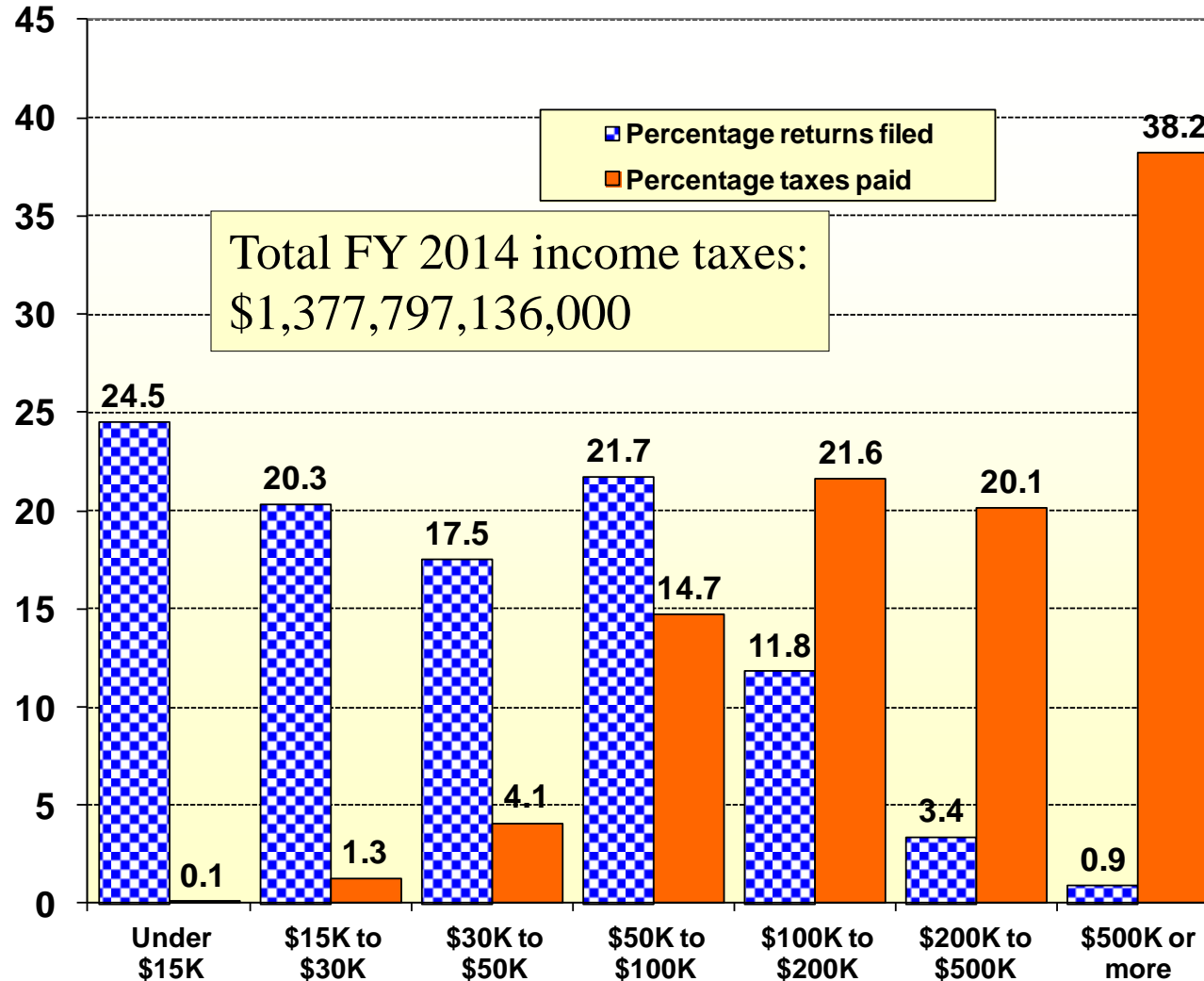
## Access Denied

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Reference #18.be0f2417.1555613224.4e8fb69f

(Why the data are not more current).

# Who pays income taxes?:

## Seven income groups, 2014, percentages



Source: irs.gov SOI Tax Stats, 2017 for 2014, aggregated from various tables including Table 1.1.

You interpret the right-most columns to mean that of those who filed income tax returns (some individual, some joint), those who filed with adjusted gross income above \$500,000 filed 0.9% of all tax returns and paid 38.2% of all taxes collected from those returns.

At the other extreme, those filing with adjusted gross income under \$15,000 filed 24.5% of all tax returns and paid 0.1% of all taxes.



# Tax brackets ...

**TABLE 1.**  
**Tax Brackets and Rates, 2020**

Rate	For Single Individuals, Taxable Income Over	For Married Individuals Filing Joint Returns, Taxable Income Over	For Heads of Households, Taxable Income Over
10%	\$0	\$0	\$0
12%	\$9,875	\$19,750	\$14,100
22%	\$40,125	\$80,250	\$53,700
24%	\$85,525	\$171,050	\$85,500
32%	\$163,300	\$326,600	\$163,300
35%	\$207,350	\$414,700	\$207,350
37%	\$518,400	\$622,050	\$518,400

Source: Internal Revenue Service

**TABLE 2.**  
**2020 Standard Deduction**

Filing Status	Deduction Amount
Single	\$12,400
Married Filing Jointly	\$24,800
Head of Household	\$18,650

Source: Internal Revenue Service

Max rate was 39.6% in 2016.

Source: The Tax Foundation,  
<https://taxfoundation.org/2020-tax-brackets/>

# The FICA/SECA Payroll Tax

This tax is clearly regressive, offsetting some of the progressive structure of the income tax.

The self-employed Social Security Tax was temporarily reduced from 12.4% to 10.4% by the 2010 Tax Relief Act.



## Employment (FICA/SECA) tax rates effective 2016

	Employer/Employee (each)	Self-employed*
<b>Social Security:</b>	6.2% \$118,500 cap	12.4% \$118,500 cap
<b>Medicare:</b>	1.45% No cap	2.9% No cap
<b>Total (each):</b>	7.65%	15.30%
<b>Total (combined):</b>	15.30%	

The self-employed Social Security Tax was reduced temporarily from 12.4% to 10.4% by the 2010 Tax Relief Act.

Source: IRS publication 1038.

For 2011 the employee contribution was temporarily reduced to 4.2%, extended in December 2011 for all of the 2012 tax year. This grossly underfunded Social Security for that year. It was raised back up in January 2013 to the levels shown above.

## Some general observations

- Short-term budget deficits can be caused by the decline in tax receipts during recessions
- Structural deficits, which are more harmful, have been caused more by tax cuts (1981-1984 and 2002-2003) than by increases in spending
- Spending has been largely independent of whatever President or political party has been in power
- Deficits do stimulate the economy in the short run
- Deficits **must be monetized** though, and that may introduce serious long-term problems.

# Key take-aways that you *should* understand ...



1. 5 key categories plus interest make up the bulk of U.S. government outlays
2. Social Security and medical outlays are huge and growing.
3. Deficits turn into debt and the level of debt is now growing very fast.
  - How are the deficits financed and what form do they take?
  - Almost 50% of our debt is held overseas
4. Interest on the debt is large and growing
  - ... and will become a very serious problem if interest rates rise
5. The real historical standard is debt as a percent of GDP
  - ... and that will likely soar this year
6. Individuals pay about 85% of federal taxes in this economy
  - ... and the wealthy pay the bulk of that
7. All of these data are going to severely distort in the coming months.

**That's it ...**

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