

# Baseline Budget Projections

January 22, 2021

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?

The baseline is 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.

- It is based on CBO's economic forecast.
- It incorporates the assumption that current laws governing taxes and spending generally remain in place.
- It is not a forecast of future budgetary outcomes; those depend on future Congressional action and other factors.
- It is generally provided two or three times a year.
- It is reported in the annual *Budget and Economic Outlook* and subsequent reports.

# How Do CBO and the Congress Use the Baseline?

The baseline is a benchmark for measuring the budgetary effects of proposed changes in federal revenues and mandatory spending.

It serves as the basis for:

- Cost estimates for proposed legislation
- CBO's analyses of the President's annual budget
- CBO's report describing policy options that would reduce the deficit
- Other reports (including those describing CBO's long-term budget projections)
- Assessments of multiyear budget trends

It is often a starting point for budget resolutions.



# An Example of CBO's Baseline Budget Projections

Table 1.

## CBO's Baseline Budget Projections, by Category

	Actual, 2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total	
													2021– 2025	2021– 2030
In Billions of Dollars														
<b>Revenues</b>														
Individual income taxes	1,718	1,533	1,571	1,821	1,913	1,982	2,089	2,334	2,569	2,677	2,792	2,906	9,376	22,654
Payroll taxes	1,243	1,313	1,246	1,335	1,412	1,463	1,507	1,567	1,627	1,689	1,750	1,810	6,963	15,407
Corporate income taxes	230	151	123	234	289	319	347	352	356	368	378	387	1,312	3,152
Other	271	298	316	349	366	382	390	402	400	389	376	354	1,804	3,725
<b>Total</b>	<b>3,463</b>	<b>3,296</b>	<b>3,256</b>	<b>3,739</b>	<b>3,980</b>	<b>4,146</b>	<b>4,334</b>	<b>4,656</b>	<b>4,952</b>	<b>5,123</b>	<b>5,296</b>	<b>5,457</b>	<b>19,455</b>	<b>44,938</b>
On-budget	2,548	2,330	2,358	2,809	2,983	3,105	3,249	3,523	3,770	3,892	4,017	4,132	14,504	33,837
Off-budget <sup>a</sup>	914	965	898	930	997	1,040	1,085	1,133	1,182	1,231	1,278	1,325	4,951	11,101
<b>Outlays</b>														
Mandatory	2,734	4,617	3,184	3,274	3,313	3,411	3,641	3,842	4,014	4,314	4,334	4,652	16,822	37,978
Discretionary	1,338	1,651	1,593	1,528	1,520	1,542	1,580	1,613	1,651	1,693	1,722	1,768	7,762	16,210
Net interest	375	338	290	273	271	274	287	316	367	448	546	664	1,395	3,737
<b>Total</b>	<b>4,447</b>	<b>6,606</b>	<b>5,066</b>	<b>5,075</b>	<b>5,104</b>	<b>5,226</b>	<b>5,507</b>	<b>5,772</b>	<b>6,033</b>	<b>6,456</b>	<b>6,602</b>	<b>7,084</b>	<b>25,979</b>	<b>57,925</b>
On-budget	3,540	5,646	4,045	3,991	3,948	3,992	4,194	4,384	4,567	4,909	4,970	5,363	20,170	44,363
Off-budget <sup>a</sup>	907	960	1,022	1,084	1,156	1,234	1,313	1,388	1,465	1,547	1,632	1,721	5,809	13,562
<b>Deficit (-) or Surplus</b>														
On-budget	-992	-3,315	-1,687	-1,182	-965	-887	-946	-861	-797	-1,017	-953	-1,231	-5,666	-10,526
Off-budget <sup>a</sup>	8	5	-123	-154	-159	-194	-228	-255	-283	-316	-354	-395	-858	-2,461

# An Example of CBO's Economic Projections

Table 1.

