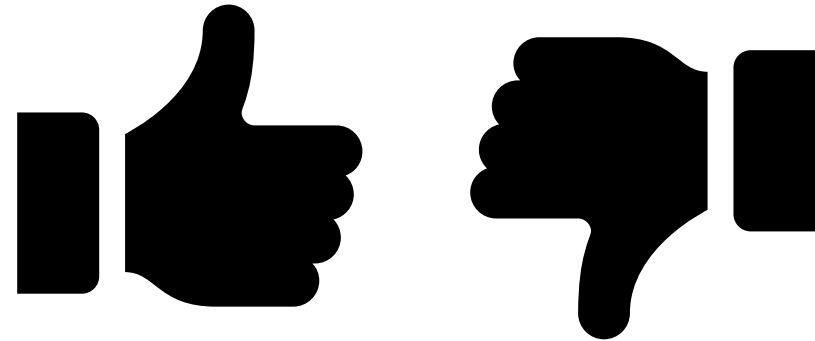


BUILDING COST ESTIMATES

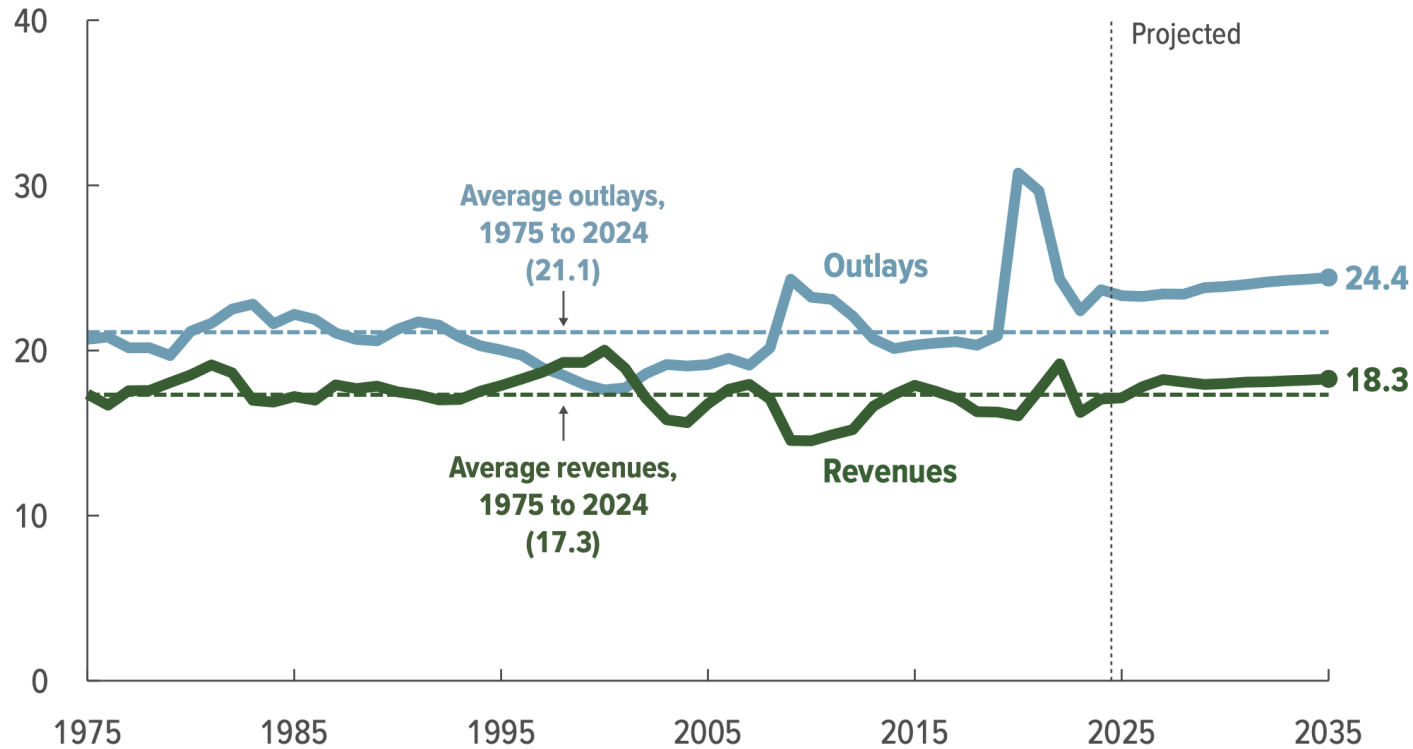
AGENDA

- Overview of the Federal Budget and CBO
- Legislative analysis
- Structuring your model
- Synthesizing and incorporating research
- Developing assumptions
- Uncertainty, refining, and quality checking
- Communicating findings



