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Baseline Budget Projections

A Joint Seminar by the Congressional Budget Office
and the Congressional Research Service

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The Congressional Budget Office

CBO's Role

To provide the Congress with objective, nonpartisan, and timely analyses of legislative proposals and of budgetary and economic issues to support the Congressional budget process

What CBO Helps the Congress With

- Developing a budget plan
- Implementing that budget plan
- Assessing the impact of proposed federal mandates
- Considering issues related to the budget and to economic policy

CBO's Characteristics

- Advisory
- Objective
- Nonpartisan
- Responsive and transparent

CBO's Process for Developing the Budget Baseline

What Is CBO's Baseline?

- A detailed projection for the current year and the ensuing 10 years of federal spending, revenues, net spending for interest, and resulting deficits or surpluses
- Based on CBO's economic forecast
- Incorporates the assumption that current laws governing taxes and spending generally remain in place
- Not a forecast of future budgetary outcomes; those depend on future Congressional action and other factors
- Generally provided two or three times a year
- Reported in the annual *Budget and Economic Outlook* and subsequent reports

An Example of CBO's Baseline Budget Projections

Summary Table 2.

CBO's Baseline Budget Projections

	Actual, 2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total	
													2019– 2023	2019– 2028
In Billions of Dollars														
Revenues	3,316	3,338	3,490	3,678	3,827	4,012	4,228	4,444	4,663	5,002	5,299	5,520	19,234	44,162
Outlays	3,982	4,142	4,470	4,685	4,949	5,288	5,500	5,688	6,015	6,322	6,615	7,046	24,893	56,580
Deficit	-665	-804	-981	-1,008	-1,123	-1,276	-1,273	-1,244	-1,352	-1,320	-1,316	-1,526	-5,660	-12,418
Debt Held by the Public at the End of the Year	14,665	15,688	16,762	17,827	18,998	20,319	21,638	22,932	24,338	25,715	27,087	28,671	n.a.	n.a.
As a Percentage of Gross Domestic Product														
Revenues	17.3	16.6	16.5	16.7	16.7	16.9	17.2	17.4	17.5	18.1	18.5	18.5	16.8	17.5
Outlays	20.8	20.6	21.2	21.3	21.6	22.3	22.3	22.2	22.6	22.9	23.1	23.6	21.8	22.4
Deficit	-3.5	-4.0	-4.6	-4.6	-4.9	-5.4	-5.2	-4.9	-5.1	-4.8	-4.6	-5.1	-4.9	-4.9
Debt Held by the Public at the End of the Year	76.5	78.0	79.3	80.9	83.1	85.7	87.9	89.6	91.5	93.1	94.5	96.2	n.a.	n.a.
Memorandum: Deficit as a Percentage of GDP, Adjusted to Exclude Timing Shifts ^a	-3.5	-4.2	-4.6	-4.6	-4.9	-5.1	-5.1	-5.1	-5.1	-4.8	-4.6	-4.8	-4.9	-4.9

An Example of CBO's Economic Projections

Table 1-1.

CBO's Economic Projections for Calendar Years 2018 to 2028

	Actual, 2017	2018	2019	2020	Annual Average	
					2021– 2022	2023– 2028
Percentage Change From Fourth Quarter to Fourth Quarter						
Gross Domestic Product						
Real ^a	2.6	3.3	2.4	1.8	1.5	1.7
Nominal	4.5	5.2	4.5	3.9	3.7	3.9
Inflation						
PCE price index	1.7	1.8	2.0	2.1	2.1	2.0
Core PCE price index ^b	1.5	1.9	2.1	2.2	2.1	2.0
Consumer price index ^c	2.1	2.0	2.3	2.4	2.5	2.4
Core consumer price index ^b	1.7	2.3	2.5	2.6	2.5	2.4
GDP price index	1.9	1.8	2.1	2.1	2.2	2.1
Employment Cost Index ^d	2.8	3.1	3.6	3.6	3.4	3.2
Fourth-Quarter Level (Percent)						
Unemployment Rate	4.1	3.5	3.3	3.8	4.6 ^e	4.8 ^f
Percentage Change From Year to Year						
Gross Domestic Product						
Real ^a	2.3	3.0	2.9	2.0	1.5	1.7
Nominal	4.1	5.0	4.9	4.1	3.7	3.9
Inflation						

