

SAE 550 Lecture #2:

The US Federal Government Budgetary Process



**University of Southern California
Viterbi School of Engineering
Systems Architecture & Engineering (SAE)**



**Ken Cureton - cureton@usc.edu
Dr. Edwin Ordoukhanian - ordoukha@usc.edu**

Tonight's Lecture

❑ Lecture #2: The US Federal Government Budgetary Process

- **Required reading: (*Please read before start of class*)**
 - **Intro to the Political Process and the Political Facts of Life**
 - **Re-Inventing Government**
 - **An Introduction to the U.S. Federal Budget System**
- **No Homework is due from this assignment**

❑ Your Instructor's Humble Apologies!

- **This will be more of an Economics and Political Science lecture, and less of an Engineering lecture**
- **Will point out Implications to Engineering & Science Programs**
 - **But forthcoming Case Studies will do a better job**
- **Honest!!! We will be focused on more technical topics, starting with the first Case Study (in 2 weeks)**

The U.S. Federal Budgetary Process

- ❑ See Websites for Federal Budget Links (Current and prior Fiscal Years)**
 - **Note that other Organizations have different processes**
 - U.S. States, Counties, Cities, etc.
 - Other Governments
 - Major Corporations
 - **But some things are Common to all:**
 - Not enough Resources to meet all qualified Demands
 - Decision-Makers mostly unskilled in Science, Math, & Engineering
 - Not enough time to review benefits/costs thoroughly
 - **This Lecture will Focus on U.S. Federal Budget**
 - My opinion? The Political FOLs apply to other Organizations!
 - **This Lecture will use the U.S. Department of Defense (DoD) Planning, Programming, Budgeting, & Execution (PPBE) process as an example**
 - Other Departments in the Administration have similar processes
- ❑ See Websites for DoD Army PPBE Primer**
 - **Links on skit.com and DEN**

PPBE Process Phases

☐ **P**lanning

☐ **P**rogram Objective Memorandum (POM)

- Includes Future Years Defense Program (FYDP) database

☐ **B**udget Estimate Submission (BES)

- Presidential Budget Request (PBR)
- Congress-- Hearings, House & Senate Authorization, Appropriation, Joint Conference
- Acquisition Planning (Statement of Work: SOW or Statement of Objectives: SOO, Contract Office Selection, Source Selection..)

☐ **E**xecution

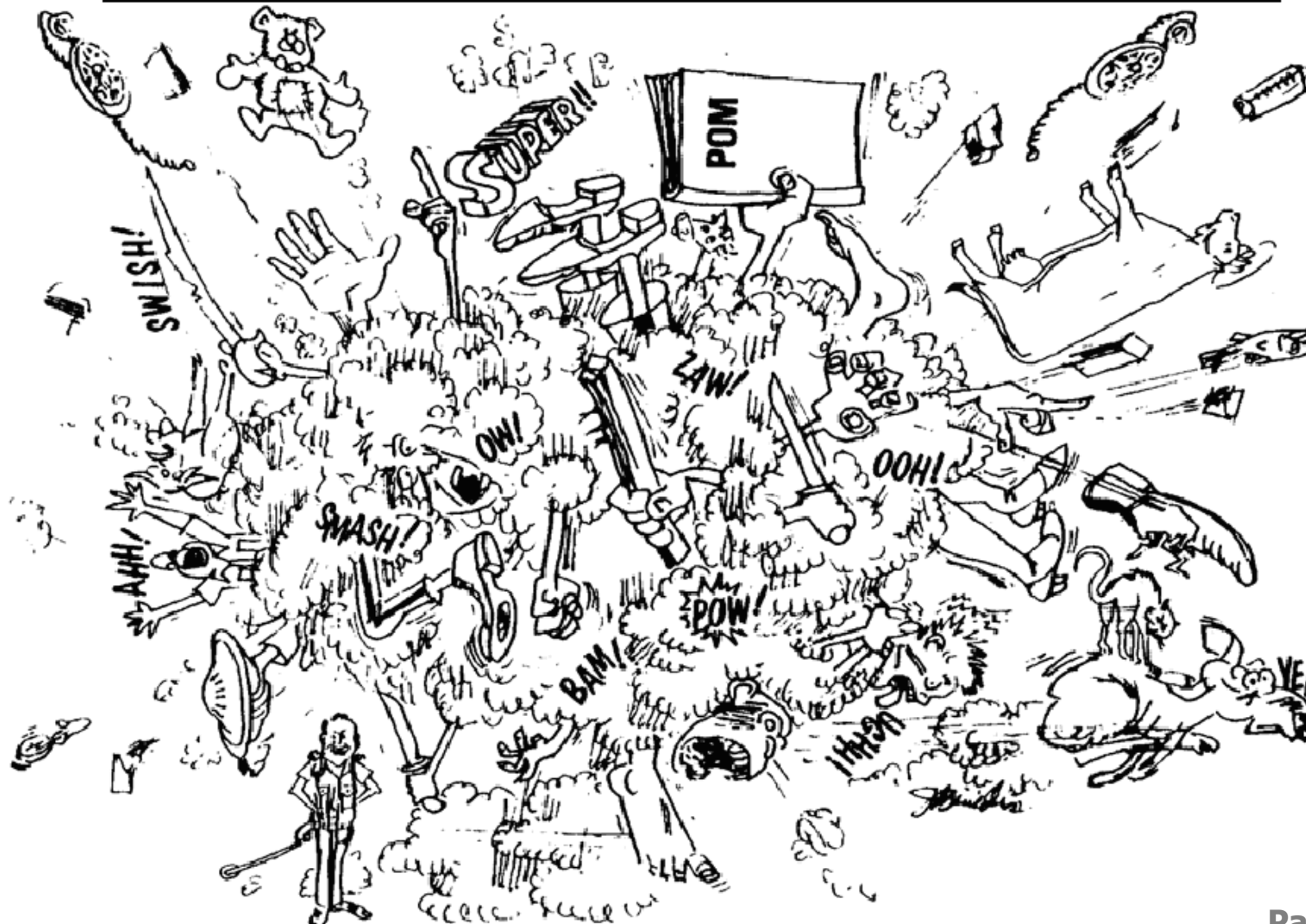
- Allocation, Obligation Planning, Commitment, Obligation*, Disbursement
 - Unobligated funds do NOT automatically roll into the next year: Use It Or Lose It!

**SEE “DoD Army PPBE Primer”
ON CLASS WEB SITES**



The Reality of PPBE

PPBE PROCESS



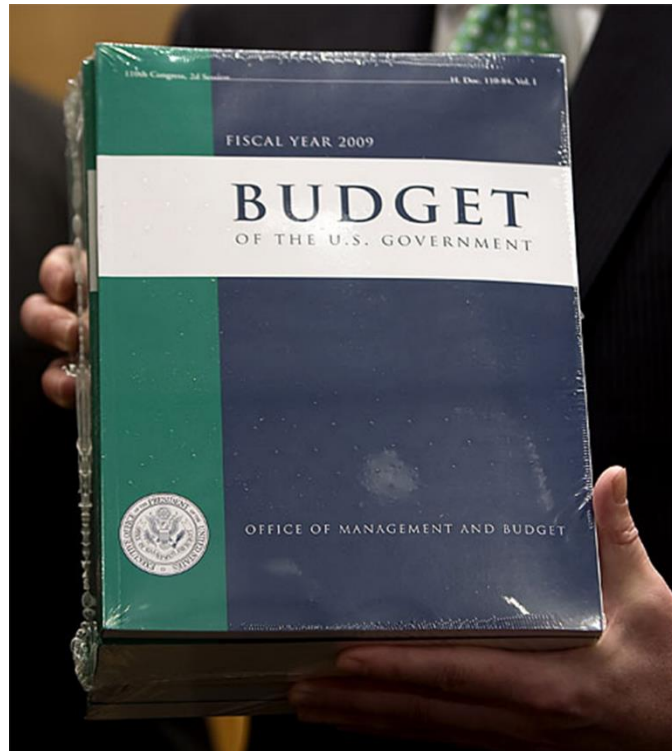
Key Points in Considering the Budgetary Process

❑ Remember That:

- **The Budget is Entirely a Political Exercise**
 - Directly reflecting the Country's Goals and Priorities
 - Budget reflects apparent Power & Importance of Organizations
- **The Purpose of Government is to Constantly Evaluate how to “Best” Allocate Funds**
 - When Demand (Outlays) is Much Greater Than Supply (Revenue)
 - Money = Politics
- **The Reasoning Processes used by the Political System is entirely different from the one in which Scientists and Engineers are trained!**
 - Political reasoning is Not based on “logical proof”
 - Instead, based on Negotiation, Compromise & Appearances
- **Not enough Time to Review & Discuss Consequences of Decisions!**
- **Federal Budget starts October of each year (Fiscal Year: FY)**
 - Ends September of the following year

Development of the Budget Request

- ❑ **The Budget Process: The President's Budget Request (PBR)**
 - **Nothing about the Budget Process is linear or hierarchical**
 - **Does not originate in one place**
 - **President's "Request" is product of long, complex prior process**
 - **Note that the President does NOT set the budget-- Requests it!**



PBR (Executive Branch)

- ❑ In preceding Spring, Office of Management and Budget (OMB):**
 - Tells each Department the maximum amount of money it may request for inclusion in PBR in the following January**
 - Intensely politicized number!**
 - Embodies Administration's Political Priorities**
 - Total reflects current political pressures from viewpoint of the OMB**
 - In theory, the President's priorities... mostly...**
 - Allocations reflect President's assessment of relative importance of each Department's Mission**
 - Each Department, of course, has own (higher) number in mind!**
 - Within each Department, struggle ensues across Agencies for Position and Importance (i.e. Money)**
 - Each Agency, of course, has their (higher) number in mind!**
 - Fierce negotiation within each Department as to Budget Request**
 - Typical Result: Most Departments Submit Budget Requests that exceed OMB Allocations**
 - Slightly or greatly, depending on the negotiated compromise across Agencies within each Department**

Executive Branch Departments

☐ Departments Whose Heads are Cabinet Members:

- **State**
- **Treasury**
- **Justice (DoJ, includes FBI, DEA, BATF, other Agencies)**
- **Interior**
- **Agriculture (USDA)**
- **Commerce**
- **Labor** (was part of Commerce & Labor)
- **Defense (DoD)** (was Department of War and Department of the Navy)
- **Health & Human Services** (was Department of Health, Education, and Welfare)
- **Housing and Urban Development (HUD)**
- **Transportation (DoT, includes FAA)**
- **Energy**
- **Education** (was part of Health, Education, and Welfare)
- **Veterans Affairs** (was an Independent Agency)
- **Homeland Security** (includes Coast Guard except when operating under US Navy)

☐ Independent Agencies (IA, no position in the President's Cabinet)