FEDERAL BUDGET 101

Percentage of GDP



- **Spending (Outlays)**

- What the government buys

- **Revenues (Collections)**

- What the government collects from taxes and fees

- **Deficit (Surplus)**

- Total outlays – total revenues = current deficit
- Debt = cumulative amount of deficits

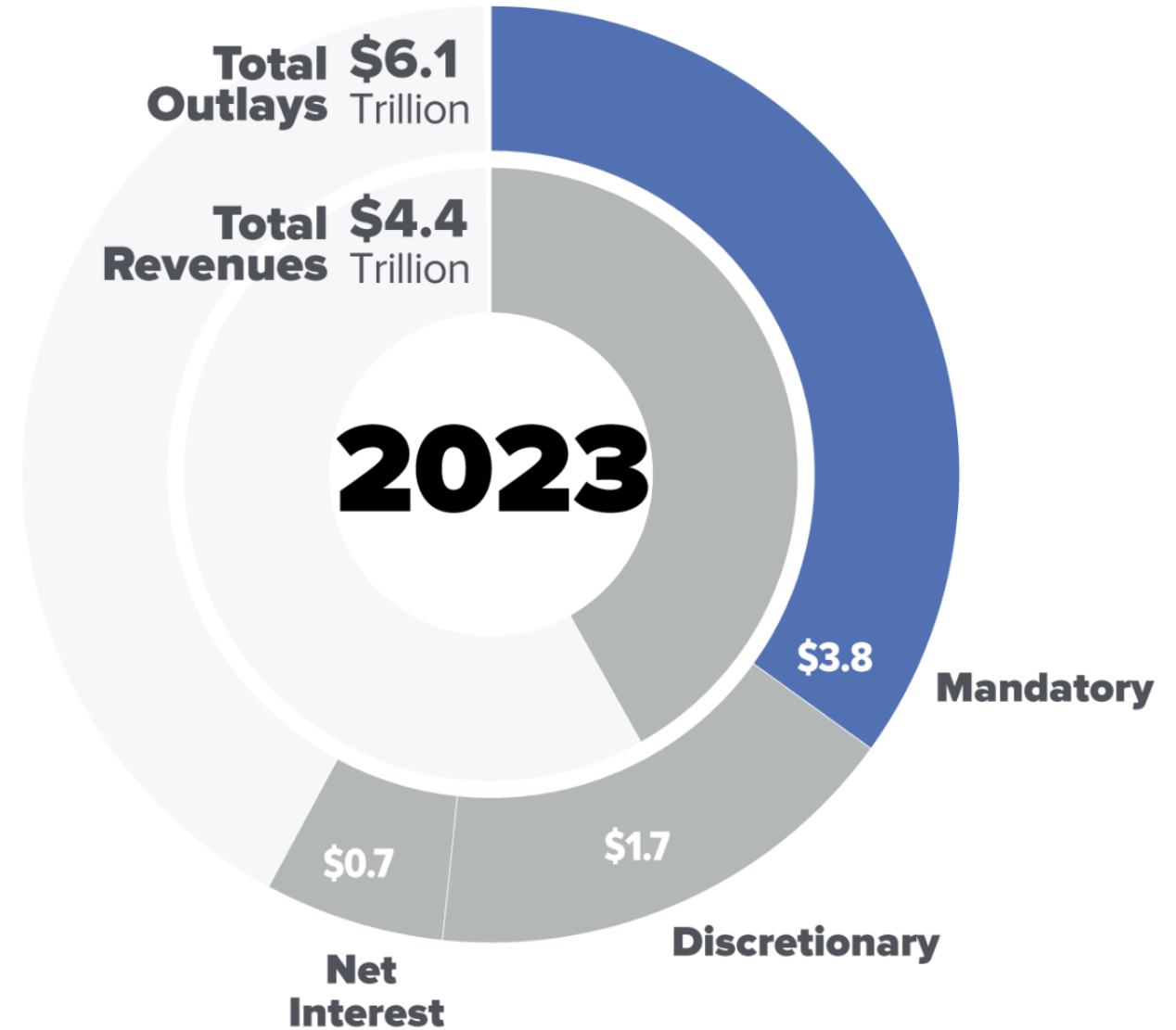
SPENDING (OUTLAYS)