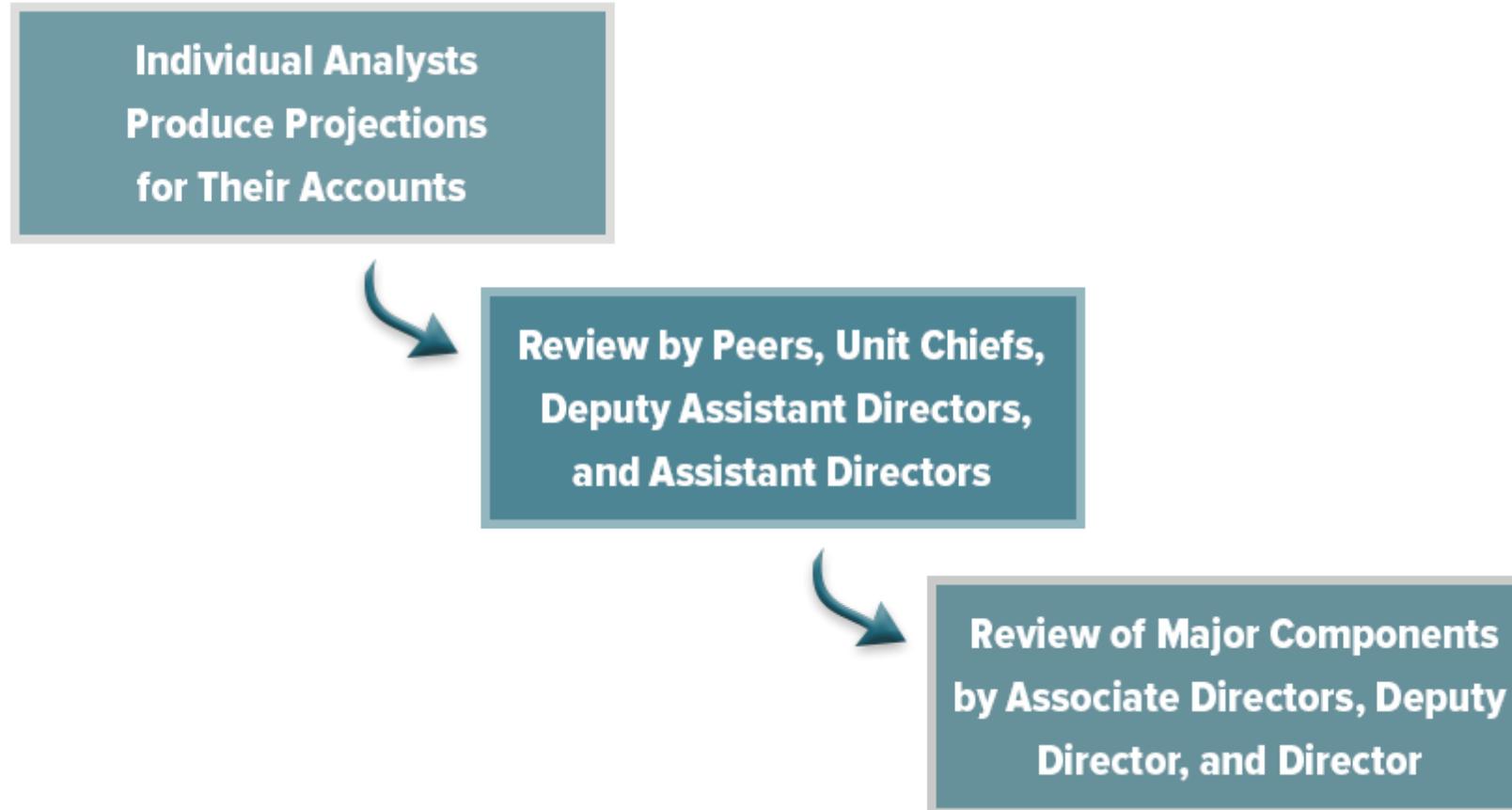
How Is the Baseline Constructed?