- e.g. CIA, NASA, EPA, FCC, GSA, SSA, PRC (USPS), others

Example: Department of Defense (DoD) Budget Process

- ❑ **Begins with Defense Planning Guidance (DPG) from Secretary of Defense (SECDEF) to Services**
 - **Army, Navy, Air Force budgets**
 - Note that Marine Corps budget is part of Navy budget and that US Space Force budget is part of the Air Force Budget
 - **Services respond with individual Budget Requests**
 - **Total is always more than OMB maximum for DoD**
 - **Issues argued between OSD and Services**
 - Negotiation down to level that SECDEF is willing to defend
 - Still, almost always more than OMB maximum to DoD
 - **Spring & Summer = “POM” (Program Objective Memorandum) process for immediately upcoming year and several out-years**
 - Associated with Future Years Defense Program (FYDP) database
 - **Fall = “PBD” (Program Budget Decision) process for upcoming Fiscal Year (October through September)**
 - **Result: DoD Budget Request to White House**

PBR (Executive Branch) *(continued)*

❑ Similar Process Ongoing in Other Departments

- **OMB objects to Department Budgets as Unacceptable on Budgetary (i.e. Political) Grounds**
- **“Passes Back” to Departments for Revision**
- **Agencies “Appeal” (i.e. lodge protests)**
 - **Department Heads may “negotiate” with President**
- **Result is President's Budget Request to the Congress**
 - **After State of the Union Address, by law no later than 1st Monday in February ***
- **Note special case of a newly-elected President**
 - **Unlikely to accept PBR developed by predecessor, especially if developed by a different Political Party!**
 - **Typically wild, last-minute changes by the President & OMB in these circumstances, with little/no negotiations with Departments**

❑ Typically a Dead-on-Arrival Ceremony in Congress

** Note– FY26 Budget only partially submitted in May of 2025!*

Budget Resolutions (The Congressional Version)

❑ Then Congress Does Its Own Budget

- **Note that the Congress does NOT set the Budget– passes bills!**
- **Republican President + Democratic Congress = Sharply Divergent Priorities**
- **Democratic President + Republican Congress = Same Thing**
- **Unless Party Majority in both House & Senate = Same Thing**

❑ Congressional Budget Office (CBO):

- **“Undoes” the Dead-on-Arrival ceremony: uses President's Request as a starting point to establish Congressional Baseline**
 - **CBO usually watches PBR development and has been drafting Congressional Budget Totals in parallel**
 - **CBO usually works closely with Budget Committee Chairmen to ensure that those totals are “politically acceptable” to Congress**

❑ CBO tells House and Senate Budget Appropriations Committees what Budget Totals are allowed, typically by March

- **Unlike in the Executive Branch, very little push-back**
 - **Mostly because of pre-negotiation & extreme time pressure**

Draft Budget Resolutions

- ❑ **Total Fiscal Year Budget Resolutions to be voted on and accepted by Congress by April 15th of each year**
 - **House and Senate Budget Committee Staffs divvy that Budget Total by Budgetary Functions and Produce 12 Draft Budget Resolutions**
 - **To go into 12 different draft Budget Bills (as of 2012), often combined into an Omnibus Budget**
 - Note again the extreme time pressure!
 - **These 12, for historical reasons, don't exactly match the organization of PBR by Executive Branch Departments & IA**
 - See list of Budget Bills and Subcommittees on next page
 - Few Departments have their own Budget Bill (e.g. Defense)
 - No separate budget for each IA: "buried" in one of the Budget Bills
 - **Budget Bill Groupings are Illogical, often Damaging**
 - But largely untouchable, major effort by Congress to change these!
 - Historical Power & Control of Subcommittees

Draft Budget Resolutions *(continued)*

- ❑ **But... What If Budget Resolutions Not Voted on and accepted by Congress by April 15th?**
 - **Alternative, Starting 2022: *Deeming***
 - **Allows House Appropriations Committees to begin work on Draft Budget Bills before total Fiscal Year Budget Resolutions passed by House of Representatives!**
 - **Assuming adherence to an overall discretionary spending level known as a 302(a)**
 - **No equivalent (yet) in the Senate**
- ❑ **Note: Statutory Caps on discretionary spending expired at the end of FY 2021**
 - **Therefore, the Congress is not required to appropriate funds within any legal limit**

Budget Bills and Appropriations Subcommittees

- ❑ **12 Individual Budget Bills & Appropriations Subcommittees (since 2012)**
- **Agriculture, Rural Development, Food & Drug Administration**
 - **Commerce, Justice, & Science (!!!)**
 - **Financial Services & General Government (!!!)**
(Includes Judicial Branch, Office of the President, District of Columbia Appropriations)
 - **Legislative Branch (!!!)**
 - **Defense ***
 - **Energy and Water Development**
 - **Homeland Security**
 - **Interior & Environment**
 - **Labor, Health and Human Services, & Education**
 - **Military Construction & Veterans Affairs ***
 - **State & Foreign Operations**
 - **Transportation, Housing, & Urban Development**

Legend: as of 2025-08

Budget battle looming for FY26, House bills (*) but not accepted by Senate, no budget bills signed into law by President!

See <https://crsreports.congress.gov/AppropriationsStatusTable> for FY2026 budget status

See <https://www.crfb.org/papers/appropriations-101> for Appropriations Process

Budget Bills *(continued)*

❑ House & Senate Authorization Committees

- One for House of Representatives, one for Senate
 - Also many Authorization Subcommittees in House & Senate
- In Theory, Authorizers say how much *May* be spent on which Programs, and Appropriators decide how much *Will* be spent
 - Example: Kid's Allowance
- In Reality, Authorizers increasingly irrelevant, true power increasingly is in hands of Appropriators
 - In Theory: Authorization Precedes Appropriation
 - In Reality: Now Happen Simultaneously
- Even when Authorizers fail to act, Appropriators can Appropriate Anyway
 - Appropriations have exceeded Authorizations on rare occasion when no Authorization bill was passed or when an item in the Authorization was zeroed
- But -- Authorization Is Still A Hurdle
 - Authorizers have chiefly Negative Power: can say "No"
 - Power to make a Program happen in hands of Appropriators

Budget Bills (*continued*)

- ❑ **Authorization & Appropriations Committee Chairmen then divvy up Budget Committee ceilings among their Oversight Subcommittees**
 - **One for each of the 12 budget bills**
 - **Each sets the Upper Limits that House & Senate Authorization and Appropriations Committees can spend in each segment of overall Budget for coming Fiscal Year**
 - **Ceilings are only slightly contentious**
 - **But breakdown below that (e.g. down to Programs) affects Constituency and thus Voters and thus Members of Congress!**
- ❑ **This is when the REAL funding process begins!**
 - **Always more Demands by Constituency than Dollars**
 - **Process is *fiercely* Political and Contentious**
 - **Departments and Functions grouped in odd ways**
 - **Prior example: HUD, VA, and IA Subcommittee, now Commerce, Justice, & Science Subcommittee**
 - **The NASA is an IA!**

Budget Bills *(continued)*

- ❑ Program Supporters must be Strongly Positioned in Oversight Subcommittee Structure**
 - Ideal Advocate is Chairman of Applicable Appropriations Subcommittee**
 - These can Channel Funding in Favored Directions**
 - Also Need Customer's Support!!!**
 - “Congress Is The Last Place You Ever Want To Go First!”**
 - Going Directly to Congress without your Administration Customer's Blessing is an Invitation for Disaster**
 - Or Program Supporters can go to a Congressional Staffer of a Member of Congress serving on an Oversight Subcommittee**
 - Often the Person to Convince, as Staffers do most of the “leg work”**
 - Especially a Senior Staffer to a Chairman of an applicable Appropriations Subcommittee**

Budget Bills *(continued)*

- ❑ House Subcommittees write their Piece of Legislation and send to Full House Committee**
 - **Full House Committee usually OK's and sends to Floor for House of Representatives Vote**
 - On rare occasions, House Vote rejects a Draft Budget Bill and sends it back to Full House Committee
 - **Goal is to obtain House Vote before August Recess**
 - Increasingly, a LOT of last-minute activity to reach this goal
 - Increasingly, this goal not achieved until after the House reconvenes in September!
 - Note that new FY starts in October– extreme time pressure!
- ❑ In Theory, Same Process is Going on in the Senate**
 - **But increasingly not in parallel**
 - **Senate in habit of waiting for the House to produce its Appropriations Bill(s)**
 - Result: Senate may not get going until just before August Recess (or even afterwards!)

Budget Bills *(continued)*

- ❑ Legislative Process therefore gets Crammed into end of Fiscal Year**
- ❑ Worse Yet, House & Senate Typically Produce Different Bills**
 - Result: Joint Conference**
 - Conference General Procedure: Split the Difference**
 - Whether or not that makes any Engineering sense**
 - May disrupt Project Scheduling/Construction Milestones/essential Research & Development**
 - Not the basis of Conference's decision-making process**
 - Conferences are vehicles to Force Consensus between two differing Political Value (House & Senate)**
 - Split the difference is readiest way**
 - Drives Programs crazy, but a Budgetary Reality**
- ❑ Then On To President of the United States**
 - In Theory, to be Signed into Law before the end of the FY**
 - In Theory, no signed Budget means no money to run the Government!**

President Signs or Vetoes Budget Bill(s)

☐ President Can Veto

- **More likely, Threaten**
 - Legislation probably then altered by Congress
 - Congress may want this to happen: set up President as the bad guy
- **Congress usually can't manage a 2/3 vote to Override a Veto**

☐ Controversy All The Way

- **Note: No Line Item Veto (at present)!**
 - President vetoes ALL of a Bill or signs ALL of a Bill into Law
- **Hearings to Air Issues or Provide Soapbox**
- **Government Accountability Office (GAO) Reports**
 - Requested by Members of Congress (usually “to get the dirt”)
 - Become Political Ammo
- **Outside Reports (e.g. by NAS, DSB) are rapidly Politicized**
 - i.e. valid Technical findings are misinterpreted/misused Politically

President Signs or Vetoes Budget Bill(s) *(continued)*

❑ But... What If Budget Not Signed Before Start of Fiscal Year?

- **In Theory, Government Must Shut Down, Cannot Operate**
- **In Practice... Continuing Resolution (CR) Bill!**
- **CR Defines Permissible Spending Level until Appropriations Legislation Signed into Law, pinned by one or more Criteria:**
 - **Last Year's Level of Appropriations (most usual choice)**
 - **Levels in the President's January Budget Request**
 - **Levels in a House Appropriations Bill that passed the House but not the Senate**
 - **Or all of the above, whichever is lower**
 - **Or Different Standards for Different Items/Agencies**

❑ May Never Get a Final Appropriations Act!

- **So CR becomes *de facto* Appropriations Bill**
 - **For example, FY2012**

President Signs or Vetoes Budget Bill(s) *(continued)*

- ❑ What About The Possibility of a U.S. Government Shutdown?**
 - Since 1977, Congress has passed all its required appropriations measures on time only four times: fiscal 1977, 1989, 1995, and 1997**
 - In 11 of the past 13 fiscal years, lawmakers have not passed a single spending bill by Oct. 1**
- ❑ Continuing Resolutions: There have been an average of 4.6 continuing resolutions per fiscal year since 1977**
 - Lawmakers utilized 131 CRs between FY1998 and FY2023 (an average of five CRs each fiscal year)**
- ❑ Timeline Impact: On average, over the past 26 years, the appropriation process was completed four and a half months into the fiscal year**

(etc.)