Mandatory Spending (>60%)

- Entitlements
 - Medicare, Medicaid, Social Security
- Congress sets eligibility and benefits
- Open-ended appropriations

Discretionary Spending (~30%)

- Funds federal agencies
- Congress sets annual amounts



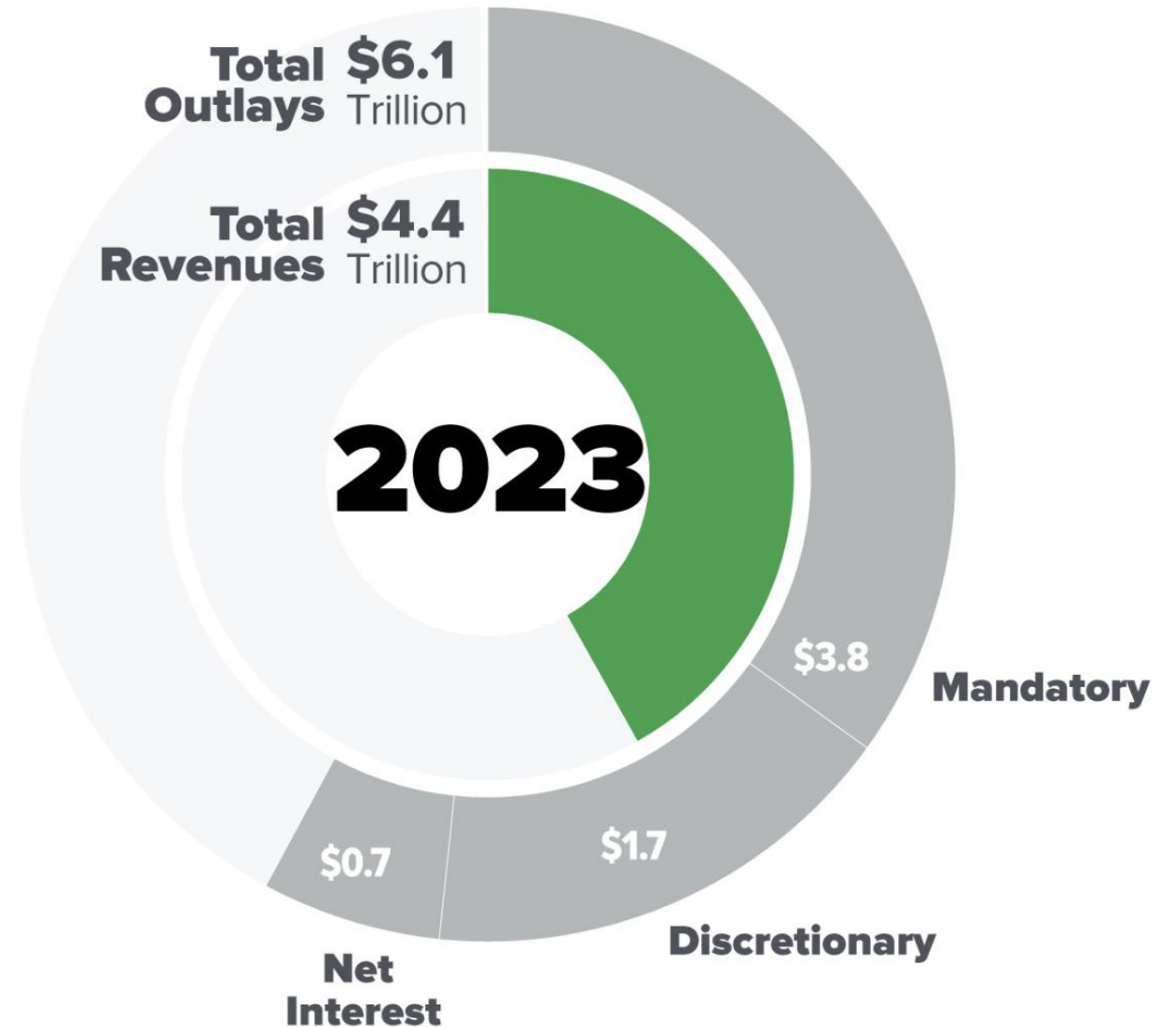
REVENUES

Revenues

- Individual, corporate, payroll, estate, excise taxes, user fees

Tax expenditures

- Credits & deductions that reduce collections
- Equivalent to spending
- Examples:
 - Employer-sponsored insurance
 - ACA premium tax credits