- Principles and rules mainly come from law, budget resolutions, House and Senate rules, and the 1967 *Report of the President's Commission on Budget Concepts*
- A key law is the Balanced Budget and Emergency Deficit Control Act, section 257
 - Defines the baseline
 - Sets out rules for projecting spending and receipts
 - Requires an assumption of full funding for entitlements
 - Directs the treatment of expiring programs and certain excise taxes

How Do CBO and the Congress Use the Baseline?

- A neutral benchmark for measuring budgetary effects of proposed changes in federal revenues and mandatory spending
- Basis for:
 - Cost estimates for proposed legislation
 - CBO's analyses of the President's annual budget
 - CBO's budget options volume
 - Other reports (including those describing CBO's long-term budget projections)
 - Assessments of multiyear budget trends
- Often a starting point for budget resolutions

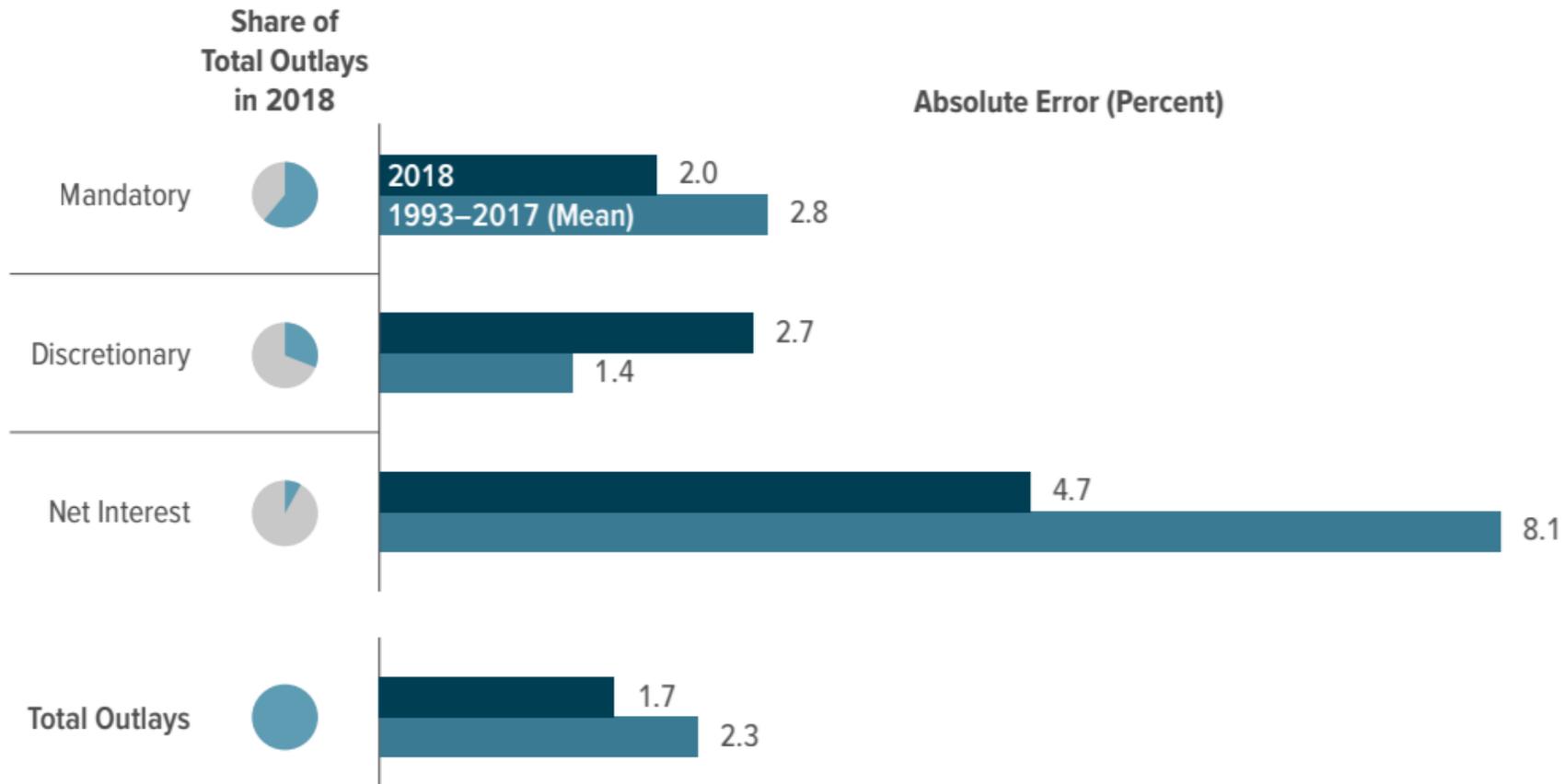
How Is the Baseline Developed and Reviewed?