## CBO's Economic Projections for Calendar Years 2020 to 2030

Percent

		Annual Average				
	Actual, 2019	2020	2021	2022	2023– 2024	2025– 2030
Change From Fourth Quarter to Fourth Quarter						
Gross Domestic Product						
Real <sup>a</sup>	2.3	-5.9	4.8	2.2	2.2	2.1
Nominal	4.0	-5.7	6.2	4.1	4.2	4.2
Inflation						
PCE price index	1.4	0.4	1.3	1.7	1.9	1.9
Core PCE price index <sup>b</sup>	1.6	0.6	1.3	1.7	1.8	1.9
Consumer price index <sup>c</sup>	2.0	0.4	1.6	2.0	2.2	2.2
Core consumer price index <sup>b</sup>	2.3	1.0	1.5	1.9	2.2	2.2
GDP price index	1.6	0.2	1.3	1.8	2.0	2.0
Employment Cost Index <sup>d</sup>	3.0	1.7	2.6	2.3	2.6	3.0
Fourth-Quarter Level						
Unemployment Rate	3.5	10.5	7.6	6.9	5.9 <sup>e</sup>	4.4 <sup>f</sup>
Change From Year to Year						
Gross Domestic Product						
Real <sup>a</sup>	2.3	-5.8	4.0	2.9	2.2	2.1
Nominal	4.1	-5.1	4.8	4.6	4.2	4.2
Inflation						
PCE price index	1.4	0.8	1.0	1.6	1.9	1.9
Core PCE price index <sup>b</sup>	1.6	1.0	0.9	1.5	1.8	1.9

# How Is the Baseline Constructed?

The 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, which:

- 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

# Examples of Rules That Govern the Baseline

Certain taxes and programs continue in the baseline beyond their scheduled expiration:

- Excise taxes dedicated to a trust fund
- Certain programs with current-year outlays greater than \$50 million (such as the Children's Health Insurance Program and the Supplemental Nutrition Assistance Program)

That treatment in the baseline, which is specified by law:

- Improves the accuracy of deficit projections for programs that are often extended
- Allows cost estimates to more accurately project the ultimate cost or savings when a program is being expanded or eliminated
- Makes certain extensions of programs appear costless

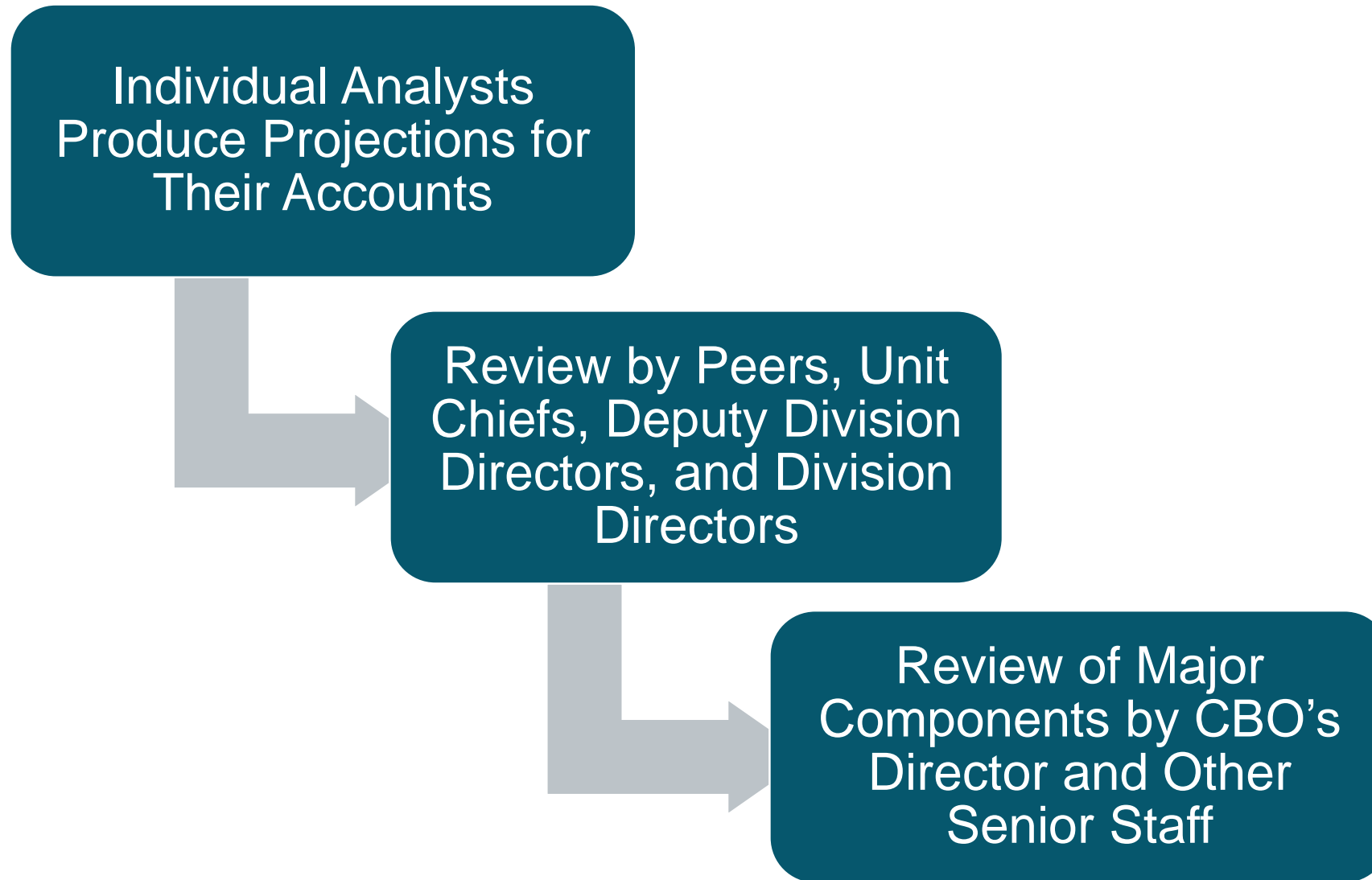
## Examples of Rules That Govern the Baseline (Continued)