CBO & COST ESTIMATES

- CBO created in 1974 to provide nonpartisan budget information to Congress
 - CBO estimates compare current law to proposed law
 - Estimates provide the net effect on the deficit over 10 years
- Estimates are also used to enforce budget procedures
 - Pay-As-You-Go (PAYGO)
 - Reconciliation



At a Glance

H.R. 2328, Reauthorizing and Extending America's Community Health Act

As ordered reported by the House Committee on Energy and Commerce on July 17, 2019

By Fiscal Year, Millions of Dollars	2019	2019-2024	2019-2029
Direct Spending (Outlays)	0	40,394	41,027
Revenues	0	6,631	20,938
Increase or Decrease (-) in the Deficit	0	33,764	20,090
Spending Subject to Appropriation (Outlays)	0	67	not estimated
Statutory pay-as-you-go procedures apply?	Yes	Mandate Effects	
Increases on-budget deficits in any of the four consecutive 10-year periods beginning in 2030?	No	Contains intergovernmental mandate?	Yes, Over Threshold
		Contains private-sector mandate?	Yes, Over Threshold

The bill would

- Extend funding for public health programs including those that support health centers and health education
- Extend funding for several programs financed through the Medicare trust funds, change some other aspects of Medicare, and change supplemental coverage for some military retirees
- Reduce scheduled funding cuts to state allotments to hospitals that treat a disproportionate share of uninsured and Medicaid patients
- Protect patients from surprise medical billing and reduce payments to some health care providers working in facilities where surprise bills are likely
- Increase funding for Medicaid in the U.S. territories
- Impose intergovernmental and private-sector mandates by prohibiting surprise medical billing

Estimated budgetary effects would primarily stem from

- Increased funding for public health programs
- Changes to Medicare coverage and payment rules
- Increased Medicaid spending on payments to hospitals and to the U.S. territories
- Reduced federal subsidies for health care and health insurance

COST ESTIMATES ARE **NOT**



Cost-benefit analyses



Predictions

ESSENTIAL COMPONENTS OF A COST ESTIMATE

Policy mechanism



Population(s)