Projection Errors for Outlays, 2018

Figure 1.

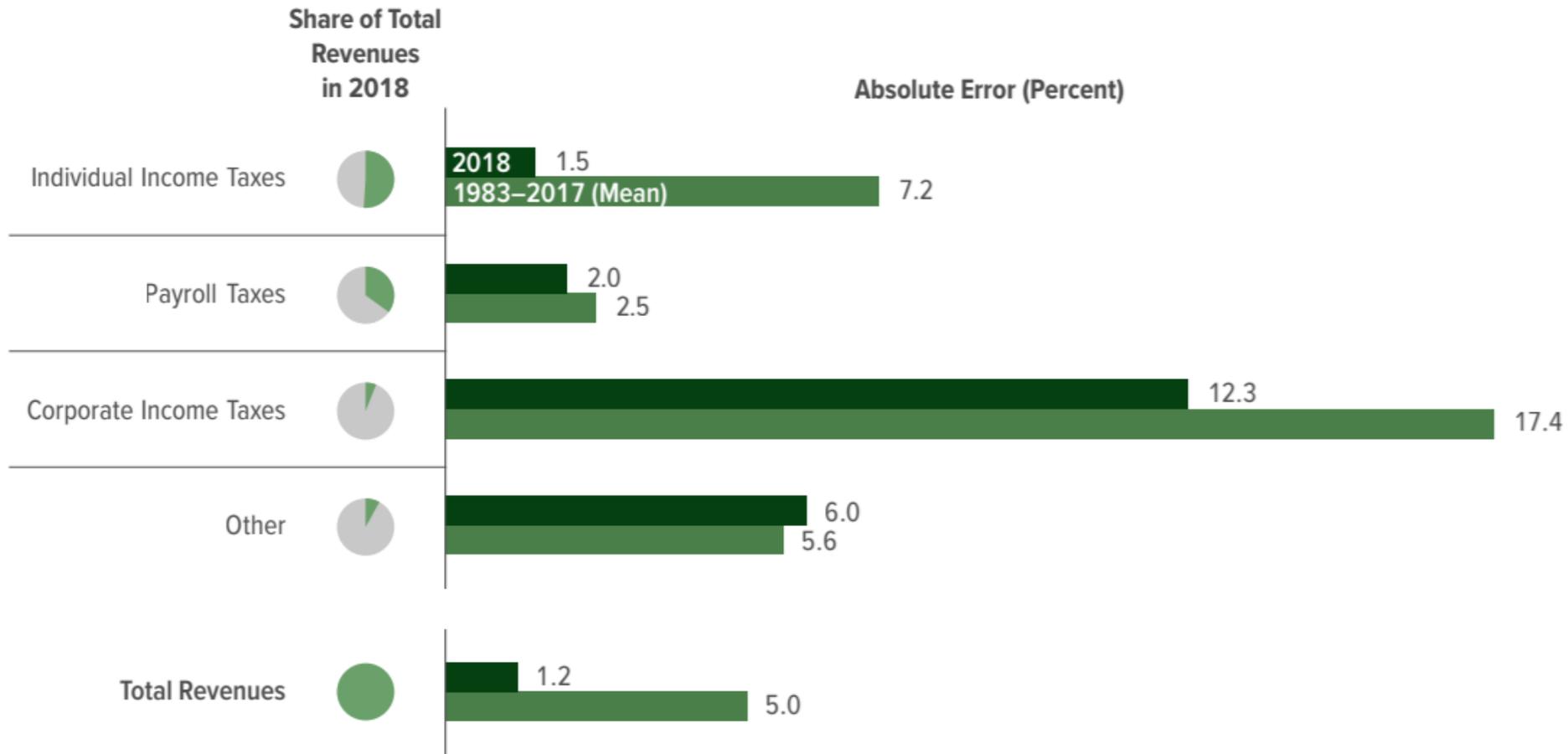
Projection Errors for Outlays



Projection Errors for Revenues, 2018

Figure 2.