The baseline incorporates the assumption that entitlements are fully funded, which means that all scheduled payments would be made.

That treatment in the baseline, which is specified by law:

- Shows benefits being paid regardless of resources in the trust funds, making the baseline less informative about challenges facing programs
- Shows the shortfall of dedicated taxes in relation to scheduled payments, possibly making the baseline more informative about budgetary challenges

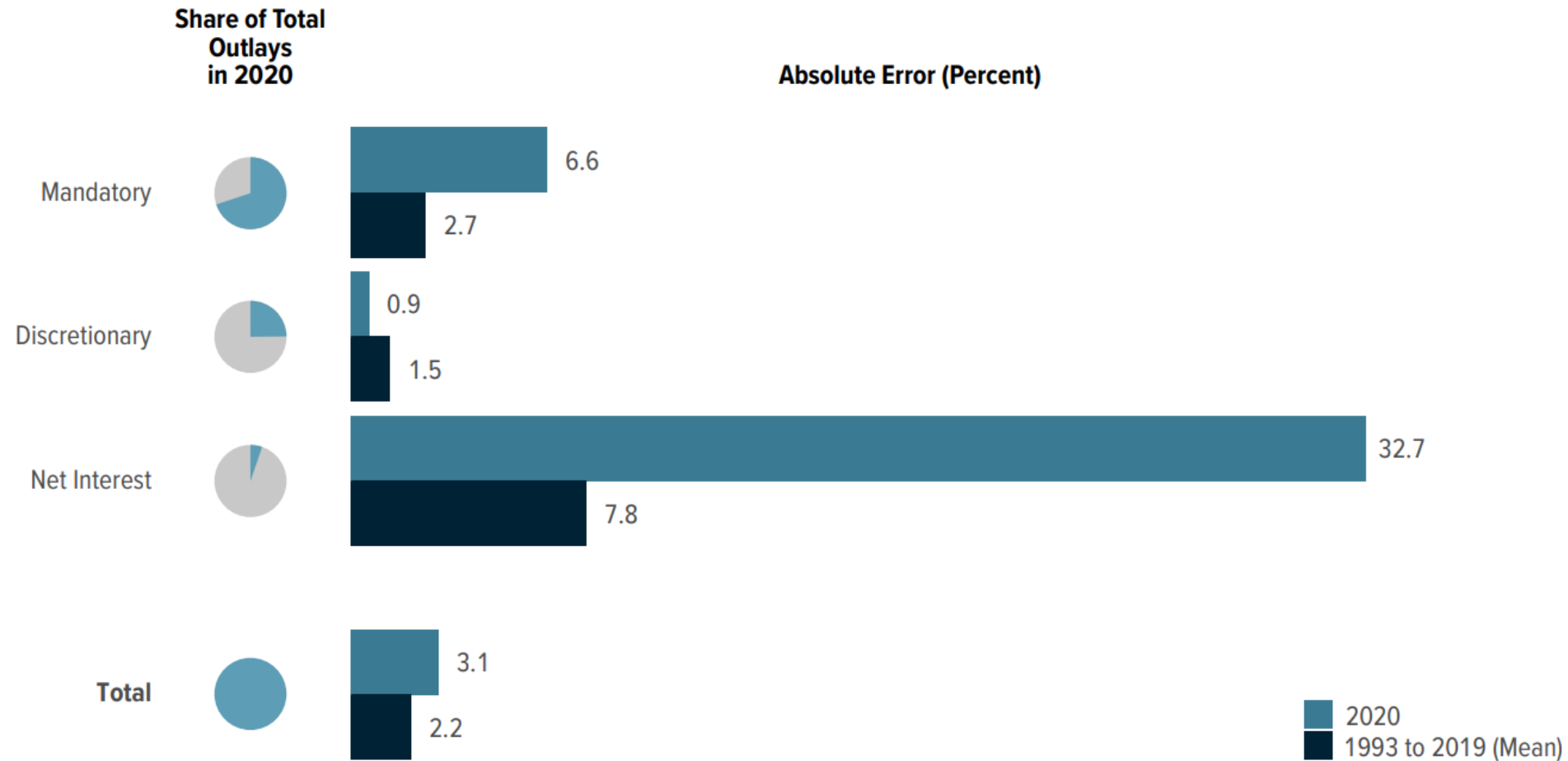
## Who Develops and Reviews the Baseline?