Behavioral responses



Budget impact



Timeline

ANALYZING LEGISLATION: INITIAL ASSESSMENT

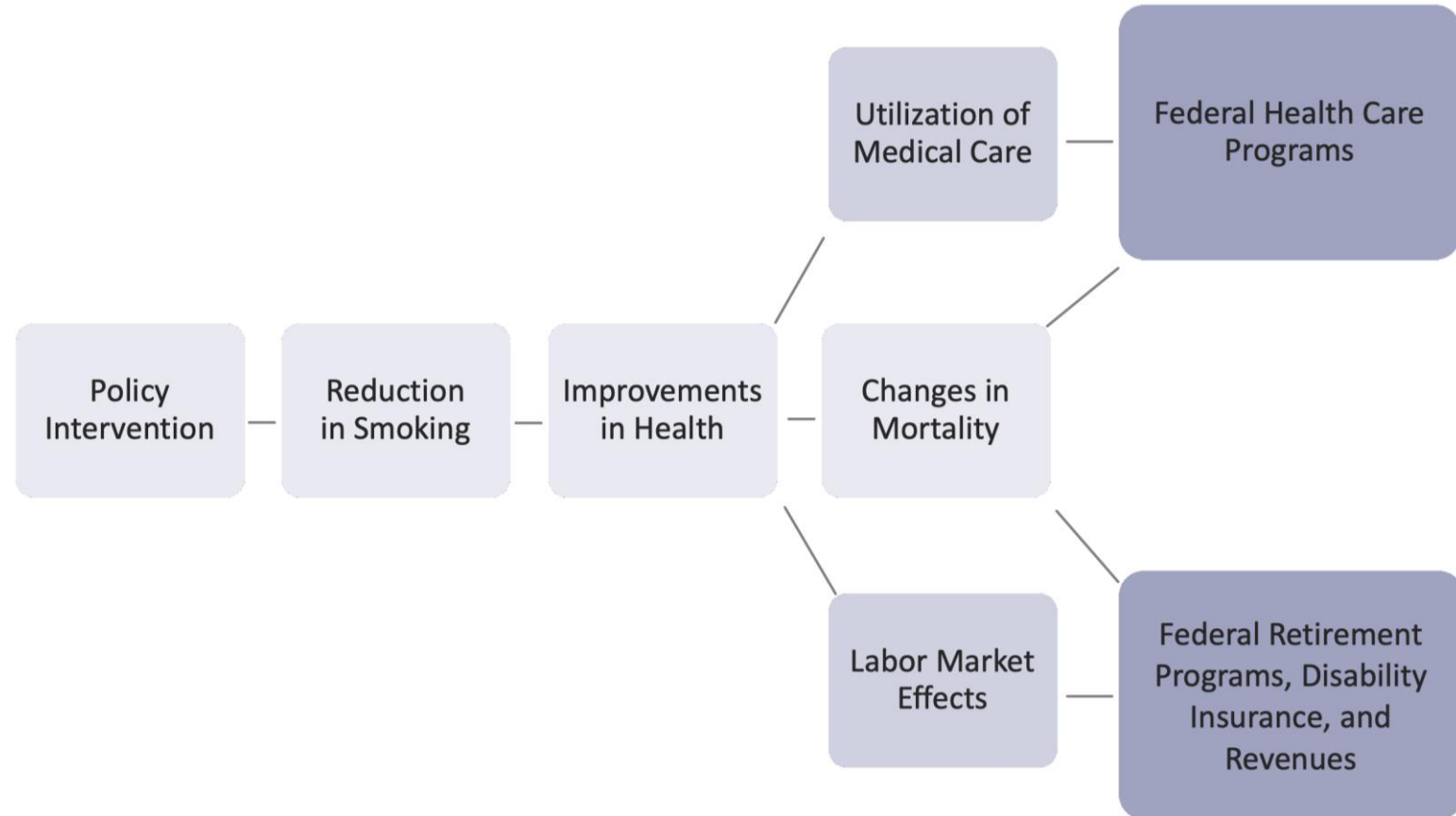
Before you read the legislation, ask yourself:

- What is its stated purpose(s)?
- How is it different from current law?
- How will it affect the federal budget?
- How is it organized?
 - Scan headings and subheadings
 - Find key terms and definitions

As you read the legislation, look for:

- Budgetary “levers”
 - Changes in “quantities”
 - Changes in “prices”
- Deadlines, effective dates, and sunset provisions

EXAMPLE: INCREASING THE EXCISE TAX ON CIGARETTES



ANALYZING LEGISLATION: TIPS AND TRICKS

SECTION 1. ("SECTION" for 1st section and "SEC." for subsequent sections, followed by Arabic numeral)

(a) (Subsection) (lower-case letter)

(1) (Paragraph) (Arabic numeral)

(A) (Subparagraph) (upper-case letter)

(i) (Clause) (lower-case Roman numeral)

(I) (Subclause) (upper-case Roman numeral)

- Understanding legislative discretion
 - **“Shall”** = no discretion – instructed party has legal duty to act
 - **“May”** = discretion – instructed party given authority to make reasonable decision
- Compare legislation to the most up-to-date U.S. Code
 - Definitive source: [House’s Office of Law Revision Counsel](#)

BUILDING A MODEL

- **Identify and prioritize budgetary effects**
- **What are the “prices” and “quantities”?**
 - Coverage changes: how many people gain or lose? Average cost for government?
 - Reimbursement changes: how many providers are affected? What is the price change?
 - Pharmaceuticals: share of market impacted? Generic penetration rate?
- **What are the likely behavioral responses?**
 - How would individuals respond?
 - Any industry-wide effects?
- **For each effect:**
 - Identify data price and quantity data
 - Identify the assumptions you'll need to make

CREATE YOUR MODEL BASELINE

- **Establish your baseline** – what would costs be if current trends continue?
 - CBO – [Selected Baselines](#) – detailed tables for each health program showing projected enrollment and spending for Medicare, Medicaid, Marketplaces and other federal health programs.
 - CMS’s [National Health Expenditure](#) (NHE) projections – detailed projections of total health spending by payer and service type, along with long-running historical data
- **In general, keep it simple** – extrapolating from historical data is the best option 99% of the time.