Projection Errors for Revenues



How Is CBO's Economic Forecast Developed and Reviewed?

Step 1: Background Analysis

- Develop preliminary forecast for exogenous variables (e.g., oil prices)
- Review recent data



Step 2: Preliminary Forecast

- Use macroeconomic model to develop preliminary forecast
- Incorporate preliminary federal tax and spending projections



Step 3: Internal and External Review

- Obtain input from CBO's senior staff and other divisions within the agency
- Obtain feedback from CBO's Panel of Economic Advisers and staff of Congressional budget committees



Step 4: Final Forecast

- Incorporate feedback and latest data to produce final forecast
- Transmit to CBO's budget and tax divisions to develop budget projections

How Does CBO Foster Accuracy in Its Projections?

- Baseline updates begin with a thorough analysis of prior-year spending and revenue collections for each account and revenue source.
- When it is appropriate, CBO uses historical patterns and experience to develop projections.
- The internal review process includes an assessment of the quality of past projections to identify opportunities to refine methods and improve the accuracy of projections.
- CBO solicits input from program experts at federal agencies and compares its projections with those prepared by others.

How Does CBO Address Uncertainty?

- All projections are subject to some degree of uncertainty about how closely they will correspond to actual outcomes.
- Projections for years farther in the future are more uncertain.
- The amount of uncertainty can vary depending on many factors, including data quality, possible administrative actions, behavioral responses to changes in policies, and the variability of underlying factors.
- Analysts often test the sensitivity of their projections to identify the range of possible outcomes for those projections.
- CBO's goal is to develop estimates that are near the middle of the range of possible outcomes.

What Are the Components of the Baseline?

An Example of CBO's Projections of Outlays

Table 2-1.

Outlays Projected in CBO's Baseline

	Actual, 2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total		
													2019– 2023	2019– 2028	
In Billions of Dollars															
Mandatory															
Social Security	939	984	1,043	1,110	1,180	1,253	1,330	1,410	1,495	1,583	1,676	1,774	5,915	13,853	
Medicare ^a	702	707	776	830	893	996	1,032	1,062	1,181	1,267	1,358	1,521	4,527	10,915	
Medicaid	375	383	401	417	437	465	493	524	554	587	620	655	2,213	5,152	
Other spending	756	724	758	776	808	857	854	851	891	920	928	981	4,053	8,624	
Offsetting receipts	-253	-252	-260	-272	-286	-305	-317	-334	-361	-374	-393	-406	-1,439	-3,306	
Subtotal	2,519	2,546	2,719	2,861	3,031	3,266	3,392	3,513	3,760	3,983	4,189	4,524	15,269	35,238	
Discretionary															
Defense	590	622	669	651	655	671	679	688	710	727	745	769	3,325	6,964	
Nondefense	610	658	693	689	693	708	727	748	771	794	817	839	3,511	7,480	
Subtotal	1,200	1,280	1,362	1,340	1,348	1,380	1,406	1,436	1,481	1,522	1,562	1,608	6,836	14,445	
Net Interest	263	316	390	485	570	643	702	739	774	817	864	915	2,789	6,897	
Total	3,982	4,142	4,470	4,685	4,949	5,288	5,500	5,688	6,015	6,322	6,615	7,046	24,893	56,580	
On-budget	3,180	3,288	3,556	3,706	3,901	4,168	4,303	4,414	4,658	4,883	5,084	5,416	19,634	44,088	
Off-budget ^b	801	853	915	980	1,048	1,120	1,197	1,274	1,357	1,439	1,531	1,631	5,259	12,492	

Memorandum:

Outlays Adjusted to

The Baseline for Mandatory Spending

- Includes spending for programs governed by permanent law, including payments to people, businesses, and state and local governments
- The largest mandatory programs are Social Security, Medicare, Medicaid, and the retirement program for civilians working for the federal government.
- Generally reflects current law (statutory language and administrative policy)
- Is driven by projections of key variables that affect cash flows:
 - Enrollment by beneficiaries and their average costs
 - Factors underlying CBO’s macroeconomic forecast
- By law, the baseline reflects an assumption that certain large entitlement programs (such as the Supplemental Nutrition Assistance Program) continue after their expiration date.