Problem With Entitlements

- ❑ **FY2026: Many Major Programs Comprise Roughly 70% of Budget!**
 - **Social Security**
 - **Medicare, Medicaid, and National Medical-Care Insurance**
 - **Interest on the National Debt**
 - **Veteran's Benefits**
 - **Mandatory Defense Spending (by Treaty & Alliance)**
- ❑ **These So-Called "Entitlement Programs" are Difficult to Cut**
 - **In General, Politically "Suicidal" to Cut these**
 - **Politicians threatening to cut these usually wind up out-of-office or else forced to change tactics (e.g. can't cut Social Security but can raise Contribution Ceilings, Rates, and Retirement Ages)**
- ❑ **Remainder are Called Appropriated or "Discretionary" Programs**
 - **Includes the majority of the Defense Budget**
 - **Doesn't leave much over which to argue**

Major Budgetary Categories: President Trump's FY2026 *Discretionary* Budget Request

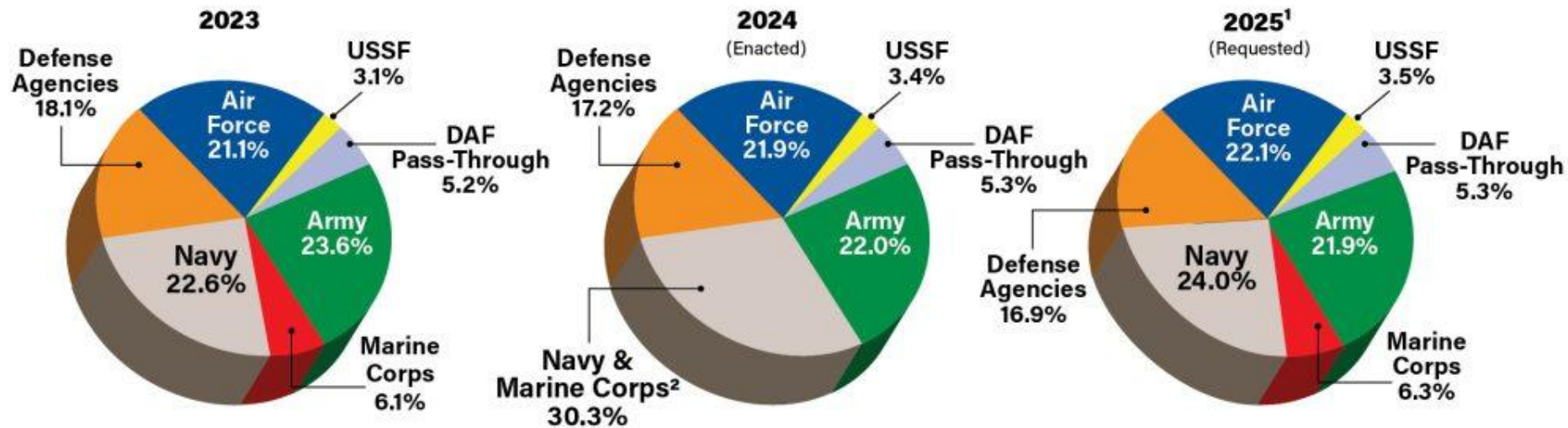
Agency	FY 2025 Enacted	FY 2026 Proposed	Change (\$)	Change (%)
CABINET DEPARTMENTS				
Agriculture	\$27.3	\$22.3	-\$5.0	-18.3%
Commerce (excluding rescission)	\$10.2	\$8.5	-\$1.7	-16.5%
Defense (incl. reconciliation)	\$848.3	\$961.6	+\$113.3	+13.4%
Education	\$78.7	\$66.7	-\$12.0	-15.3%
Energy (Total DOE)	\$49.8	\$45.1	-\$4.7	-9.4%
Health & Human Services	\$127.0	\$93.8	-\$33.3	-26.2%
Homeland Security	\$65.1	\$107.4	+\$42.3	+64.9%
Housing & Urban Development	\$77.0	\$43.5	-\$33.6	-43.6%
Interior	\$16.8	\$11.7	-\$5.1	-30.5%
Justice	\$36.0	\$33.2	-\$2.7	-7.6%
Labor	\$13.3	\$8.6	-\$4.6	-34.9%
State & International Programs	\$58.7	\$9.6	-\$49.1	-83.7%
Transportation	\$25.2	\$26.7	+\$1.5	+5.8%
Treasury	\$14.2	\$11.5	-\$2.7	-19.0%
Veterans Affairs (incl. Toxic Exposures Fund)	\$159.7	\$187.2	+\$27.6	+17.3%
MAJOR AGENCIES				
Corps of Engineers	\$5.9	\$5.0	-\$0.9	-15.2%
Environmental Protection Agency	\$9.1	\$4.2	-\$5.0	-54.5%
General Services Administration	-\$0.9	\$0.5	+\$1.3	N/A
NASA	\$24.8	\$18.8	-\$6.0	-24.3%
National Science Foundation	\$8.8	\$3.9	-\$4.9	-55.8%
Small Business Administration	\$0.9	\$0.6	-\$0.3	-33.2%
Social Security Administration	\$12.7	\$12.7	\$0.0	0.0%

Source: <https://www.whitehouse.gov/omb/information-resources/budget/the-presidents-fy-2026-discretionary-budget-request/>

Total Discretionary Budget FY 2025: \$1,830.9B FY 2026: \$1,691.1B

US DoD Budget Shares

DOD BUDGET SHARES: 2023 vs. 2024 vs. 2025



1—Requested. The Department of the Navy had not separately published the enacted amounts for the Marine Corps and Navy by press time.

2—The Department of the Navy had not separately published the enacted amounts for the Marine Corps and Navy by press time.

(Note— President Trump's FY2026 Budget Request not yet fully released!)

President Biden's FY2025 Budget Request

Table S-4. Proposed Budget by Category

(In billions of dollars)

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Totals	
													2025- 2029	2025- 2034
Outlays:														
Discretionary programs:														
Defense	806	884	900	906	920	940	961	967	981	990	998	1,005	4,626	9,566
Non-defense	912	1,001	1,029	1,021	1,014	993	986	986	993	1,018	1,038	1,057	5,042	10,134
Subtotal, discretionary programs	1,718	1,885	1,929	1,927	1,934	1,933	1,946	1,952	1,974	2,008	2,036	2,062	9,669	19,700
Mandatory programs:														
Social Security	1,348	1,452	1,543	1,637	1,730	1,824	1,919	2,018	2,118	2,221	2,325	2,432	8,653	19,767
Medicare	839	839	936	997	1,069	1,202	1,158	1,311	1,398	1,504	1,721	1,693	5,362	12,989
Medicaid	616	567	589	625	666	707	749	797	850	907	969	1,035	3,335	7,893
Other mandatory programs	955	1,310	1,303	1,221	1,225	1,281	1,350	1,487	1,483	1,538	1,580	1,609	6,381	14,077
Subtotal, mandatory programs	3,758	4,167	4,372	4,479	4,690	5,014	5,176	5,612	5,849	6,169	6,595	6,769	23,731	54,725
Net interest	658	889	965	1,013	1,072	1,136	1,190	1,241	1,301	1,367	1,428	1,485	5,377	12,199
Total outlays	6,135	6,941	7,266	7,419	7,697	8,083	8,313	8,805	9,123	9,544	10,060	10,316	38,777	86,625
Receipts:														
Individual income taxes	2,176	2,503	2,679	2,976	3,178	3,369	3,549	3,734	3,925	4,129	4,341	4,574	15,751	36,455
Corporation income taxes	420	613	668	721	703	710	741	770	806	859	882	905	3,544	7,766
Social insurance and retirement receipts:														
Social Security payroll taxes	1,194	1,240	1,284	1,342	1,397	1,467	1,526	1,591	1,656	1,723	1,814	1,885	7,016	15,685
Medicare payroll taxes	358	413	542	519	543	572	597	625	653	682	720	752	2,772	6,203
Unemployment insurance	49	54	56	59	62	64	64	67	70	71	73	78	306	664
Other retirement	14	14	14	15	16	16	17	18	18	19	20	21	78	175
Excise taxes	76	100	110	112	113	113	115	118	118	120	122	122	563	1,163
Estate and gift taxes	34	29	33	35	53	57	61	65	69	75	80	87	238	614
Customs duties	80	81	61	53	53	55	57	59	61	53	56	58	277	564
Deposits of earnings, Federal Reserve System	1				25	40	51	62	71	79	85	90	116	503
Other miscellaneous receipts	40	35	38	41	43	47	52	56	60	64	66	69	221	537
Total receipts	4,441	5,082	5,485	5,873	6,186	6,510	6,830	7,164	7,509	7,873	8,258	8,639	30,883	70,328
Deficit	1,694	1,859	1,781	1,547	1,510	1,573	1,483	1,640	1,614	1,671	1,801	1,677	7,894	16,297
Net interest	658	889	965	1,013	1,072	1,136	1,190	1,241	1,301	1,367	1,428	1,485	5,377	12,199
Primary deficit	1,035	971	816	533	438	437	293	400	313	304	373	192	2,516	4,098
On-budget deficit	1,666	1,788	1,669	1,410	1,346	1,392	1,268	1,398	1,338	1,359	1,476	1,313	7,086	13,970
Off-budget deficit	27	72	112	137	164	180	215	243	275	312	326	364	807	2,327

Source: <https://www.whitehouse.gov/omb/budget/>

President Biden's FY2025 Budget Request

❑ Observe Projected Effect over the 2025-to-2034 Time Period:

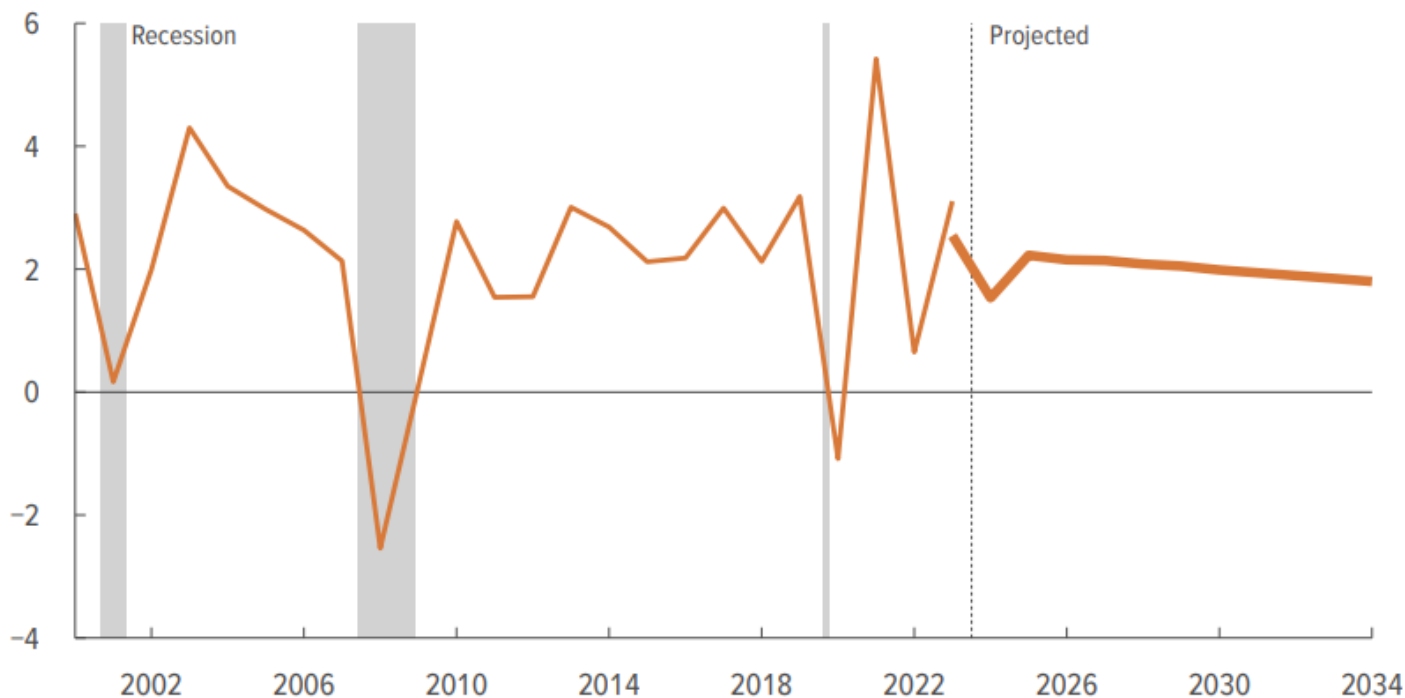
- **Spending on Non-Interest Entitlements will go UP by 55%**
 - Matching the projected increase in revenue (up by 58%)
While spending on Discretionary will go UP by only 7%
 - And in actuality, 15% ***DOWN*** if Inflation is taken into account
- **Net Interest will go UP by 54%**
 - Assumes additional \$16.297T deficit from 2025-2034!
- **Above Estimates assume:**
 - Revenues will go UP by 58%
(via Taxes? Real growth in GDP? Inflation?)

More About The U.S. Economy

Figure 2-1.

Growth of Real GDP

Percent



The growth of economic output is projected to slow in 2024 as the growth of consumer spending slows and as business investment in nonresidential structures declines. Economic growth is projected to increase in 2025 after the Federal Reserve responds to weaker economic conditions in 2024 by lowering interest rates.

Data sources: Congressional Budget Office; Bureau of Economic Analysis. See www.cbo.gov/publication/59710#data.

Real GDP is nominal GDP that has been adjusted to remove the effects of changes in prices. Growth of real GDP is measured from the fourth quarter of one calendar year to the fourth quarter of the next year.

Values for 2000 to 2023 reflect data available from the Bureau of Economic Analysis as of late January 2024. Those data contain values for the fourth quarter of 2023, which were not available when CBO developed its current projections.

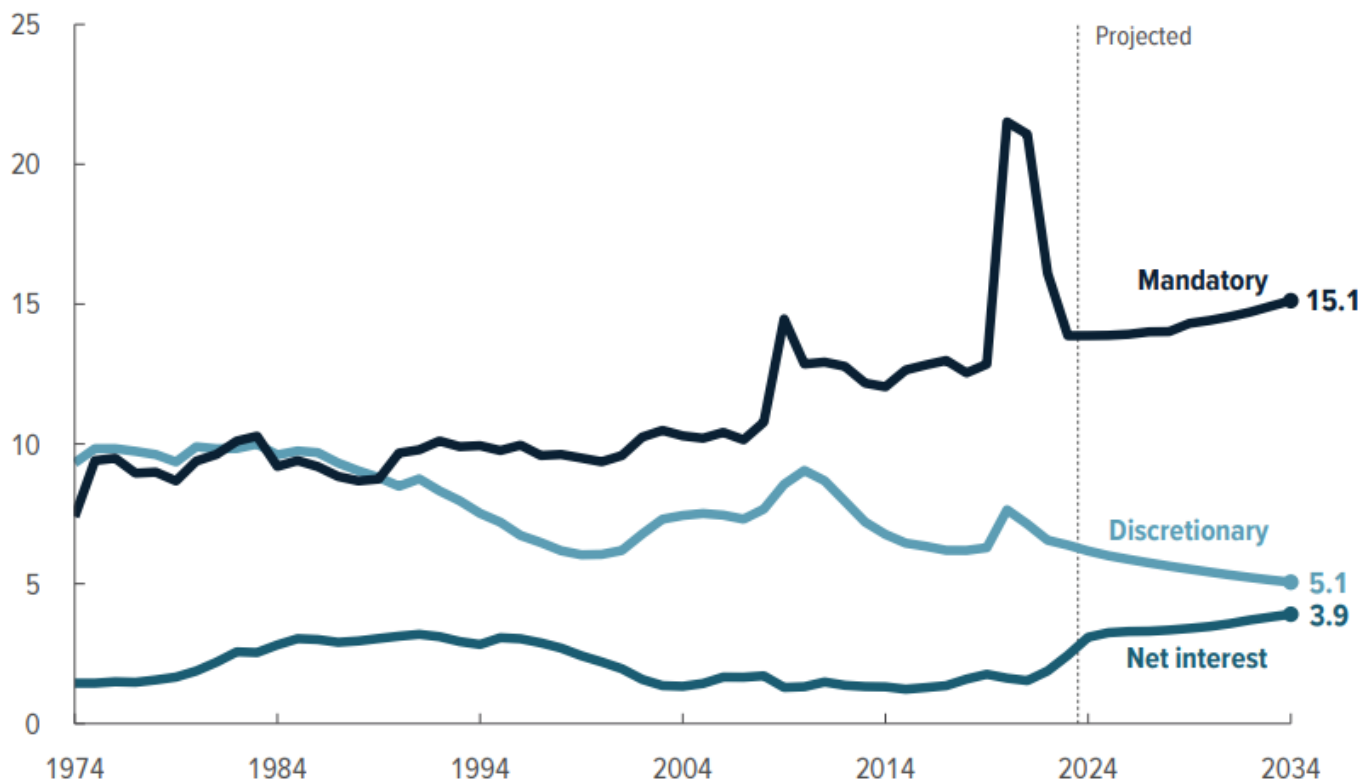
GDP = gross domestic product.

More About Projected Budget Outlays Over Time

Figure 1-4.

Outlays, by Category

Percentage of GDP



In CBO's projections, rising spending for Social Security and Medicare boosts mandatory outlays. Discretionary spending as a share of GDP falls to historic lows. And mounting debt and higher interest rates cause net outlays for interest to increase. Starting next year, those outlays are greater in relation to GDP than at any point since at least 1940, the first year for which the Office of Management and Budget reports such data.

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.

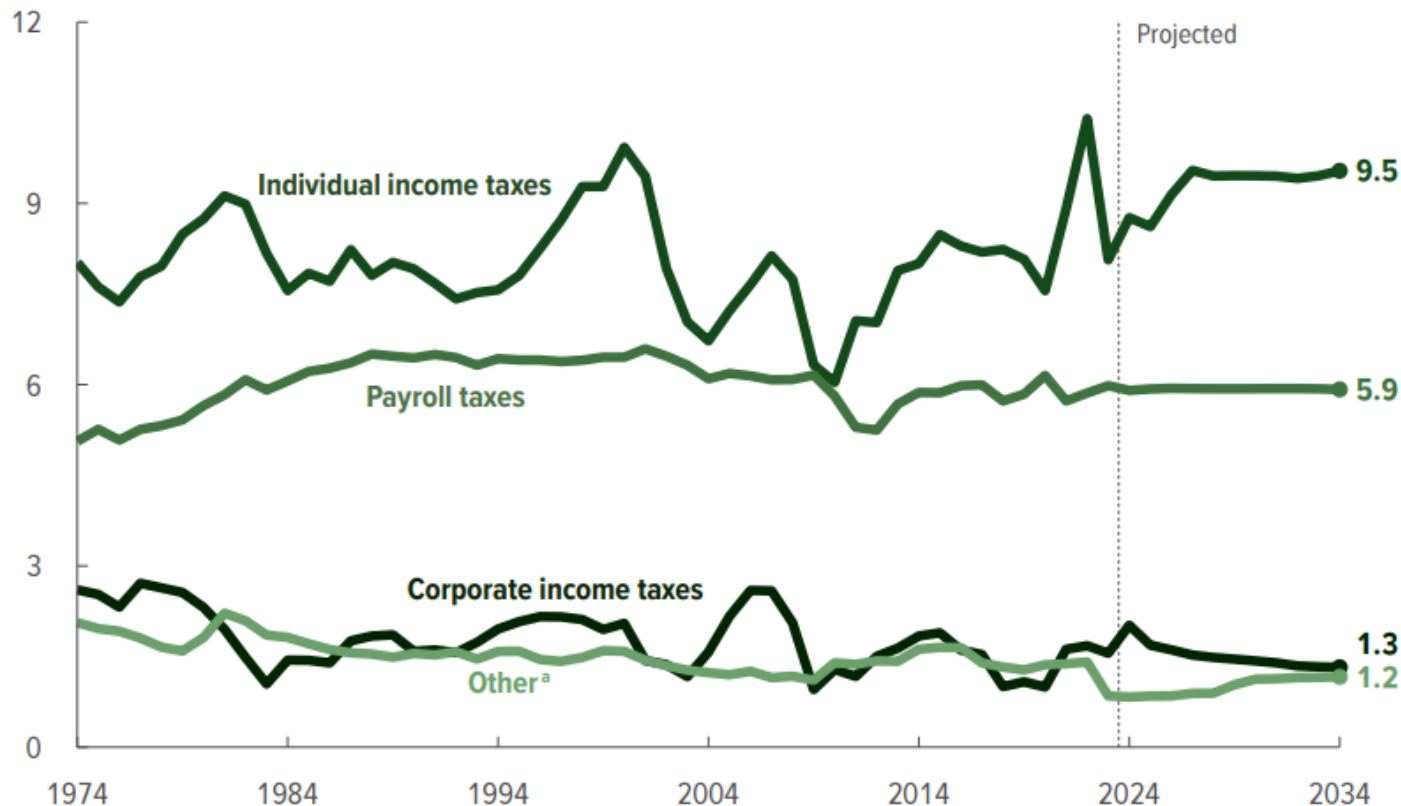
GDP = gross domestic product.

More About Projected Revenues Over Time

Figure 1-5.

Revenues, by Category

Percentage of GDP



Receipts from individual income taxes fell sharply in 2023 from a historic high in 2022. They declined in part because of lower capital gains on sold assets and because the Internal Revenue Service extended some tax payment deadlines. As those delayed payments are made, revenues are projected to rise in 2024. They rise again in 2026 and 2027.