# Projection Errors for Outlays, 2020

Figure 2.

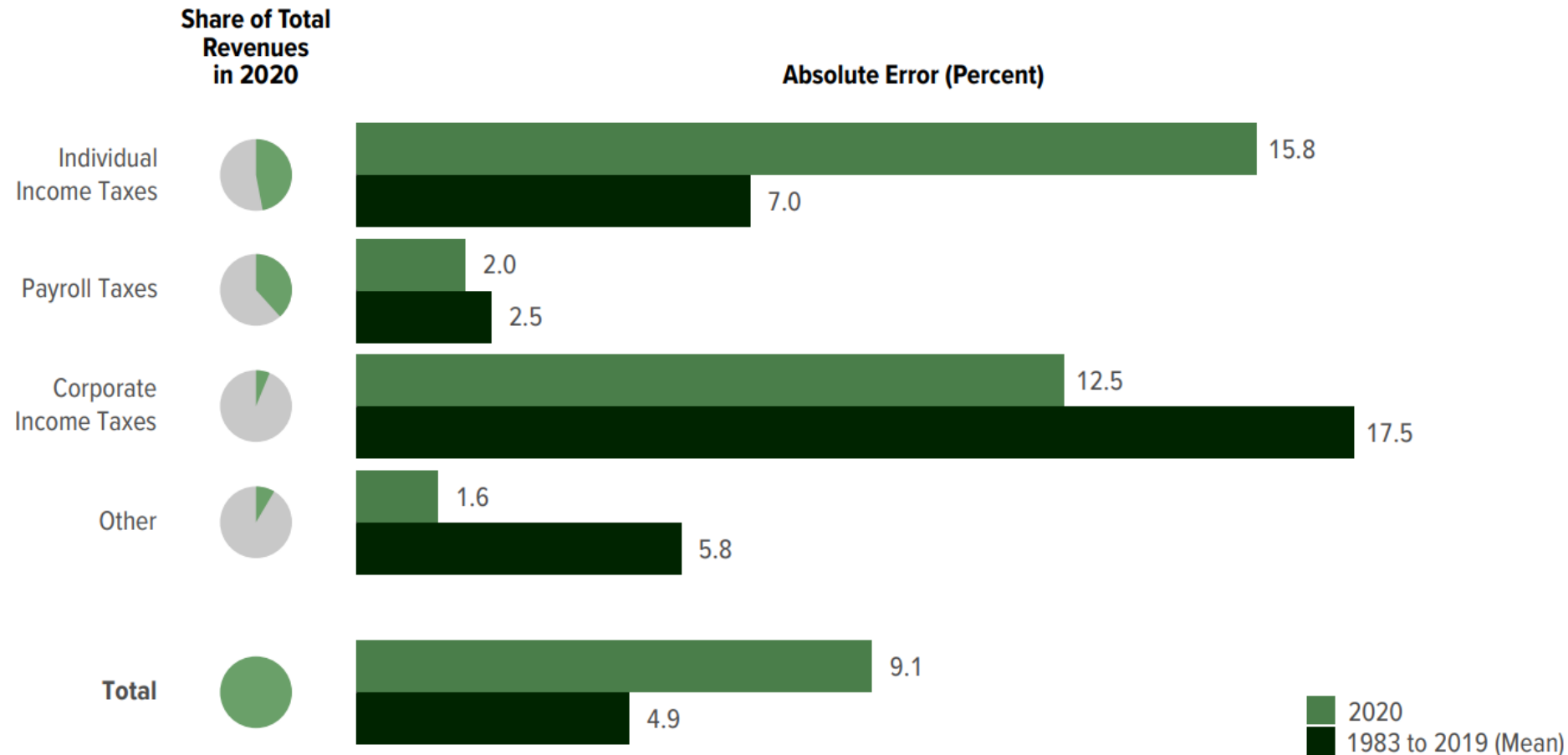
## Projection Errors for Outlays



# Projection Errors for Revenues, 2020

Figure 1.

## 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?**

# The Baseline for Mandatory Spending

Mandatory spending involves programs governed by permanent law.

- It includes payments to people, businesses, and state and local governments.
- The largest programs are Social Security, Medicare, Medicaid, and the retirement program for civilians working for the federal government.

CBO's baseline projections for mandatory programs:

- Generally reflect current law (statutory language and administrative policy)
- Are driven by projections of key variables that affect cash flows:
  - Enrollment by beneficiaries and their average costs
  - Factors underlying CBO's economic forecast
- Reflect an assumption, required by law, that certain large programs (such as the Supplemental Nutrition Assistance Program) continue after their expiration date

# An Example of CBO's Projections of Mandatory Spending

Table 3.

## Mandatory Outlays Projected in CBO's Baseline

Billions of Dollars

	Actual, 2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total	
													2021– 2025	2021– 2030
<b>Social Security</b>														
Old-Age and Survivors Insurance	893	946	993	1,046	1,104	1,169	1,238	1,309	1,381	1,463	1,545	1,629	5,549	12,876