An Example of CBO's Projections of Mandatory Outlays

Table 2-2.

Mandatory Outlays Projected in CBO's Baseline

Billions of Dollars

	Actual, 2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total	
													2019– 2023	2019– 2028
Social Security														
Old-Age and Survivors Insurance	796	840	895	956	1,019	1,085	1,155	1,226	1,303	1,382	1,465	1,557	5,109	12,043
Disability Insurance	143	144	148	154	161	168	176	184	192	201	211	216	806	1,810
Subtotal	939	984	1,043	1,110	1,180	1,253	1,330	1,410	1,495	1,583	1,676	1,774	5,915	13,853
Major Health Care Programs														
Medicare ^a	702	707	776	830	893	996	1,032	1,062	1,181	1,267	1,358	1,521	4,527	10,915
Medicaid	375	383	401	417	437	465	493	524	554	587	620	655	2,213	5,152
Health insurance subsidies and related spending ^b	48	58	60	61	67	74	76	78	81	83	87	91	338	757
Children's Health Insurance Program	16	16	16	14	13	13	13	14	14	15	15	16	69	143
Subtotal ^a	1,141	1,164	1,252	1,322	1,409	1,548	1,614	1,677	1,831	1,952	2,080	2,282	7,146	16,967
Income Security Programs														
Earned income, child, and other tax credits ^c	83	87	99	99	99	100	99	100	101	102	88	88	496	975
Supplemental Nutrition Assistance Program	70	69	66	65	65	65	65	65	66	67	69	70	326	664
Supplemental Security Income	55	51	57	58	60	67	64	60	68	70	72	81	306	658
Unemployment compensation	21	20	27	20	20	20	20	20	20	20	20	20	100	400

The Baseline for Discretionary Spending

- Spending stemming from annual appropriation acts
- Funding
 - Starts with the enacted amount for the current year
 - For individual accounts, incorporates adjustments for inflation for future years
 - Totals constrained by caps through 2021
- Outlays
 - Depends on how quickly funding is spent, with that rate differing widely among programs and accounts
 - For a given year, depends on funding in that year and prior years because funding is usually spent gradually over several years

An Example of CBO's Projections of Discretionary Spending

Table 2-4.

Discretionary Spending Projected in CBO's Baseline

Billions of Dollars

	Actual, 2017 ^a	2018 ^a	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total	
													2019– 2023	2019– 2028
Budget Authority														
Defense	634	701	719	651	666	683	699	717	734	752	771	789	3,419	7,182
Nondefense	586	721	724	671	687	704	721	739	757	775	794	814	3,507	7,385
Total	1,220	1,422	1,443	1,322	1,353	1,386	1,420	1,455	1,491	1,527	1,565	1,603	6,925	14,567
Outlays														
Defense	590	622	669	651	655	671	679	688	710	727	745	769	3,325	6,964
Nondefense	610	658	693	689	693	708	727	748	771	794	817	839	3,511	7,480
Total	1,200	1,280	1,362	1,340	1,348	1,380	1,406	1,436	1,481	1,522	1,562	1,608	6,836	14,445
Memorandum:														
Caps in the Budget Control Act (As Amended), Including Automatic Reductions to the Caps														
Defense	551	629	647	576	590	n.a.	n.a.							
Nondefense	519	579	597	542	555	n.a.	n.a.							
Total	1,070	1,208	1,244	1,118	1,145	n.a.	n.a.							
Adjustments to the Caps ^b														
Defense	63	72	72	75	76	--	--	--	--	--	--	--	--	--

The Baseline for Revenues

- Is projected for each source
 - More than 50 sources
 - Largest share of total (49 percent) is from individual income taxes: \$1.6 trillion in 2018
- Usually reflects current law
 - Reductions in the individual income tax are assumed to expire as scheduled at the end of 2025
 - Exception: Excise taxes dedicated to trust funds are extended at current rates
- Is sensitive to economic projections
- Tends to increase as a percentage of gross domestic product (GDP) over time

An Example of CBO's Projections of Revenues

Table 3-1.