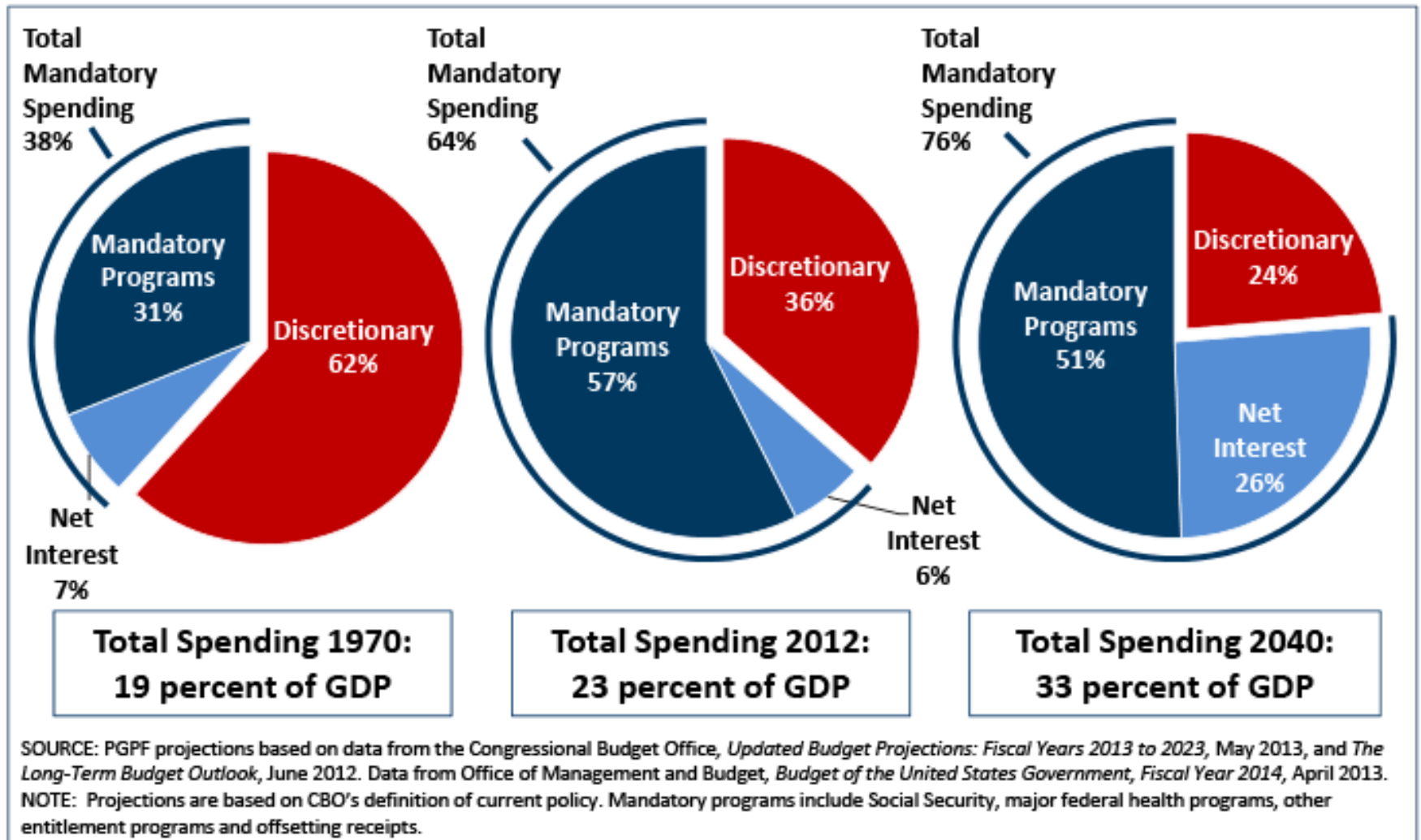
Data source: Congressional Budget Office. See www.cbo.gov/publication/59710#data.

GDP = gross domestic product.

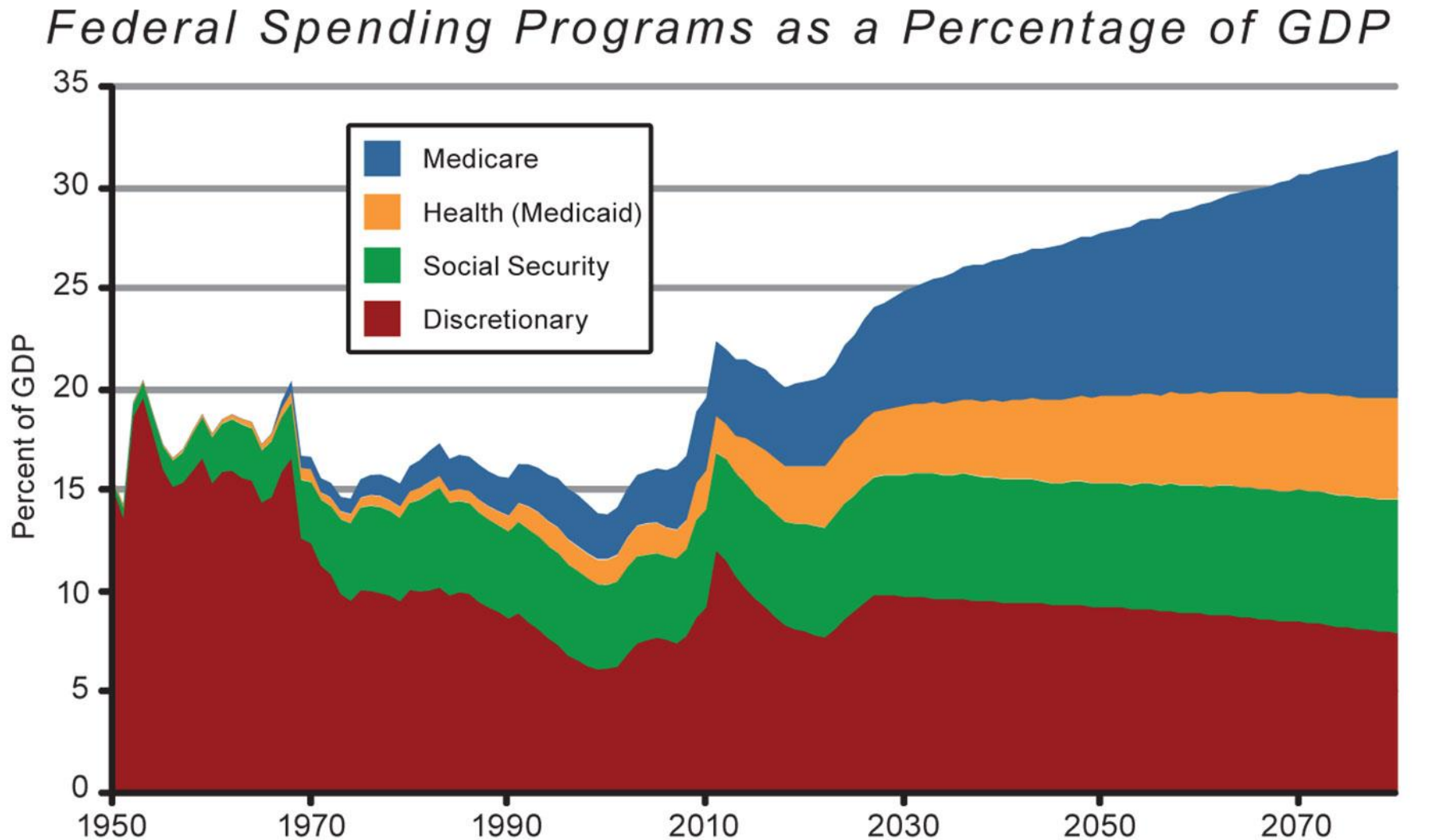
a. Consists of excise taxes, remittances from the Federal Reserve System, customs duties, estate and gift taxes, and miscellaneous fees and fines.

Source: <https://www.cbo.gov/publication/59710> "CBO: The Budget and Economic Outlook: 2024 to 2034"

Ratio of Entitlements to Discretionary over Time



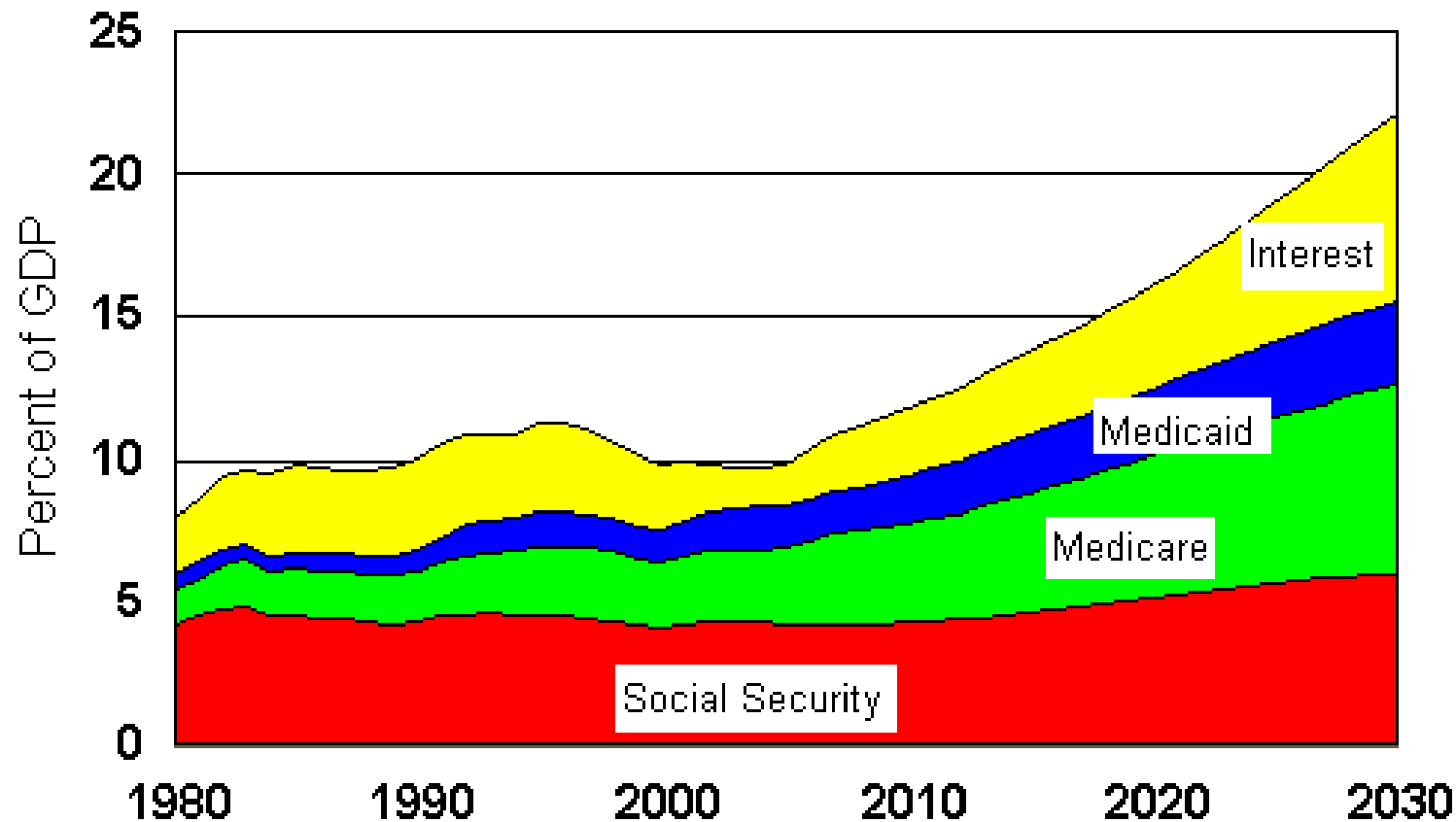
Spending as a % of Gross Domestic Product (GDP)



Sources: Office of Management and Budget (1950-70), Congressional Budget Office (1971-2080); figures after 2012 are CBO projections.