Disability Insurance	145	145	149	156	164	172	179	187	194	196	201	206	820	1,805
Subtotal	1,038	1,091	1,142	1,201	1,268	1,341	1,417	1,496	1,575	1,660	1,746	1,835	6,370	14,681
<b>Major Health Care Programs</b>														
Medicare <sup>a,b</sup>	775	862	810	973	1,013	1,036	1,158	1,240	1,328	1,491	1,450	1,611	4,990	12,110
Medicaid	409	466	537	516	495	517	545	575	605	637	671	707	2,611	5,806
Premium tax credits and related spending <sup>c</sup>	56	54	56	55	55	56	57	58	60	64	68	73	278	601
Children's Health Insurance Program	18	17	16	15	15	16	16	17	17	18	19	19	78	168
Subtotal <sup>a</sup>	1,258	1,399	1,419	1,559	1,578	1,625	1,776	1,890	2,011	2,209	2,207	2,411	7,957	18,685
<b>Income Security Programs</b>														
Earned income, child, and other tax credits <sup>d</sup>	99	369	102	100	98	99	99	98	84	84	83	84	497	931
Supplemental Nutrition Assistance Program	63	92	114	94	85	85	85	85	85	83	81	79	463	875
Supplemental Security Income <sup>b</sup>	56	57	58	65	63	60	68	70	72	80	69	77	315	683
Unemployment compensation	28	557	166	67	57	53	49	46	44	42	42	43	392	610

# The Baseline for Discretionary Spending

Discretionary spending is 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 are constrained by caps through 2021

- Outlays

- Depend on how quickly funding is spent; that rate differs widely among programs and accounts
- For a given year, depend 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 4.