Revenues Projected in CBO's Baseline

	Actual, 2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total	
													2019– 2023	2019– 2028
In Billions of Dollars														
Individual Income Taxes	1,587	1,639	1,744	1,833	1,900	1,990	2,092	2,199	2,316	2,574	2,804	2,924	9,558	22,376
Payroll Taxes	1,162	1,178	1,231	1,284	1,337	1,395	1,456	1,519	1,583	1,646	1,712	1,780	6,704	14,944
Corporate Income Taxes	297	243	276	307	327	353	388	421	447	449	431	448	1,651	3,847
Other														
Excise taxes	84	102	88	106	109	113	117	119	121	123	126	129	532	1,149
Federal Reserve remittances	81	66	44	39	45	52	61	68	74	80	82	88	240	632
Customs duties	35	38	41	43	46	47	49	51	52	54	56	58	227	499
Estate and gift taxes	23	26	19	19	20	21	21	23	24	25	37	40	100	249
Miscellaneous fees and fines	48	47	46	45	44	42	44	46	47	49	51	52	221	466
Subtotal	270	278	238	253	263	275	291	306	318	332	352	368	1,320	2,995
Total	3,316	3,338	3,490	3,678	3,827	4,012	4,228	4,444	4,663	5,002	5,299	5,520	19,234	44,162
On-budget	2,466	2,477	2,590	2,736	2,845	2,990	3,164	3,338	3,513	3,807	4,058	4,230	14,327	33,273
Off-budget ^a	851	860	899	941	981	1,022	1,063	1,106	1,150	1,194	1,241	1,290	4,907	10,889
Memorandum:														
Gross Domestic Product	19,178	20,103	21,136	22,034	22,872	23,716	24,621	25,583	26,595	27,608	28,677	29,803	114,379	252,646
As a Percentage of Gross Domestic Product														
Individual Income Taxes	8.3	8.2	8.3	8.3	8.3	8.4	8.5	8.6	8.7	9.3	9.8	9.8	8.4	8.9
Payroll Taxes	6.1	5.9	5.8	5.8	5.8	5.9	5.9	5.9	6.0	6.0	6.0	6.0	5.9	5.9
Corporate Income Taxes	1.5	1.2	1.3	1.4	1.4	1.5	1.6	1.6	1.7	1.6	1.6	1.6	1.4	1.5

The Baseline for Net Spending for Interest

- CBO's model:
 - Incorporates existing stock of outstanding debt and associated interest rates
 - Integrates projections of future deficits and other financing obligations
 - Uses CBO's forecast for interest rates
 - Relies on a projection of the mix of securities that the Treasury could issue
- CBO's projections also include offsets from interest income received on loans and cash balances.

An Example of CBO's Baseline Budget Projections, by Category

Table 4-1.

CBO's Baseline Budget Projections, by Category

	Actual, 2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total	
													2019– 2023	2019– 2028
In Billions of Dollars														
Revenues														
Individual income taxes	1,587	1,639	1,744	1,833	1,900	1,990	2,092	2,199	2,316	2,574	2,804	2,924	9,558	22,376
Payroll taxes	1,162	1,178	1,231	1,284	1,337	1,395	1,456	1,519	1,583	1,646	1,712	1,780	6,704	14,944
Corporate income taxes	297	243	276	307	327	353	388	421	447	449	431	448	1,651	3,847
Other	270	278	238	253	263	275	291	306	318	332	352	368	1,320	2,995
Total	3,316	3,338	3,490	3,678	3,827	4,012	4,228	4,444	4,663	5,002	5,299	5,520	19,234	44,162
On-budget	2,466	2,477	2,590	2,736	2,845	2,990	3,164	3,338	3,513	3,807	4,058	4,230	14,327	33,273
Off-budget ^a	851	860	899	941	981	1,022	1,063	1,106	1,150	1,194	1,241	1,290	4,907	10,889
Outlays														
Mandatory	2,519	2,546	2,719	2,861	3,031	3,266	3,392	3,513	3,760	3,983	4,189	4,524	15,269	35,238
Discretionary	1,200	1,280	1,362	1,340	1,348	1,380	1,406	1,436	1,481	1,522	1,562	1,608	6,836	14,445
Net interest	263	316	390	485	570	643	702	739	774	817	864	915	2,789	6,897
Total	3,982	4,142	4,470	4,685	4,949	5,288	5,500	5,688	6,015	6,322	6,615	7,046	24,893	56,580
On-budget	3,180	3,288	3,556	3,706	3,901	4,168	4,303	4,414	4,658	4,883	5,084	5,416	19,634	44,088
Off-budget ^a	801	853	915	980	1,048	1,120	1,197	1,274	1,357	1,439	1,531	1,631	5,259	12,492
Deficit (-) or Surplus	-665	-804	-981	-1,008	-1,123	-1,276	-1,273	-1,244	-1,352	-1,320	-1,316	-1,526	-5,660	-12,418
On-budget	-715	-811	-955	-950	-1,056	-1,178	-1,130	-1,076	-1,144	-1,076	-1,026	-1,186	-5,307	-10,915