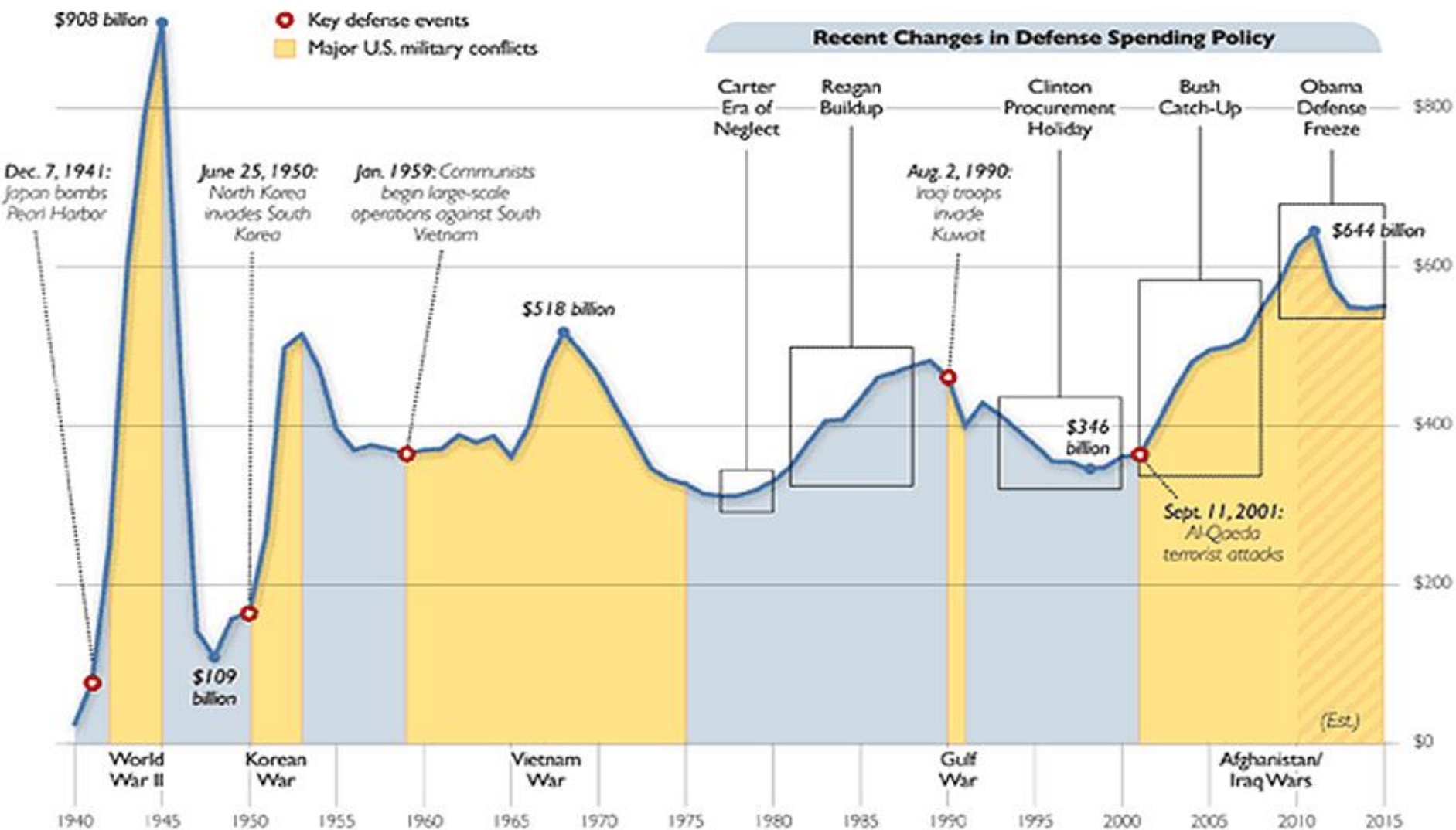
The Four Big Entitlement Programs over Time

Four Big Entitlements



Source: Centrists.Org

A Topline View of U.S. Defense Budget History



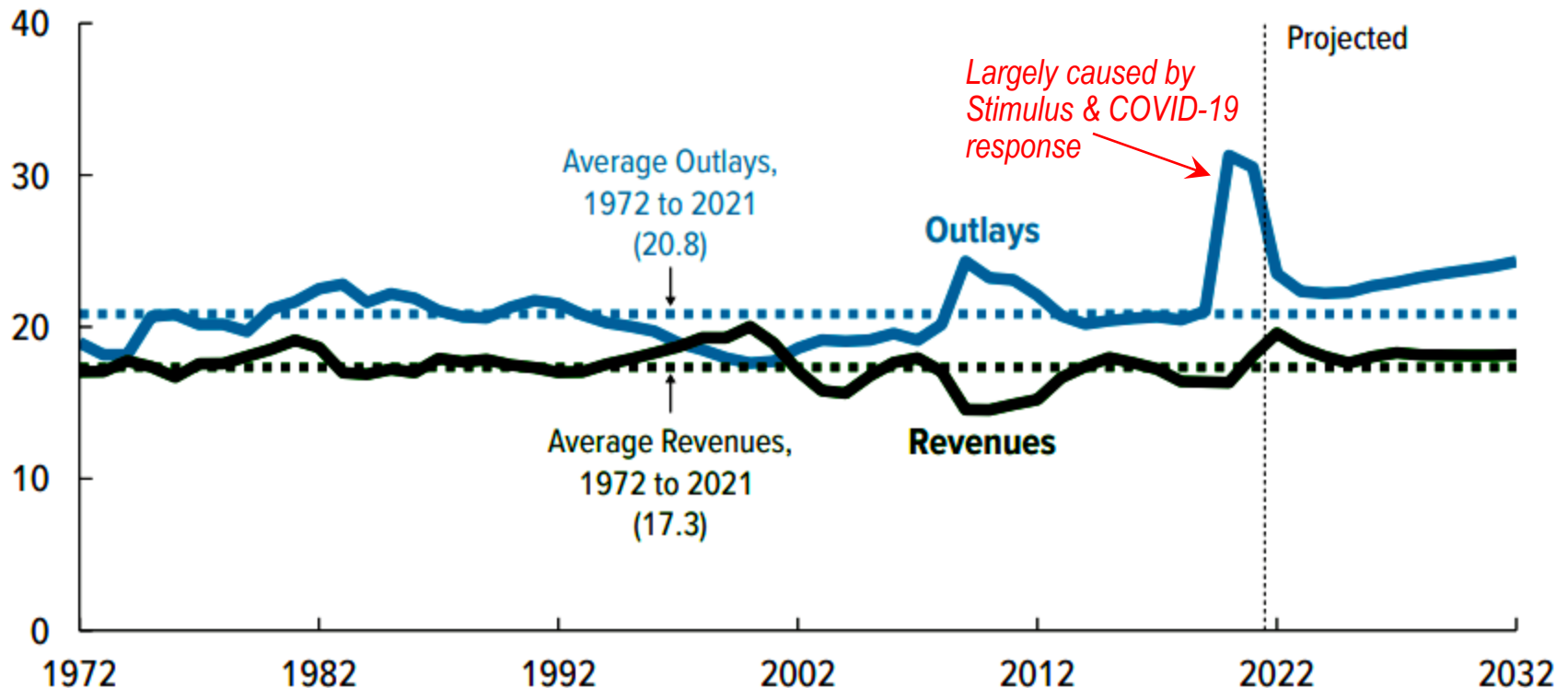
Source: Heritage Foundation calculations based on defense budget data and defense GDP deflator used in U.S. Office of Management and Budget, Historical Tables, Budget of the United States Government, Fiscal Year 2011 (Washington, D.C.: U.S. Government Printing Office, 2010), pp. 47–55, Table 3.1, and pp. 210–211, Table 10.1, at <http://www.whitehouse.gov/omb/budget/fy2009/pdf/hist.pdf> (March 2, 2010).

Why Can't We Balance the National Budget?

- ❑ **Politically Difficult to say “NO” to Growth in Entitlements AND say “NO” to Critical Discretionary Items (e.g. Defense, Infrastructure)**
 - **Therefore, Big-Ticket Program Funding accommodated partly through Deficit Spending**
 - **If Spending were constrained to = Revenue**
 - **Then either Revenue goes Up, or else Spending goes Down**
 - **For Revenue to go UP:**
 - **Either Taxes and Tariffs have to go up**
 - **Else Economy increase Significantly in Productivity and Cash Flow**
 - **Government already does All It Can to accomplish these things without inducing Economic Depression, Rampant Inflation, Global Trade Wars**
 - **For Spending to go DOWN:**
 - **Congress must cut Entitlements (Distasteful/Suicidal)**
 - **Else Hack At Remaining Discretionary Budget Items**
 - **Given Strong Constituency Financially Dependent on Entitlements:**
 - **Latter is likely to bear brunt of any Budget Cuts if required to balance the budget**

The National Budget Over Time

Percentage of Gross Domestic Product



From 2023 to 2032, outlays are projected to average 23.2 percent of GDP, exceeding their 50-year average of 20.8 percent. Revenues, which are projected to average 18.1 percent of GDP over the next 10 years, exceed their 50-year average of 17.3 percent.

Source: <https://www.cbo.gov/system/files/2022-05/57950-Outlook.pdf>
“CBO: The Budget and Economic Outlook: 2022 to 2032”

More About The National Debt

❑ Gross Federal Debt: Total Debt Owed, as Two Parts:

- **“Debt Held By The Public”**
 - Debt held by Public and Foreign Governments
 - Includes Federal Reserve System
 - This is the amount normally reported in the Media
 - As of August 2025: \$29T
- **“Debt Held By Federal Government Accounts”**
 - Includes **IOWs** owed to Social Security Trust Fund
 - As of August 2025: \$7.4T
- **Total National Debt: as of August 2025: \$36.4T**
- **NO MORE Statutory Debt Ceiling!**
 - Forecasted to reach \$54T by 2034!
 - Note: was \$14.294T as of July 2011– over 10 years ago!