## CBO's Baseline Projections of Discretionary Spending

Billions of Dollars

													Total	
	Actual, 2019 <sup>a</sup>	2020 <sup>a</sup>	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2021– 2025	2021– 2030
Budget Authority														
Defense	719	757	752	765	781	798	817	836	856	876	897	919	3,913	8,296
Nondefense	658	1,139	668	680	695	711	728	746	764	781	800	819	3,482	7,392
<b>Total</b>	<b>1,376</b>	<b>1,896</b>	<b>1,419</b>	<b>1,445</b>	<b>1,476</b>	<b>1,510</b>	<b>1,545</b>	<b>1,582</b>	<b>1,620</b>	<b>1,657</b>	<b>1,696</b>	<b>1,738</b>	<b>7,396</b>	<b>15,688</b>
Outlays														
Defense	676	715	733	750	759	770	792	809	828	853	862	888	3,803	8,044
Nondefense	661	936	860	778	761	772	788	804	823	841	860	880	3,959	8,166
<b>Total</b>	<b>1,338</b>	<b>1,651</b>	<b>1,593</b>	<b>1,528</b>	<b>1,520</b>	<b>1,542</b>	<b>1,580</b>	<b>1,613</b>	<b>1,651</b>	<b>1,693</b>	<b>1,722</b>	<b>1,768</b>	<b>7,762</b>	<b>16,210</b>

### Memorandum:

Caps on Budget Authority Specified in the Budget Control Act (As Amended), Including Automatic Reductions to the Caps

Defense	647	667	672	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Nondefense	597	622	627	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Total</b>	<b>1,244</b>	<b>1,288</b>	<b>1,298</b>	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Funding Not Constrained by the Caps<sup>b</sup>

Defense	72	90	80	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Nondefense	44	503	41	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.



# The Baseline for Revenues

- It is projected for each source.
  - There are more than 50 sources.
  - The largest share of the total (47 percent) is from individual income taxes, which came to \$1.6 trillion in 2020.
- It usually reflects current law.
  - For example, 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.
- It is sensitive to economic projections.
- It tends to increase as a percentage of gross domestic product (GDP) over time.

# An Example of CBO's Projections of Revenues

## 1. Revenues Projected in CBO's September 2020 Baseline

Billions of Dollars

Fiscal Year	Actual, 2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total	
													2021- 2025	2021- 2030
Individual Income Taxes	1,718	1,533	1,571	1,821	1,913	1,982	2,089	2,334	2,569	2,677	2,792	2,906	9,376	22,654
Payroll Taxes	1,243	1,313	1,246	1,335	1,412	1,463	1,507	1,567	1,627	1,689	1,750	1,810	6,963	15,407
Corporate Income Taxes	230	151	123	234	289	319	347	352	356	368	378	387	1,312	3,152
Other														
Excise taxes	99	90	81	88	88	91	91	92	93	94	94	95	439	907
Federal Reserve	53	83	109	129	138	144	150	156	139	118	97	72	669	1,251
Customs duties	71	71	73	80	85	89	91	94	96	98	99	100	419	905
Estate and gift taxes	17	18	20	19	20	21	22	23	34	38	41	44	101	281
Miscellaneous fees and fines	32	36	34	33	35	37	36	38	40	42	44	43	175	381
Subtotal	271	298	316	349	366	382	390	402	400	389	376	354	1,804	3,725
<b>Total</b>	<b>3,463</b>	<b>3,296</b>	<b>3,256</b>	<b>3,739</b>	<b>3,980</b>	<b>4,146</b>	<b>4,334</b>	<b>4,656</b>	<b>4,952</b>	<b>5,123</b>	<b>5,296</b>	<b>5,457</b>	<b>19,455</b>	<b>44,938</b>
On-budget	2,548	2,330	2,358	2,809	2,983	3,105	3,249	3,523	3,770	3,892	4,017	4,132	14,504	33,837
Off-budget <sup>a</sup>	914	965	898	930	997	1,040	1,085	1,133	1,182	1,231	1,278	1,325	4,951	11,101