MODELING PROPOSED LAW PRICES AND QUANTITIES

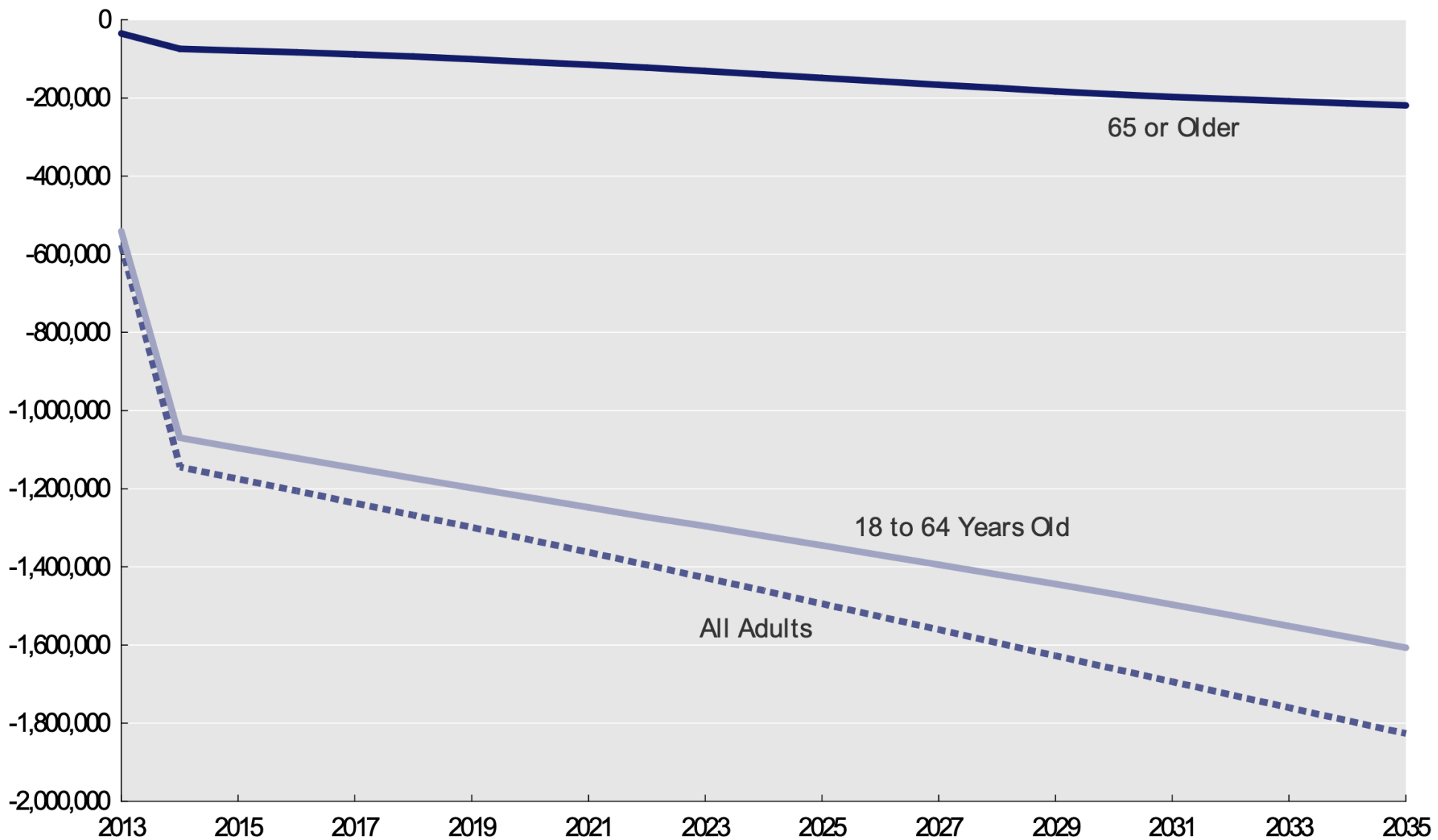
Change in Quantities:

- Use administrative data, when available, to size affected population
- Use take-up rates based on similar existing programs
- Account for:
 - Implementation timelines
 - Population growth, other demographic changes
 - Interactions with other policies

Change in Prices:

- Develop average prices for quantity estimates
- Use known benchmarks when possible
- Account for:
 - Inflation and other economic trends

Cumulative Reduction in the Number of Smokers Because of the Illustrative Increase in the Cigarette Tax