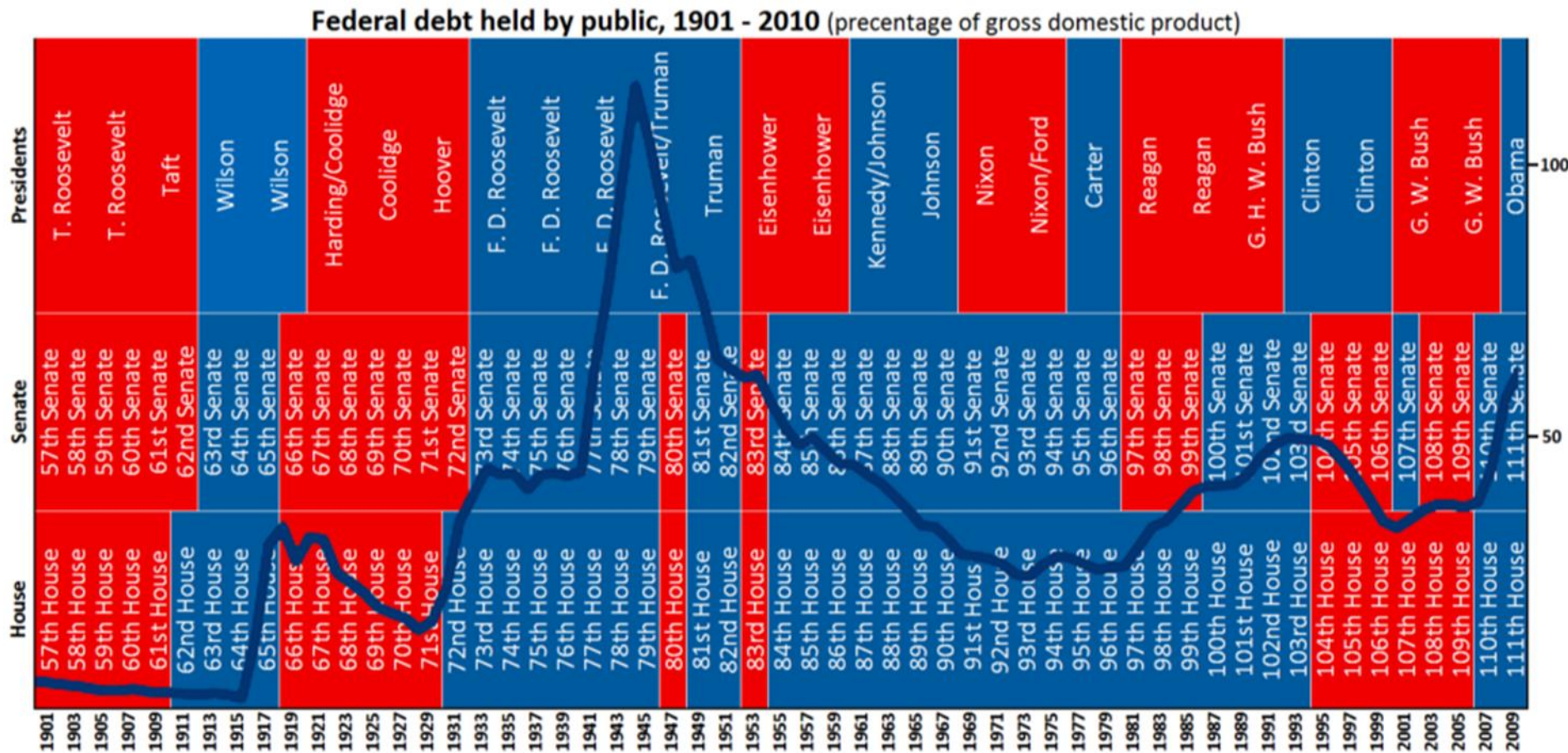
See: <https://fiscaldata.treasury.gov/datasets/monthly-statement-public-debt/summary-of-treasury-securities-outstanding>
for Monthly Statements of Public Debt: Current back to January 2001

See: https://www.usgovernmentspending.com/federal_budget for more historical data

See: <https://www.statista.com/statistics/216998/forecast-of-the-federal-debt-of-the-united-states/> for forecasted debt

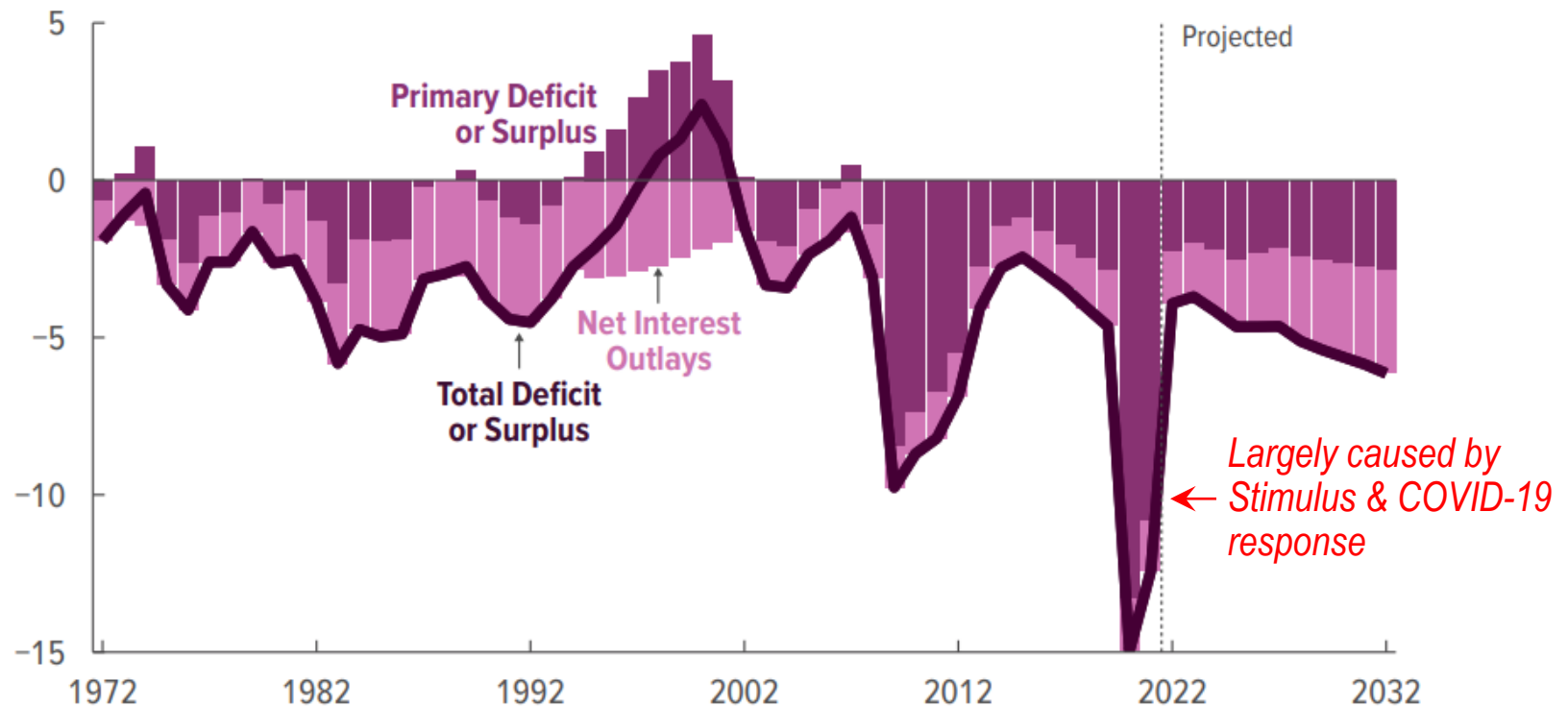
More About The National Debt *(continued)*

- ❑ Each Political Party Accuses the Other Party as Being Fiscally Irresponsible
 - Reality is that Global Circumstances (e.g. Wars) are a big driver



More About Deficit Spending

Percentage of Gross Domestic Product

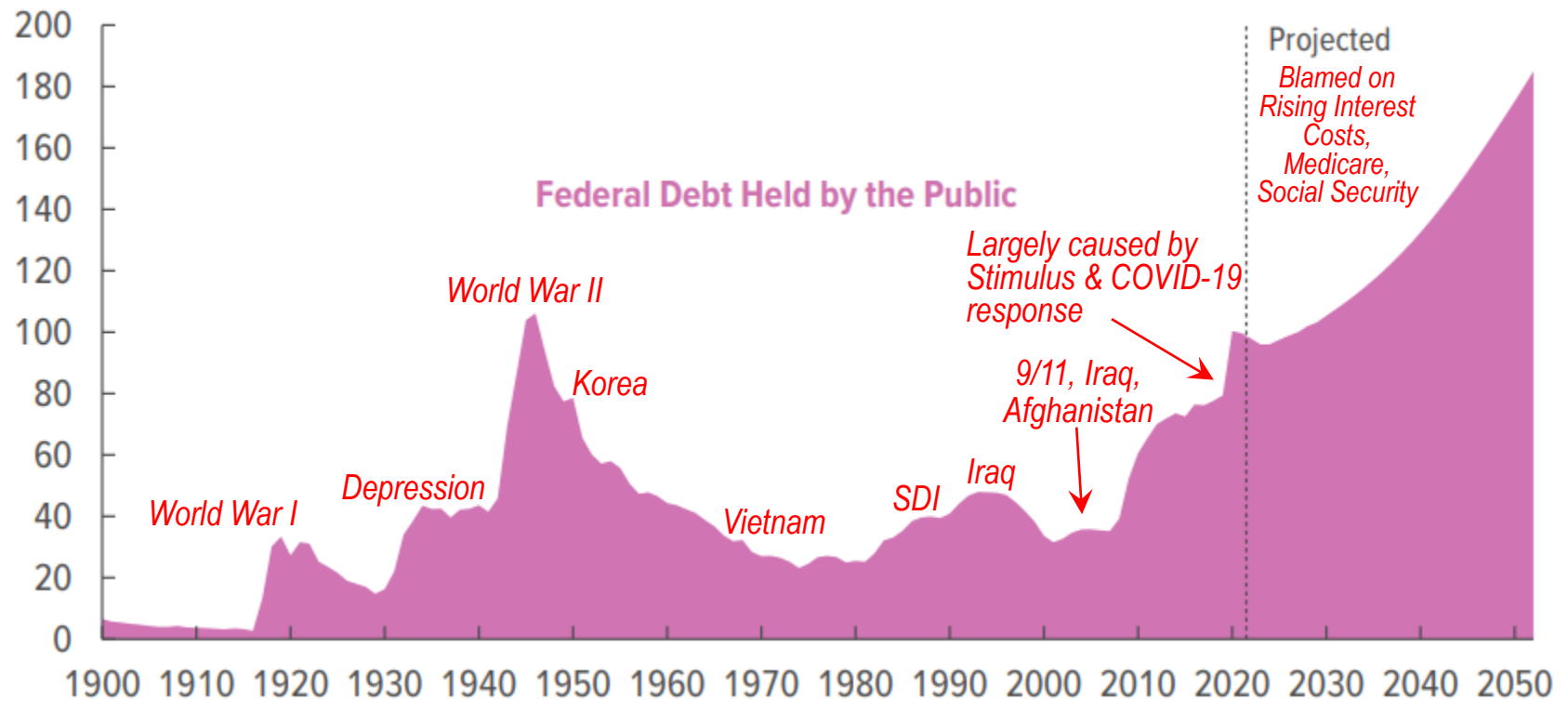


Rising interest rates and mounting debt cause net interest outlays to double as a percentage of GDP over the coming decade—from 1.6 percent in 2022 to 3.3 percent in 2032. Adjusted to exclude the effects of timing shifts, primary deficits (which exclude net interest costs) increase from 2.3 percent of GDP in 2022 to 2.9 percent in 2032, exceeding their 50-year average of 1.5 percent of GDP in each year of the projection period.