Projections by CBO and OMB

- Both CBO and OMB develop baselines that reflect the budgetary effects of current law.
- OMB also coordinates the President's budget proposals as part of the annual budget submission. Those proposals:
 - Reflect the effects of the President's legislative, regulatory, and administrative changes
 - Usually have significantly different spending and revenue projections from those in CBO's baseline because they incorporate proposed policy changes
- In CBO's *Analysis of the President's Budget*, the Administration's proposals are estimated in relation to CBO's baseline

An Example of CBO's Account-by-Account Projections of Spending

	A	B	C	D	E
1	This file presents an update to the data that supplement CBO's April 2018 report <i>The Budget and Economic Outlook: 2018 to 2028</i> .				
2	www.cbo.gov/publication/53651				
3					
4					
5	1. CBO's April 2018 Baseline				
6					
7					
8	Treasury Identification		Discretionary or	Major Spending	
9	Number	Title	Mandatory	Category	Agency
10	099-9999-9-9-050	Reduction to comply with discretionary cap & mand seq	Discretionary	Defense	Allowances
11	099-9999-9-9-050	Reduction to comply with discretionary cap & mand seq	Mandatory	Other Spending	Allowances
12	017-0730-0-1-051	Family housing construction, Navy and Marine Corps	Discretionary	Defense	Department of Defense--Military Programs
13	017-0735-0-1-051	Family housing operation and maintenance, Navy and Marine Corps	Discretionary	Defense	Department of Defense--Military Programs
14	017-1000-0-1-051	Medicare-Eligible retiree health fund contribution, Navy	Discretionary	Defense	Department of Defense--Military Programs
15	017-1001-0-1-051	Medicare-Eligible retiree health fund contribution, Marine Corps	Discretionary	Defense	Department of Defense--Military Programs
16	017-1002-0-1-051	Medicare-Eligible retiree health fund contribution, reserve pers	Discretionary	Defense	Department of Defense--Military Programs
17	017-1003-0-1-051	Medicare-Eligible retiree health fund contribution, reserve pers	Discretionary	Defense	Department of Defense--Military Programs
18	017-1105-0-1-051	Military personnel, Marine Corps	Discretionary	Defense	Department of Defense--Military Programs
19	017-1106-0-1-051	Operation and maintenance, Marine Corps	Discretionary	Defense	Department of Defense--Military Programs
20	017-1106-0-1-051	Operation and maintenance, Marine Corps	Mandatory	Other Spending	Department of Defense--Military Programs
21	017-1107-0-1-051	Operation and maintenance, Marine Corps Reserve	Discretionary	Defense	Department of Defense--Military Programs
22	017-1108-0-1-051	Reserve personnel, Marine Corps	Discretionary	Defense	Department of Defense--Military Programs
23	017-1109-0-1-051	Procurement, Marine Corps	Discretionary	Defense	Department of Defense--Military Programs
24	017-1109-0-1-051	Procurement, Marine Corps	Mandatory	Other Spending	Department of Defense--Military Programs
25	017-1205-0-1-051	Military construction, Navy and Marine Corps	Discretionary	Defense	Department of Defense--Military Programs
26	017-1235-0-1-051	Military Construction, Navy Reserve	Discretionary	Defense	Department of Defense--Military Programs
27	017-1319-0-1-051	Research, Development, Test and Evaluation, Navy	Discretionary	Defense	Department of Defense--Military Programs
28	017-1319-0-1-051	Research, Development, Test and Evaluation, Navy	Mandatory	Other Spending	Department of Defense--Military Programs
29	017-1405-0-1-051	Reserve personnel, Navy	Discretionary	Defense	Department of Defense--Military Programs

Questions?