# The Baseline for Net Spending for Interest

CBO's model:

- Incorporates the 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

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<b>Deficit (-) or Surplus</b>														
<b>On-budget</b>	<b>-992</b>	<b>-3,315</b>	<b>-1,687</b>	<b>-1,182</b>	<b>-965</b>	<b>-887</b>	<b>-946</b>	<b>-861</b>	<b>-797</b>	<b>-1,017</b>	<b>-953</b>	<b>-1,231</b>	<b>-5,666</b>	<b>-10,526</b>
<b>Off-budget<sup>a</sup></b>	<b>8</b>	<b>5</b>	<b>-123</b>	<b>-154</b>	<b>-159</b>	<b>-194</b>	<b>-228</b>	<b>-255</b>	<b>-283</b>	<b>-316</b>	<b>-354</b>	<b>-395</b>	<b>-858</b>	<b>-2,461</b>

# Projections by CBO and OMB

Both CBO and the Office of Management and Budget (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 data that supplement CBO's September 2020 report <i>An Update to the Budget Outlook: 2020 to 2030</i> .				
2	<a href="https://www.cbo.gov/publication/56517">www.cbo.gov/publication/56517</a>				
3					
4					
5	<b>1. CBO's September 2020 Baseline Projections</b>				
6					
7					
8	Treasury Identification Number	Title	Discretionary or Mandatory	Major Spending Category	Agency
9	099-9999-9-9-050	Reduction to comply with discretionary cap & mand seq	Discretionary	Defense	Allowances
10	017-0730-0-1-051	Family housing construction, Navy and Marine Corps	Discretionary	Defense	Department of Defense--Military Programs
11	017-0735-0-1-051	Family housing operation and maintenance, Navy and Marine Corps	Discretionary	Defense	Department of Defense--Military Programs
12	017-1000-0-1-051	Medicare-Eligible retiree health fund contribution, Navy	Discretionary	Defense	Department of Defense--Military Programs
13	017-1001-0-1-051	Medicare-Eligible retiree health fund contribution, Marine Corps	Discretionary	Defense	Department of Defense--Military Programs
14	017-1002-0-1-051	Medicare-Eligible retiree health fund contribution, reserve pers	Discretionary	Defense	Department of Defense--Military Programs
15	017-1003-0-1-051	Medicare-Eligible retiree health fund contribution, reserve pers	Discretionary	Defense	Department of Defense--Military Programs
16	017-1105-0-1-051	Military personnel, Marine Corps	Discretionary	Defense	Department of Defense--Military Programs
17	017-1106-0-1-051	Operation and maintenance, Marine Corps	Discretionary	Defense	Department of Defense--Military Programs
18	017-1106-0-1-051	Operation and maintenance, Marine Corps	Mandatory	Other Spending	Department of Defense--Military Programs
19	017-1107-0-1-051	Operation and maintenance, Marine Corps Reserve	Discretionary	Defense	Department of Defense--Military Programs
20	017-1108-0-1-051	Reserve personnel, Marine Corps	Discretionary	Defense	Department of Defense--Military Programs
21	017-1109-0-1-051	Procurement, Marine Corps	Discretionary	Defense	Department of Defense--Military Programs
22	017-1109-0-1-051	Procurement, Marine Corps	Mandatory	Other Spending	Department of Defense--Military Programs
23	017-1205-0-1-051	Military construction, Navy and Marine Corps	Discretionary	Defense	Department of Defense--Military Programs
24	017-1235-0-1-051	Military Construction, Navy Reserve	Discretionary	Defense	Department of Defense--Military Programs
25	017-1319-0-1-051	Research, Development, Test and Evaluation, Navy	Discretionary	Defense	Department of Defense--Military Programs
26	017-1319-0-1-051	Research, Development, Test and Evaluation, Navy	Mandatory	Other Spending	Department of Defense--Military Programs
27	017-1405-0-1-051	Reserve personnel, Navy	Discretionary	Defense	Department of Defense--Military Programs
28	017-1453-0-1-051	Military personnel, Navy	Discretionary	Defense	Department of Defense--Military Programs
29	017-1506-0-1-051	Aircraft procurement, Navy	Discretionary	Defense	Department of Defense--Military Programs

# Questions?