Source: <https://www.cbo.gov/system/files/2022-05/57950-Outlook.pdf>
“CBO: The Budget and Economic Outlook: 2022 to 2032”

More About Deficit Spending

Percentage of Gross Domestic Product



Debt is projected to rise in relation to GDP mainly because of increasing interest costs and growth in spending for Medicare and Social Security.

Source: <https://www.cbo.gov/system/files/2022-05/57950-Outlook.pdf>
“CBO: The Budget and Economic Outlook: 2022 to 2032”

The REAL (Long-Term) National Debt, Including Obligations

- ❑ As of August 2025, Gross Federal Debt about **\$36.4 Trillion!**
- ❑ But That Does NOT Include Other (Projected Future) Obligations!
 - **\$9.4 Trillion** (estimated*) in Liabilities that are not accounted for in the Publicly Held National Debt, such as Federal Employee Retirement Benefits, Accounts Payable, and Environmental/Disposal Liabilities for Superfund Sites
 - **\$41.2 Trillion** (estimated*) in obligations for current Social Security participants above and beyond projected revenues from their Payroll and Benefit Taxes, certain transfers from the General Fund of the U.S. Treasury, and assets of the Social Security Trust Fund
 - **\$55.1 Trillion** (estimated*) in obligations for current Medicare participants above and beyond projected revenues from their Payroll Taxes, Benefit Taxes, premium payments, and assets of the Medicare Trust Fund
- ❑ Real (Long-Term) National Debt is Probably Closer to **\$175 Trillion** (including estimates* of future deficit spending)
 - Based on recent Treasury Department estimates
 - Pressure on Budget is likely to GROW in time

* Estimates from various Internet sources, not substantiated with U.S. Government Data

What About Budgetary Reform?

❑ GAO Finds Wasteful Spending:

- July 24 2007 Report, Dead Farmers got \$1.1B from Taxpayers
- Of course, any attempt to Reduce or Eliminate would be met with an Immediate Counter-attack
 - Somebody (somewhere) is depending on such Payments

❑ Earmarks, also known as “Pork Barrel Politics”

- Practice of including a Special Favor for a Special Constituent in a larger, unrelated Bill
 - Requiring President to Veto ENTIRE Bill to eliminate it
 - Only a small % of Federal Budget, estimates vary from about 0.5% to 3% (\$20B to \$125B for FY2017)
- Almost everyone in Congress engages in such practices
 - To not engage in earmarks is invitation to NOT be re-elected
- My Humble (*and ever so unbiased!*) Opinion:
 - Some valid/useful programs would never be funded otherwise
 - Unable to obtain Funding if a Line Item Veto were ever available
 - Yes, there are many abuses of Pork Barrel Politics

Attempts To Control The Federal Deficit

- ❑ **Gramm-Rudman-Hollings Deficit Reduction Act of 1984**
 - **Mandatory Deficit Reduction Goals over four years**
 - **Elaborate implementation process, with “Snapshots” by Budget Committees and OMB**
 - **Instead, Political Reality triumphed**
 - Creative bookkeeping to define the discrepancies away
 - Process just wilted, no more Budget “Snapshots”
 - Became “Pay-As-You-Go” (PAYGO)
 - **PAYGO requires New Spending or Tax Changes to not increase the Federal Deficit**
 - Like buying on a Cash-Only basis
 - **Requests must be either “Budget Neutral” or be Offset with Savings from Current Funds**
 - On a Department-by-Department basis
 - **Congress has found PAYGO inconvenient**
 - Has all but abandoned these promises

Attempts To Control The Federal Deficit *(continued)*

❑ Nunn-McCurdy Act of 1982 Defense Authorization Act

- **15% cost increase threshold**
 - Requiring NOTIFICATION of Congress
- **25% cost increase threshold**
 - Requiring RECERTIFICATION by Congress

❑ Clinger-Cohen Act (CCA) of 1996

- **Focused primarily on Information Technology (I.T.)**
- **Requires Capital Planning Considerations just like in Private Industry:**
 - **Cost/Benefit Ratio**
 - **Expected Life of the Technology**
 - **Flexibility and Possibilities for Multiple Uses**
 - **Use Commercial “Best I.T. Practices”**

What About Inflation?

- ❑ **Multi-Year Program Cost Estimates Include An Inflation Factor**
 - **Inflation factor based on Budget Consumer Price Index (CPI)**
 - A Political number, set by OMB
 - Has little relationship to Reality of Inflation
 - Carefully manipulated as True Inflation always runs much higher, as shown on next page
 - Hard to estimate “True Inflation”: difficult to correlate cost increases in Gasoline and Milk/Bread to F-35 Program costs
 - A lower apparent Inflation Rate makes a President “look good”
 - **Undermines Estimates based on Official Figures**
 - Because if a Program experiences a Stretch-Out
 - Future Years will cost more than Estimated!
 - Significant cause of Cost Growth in Long-Term Programs!
 - **Note that FOL #2 “Cost Rules” Predicts This Case!**
 - Government Rarely Provides an Optimal Funding Profile
 - Prefers reduced/level-loaded funding over a longer period of time

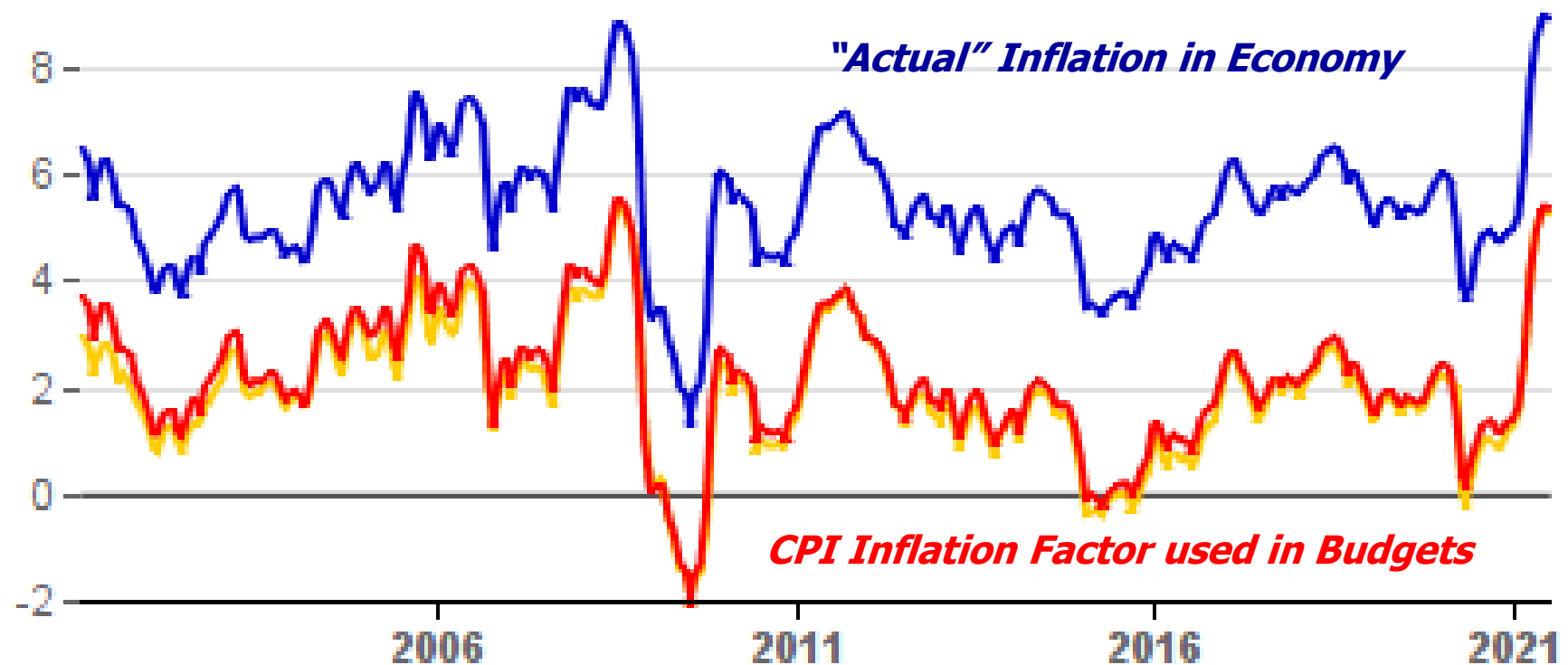
NOTE—NOT Official U.S. Government Figures!

What About Inflation? *(continued)*

Consumer Inflation - Official vs ShadowStats (1990-Based) Alternate

CPI-U Year to Year Change. Not Seasonally Adjusted. to July 2021 (BLS, SGS)

— Official CPI-U — Experimental C-CPI — SGS Alt. 1990-Based
CPI-U: Consumer Price Index For All Urban Consumers SGS: Shadow Government Statistics



Published: Aug. 11, 2021

ShadowStats.com

Central Lessons of the Budget Process

- ❑ **No Matter How Scientifically Admirable or Technologically Innovative, "Big Ticket" Programs Are Always Targets**
 - **Ambushes are an Ever-Present Possibility**
- ❑ **Terrorism & War Confusion + Worry Over Economy**
 - **Political Process increasingly obsesses on Near Term instead of Future**
- ❑ **Daunting, Confusing, Frustrating**
 - **But this is the Process that determines Program Success or Failure (Remember FOL #1)**
 - **Absolutely essential to understand how to deal effectively with the Political Process**
 - **That means Understanding how it Works, how it Thinks, and what it takes to Influence in your favor**
 - **Distasteful, but won't go away**
 - **Saying, "Oh, that's politics!" will not take you back to some better world where Engineering is automatically respected for what it can accomplish and rewarded accordingly**

Is "Defensive Engineering" Possible?

❑ Class Premise:

- You can apply Political Risk Mitigation Factors (FOLs) the same way as for:
 - Performance Risk
 - Cost Risk
 - Schedule Risk
- To truly grasp the FOLs and their Implications:
 - You will need to Analyze Case Studies
 - You will need to apply them to your Research Paper topic

❑ After The Next Lecture

- No More Political Science Lectures!!!
- *Technical* Review of political impact on 8 Case Studies
 - 6 "Real-World" sets of Programs, one Process, one Infrastructure
 - Students to review and analyze five other Case Studies in Homework assignments

Reminders for Next Class Session

- ❑ **Next Week's Lecture #3:**
 - **FOL Characteristics and Budgetary Defense**

- ❑ **Required Reading Text: (please read before start of class)**
 - **None assigned**

- ❑ **Start thinking about a potential subject for your Research Paper, based on what you've learned in this lecture**
 - **Need to choose a topic and submit an Abstract in a few weeks**

Questions?

(can also use Discussion Boards before/after class)