REFINING ANALYSIS AND ASSUMPTIONS

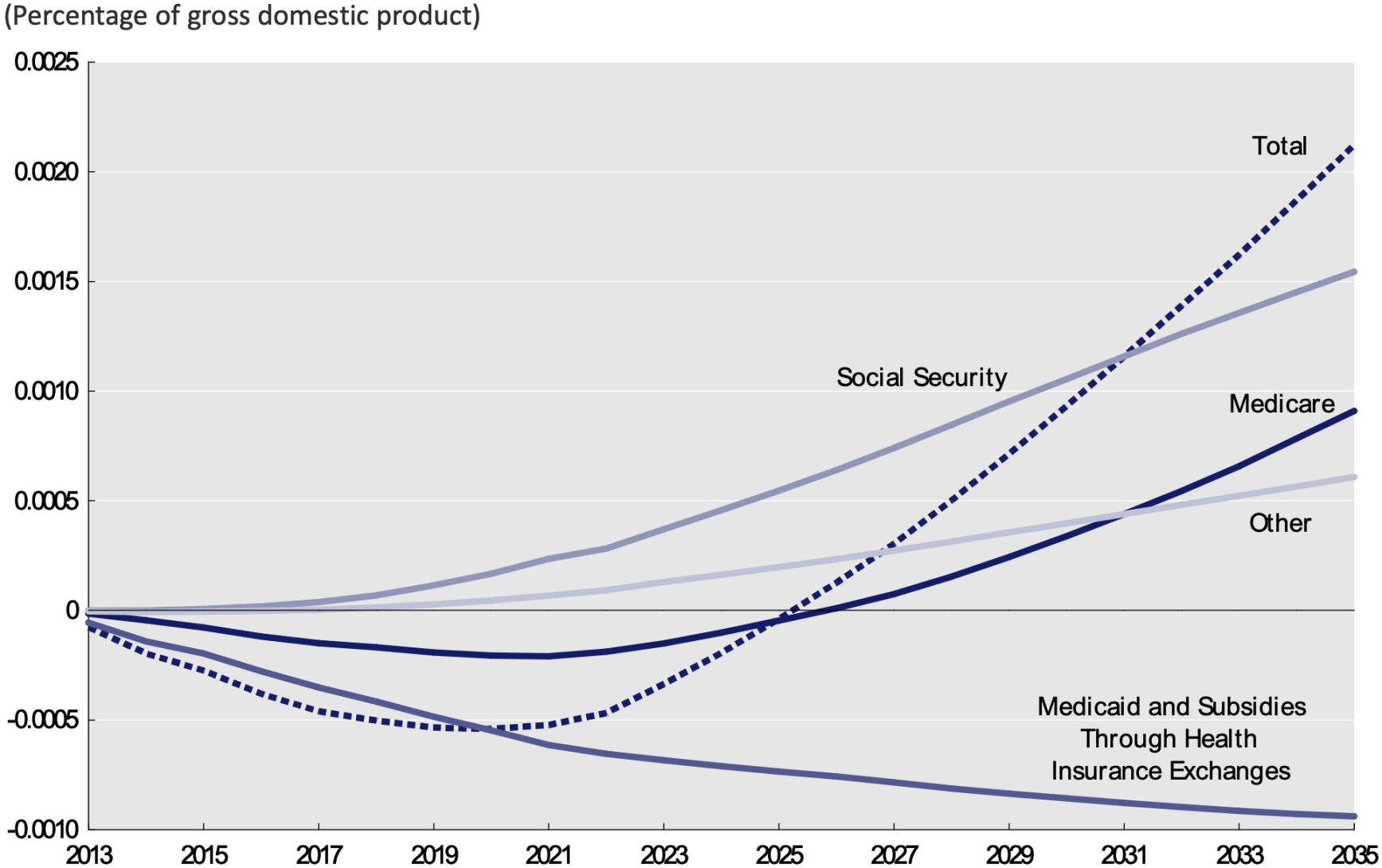
- **Implementation Assumptions**

- Program startup time
- Regulatory timelines – statutory deadlines + federal rulemakings

- **Behavioral Responses**

- Rely on econ 101 – there are no free lunches, and tradeoffs are real
- Individual responses (take-up rates, utilization, and substitution effects)
- Provider responses (practice pattern changes, market entry/exit decisions)
- Develop timing assumption – how long will it take for behaviors to change?

Effects on Outlays of the Illustrative Increase in the Cigarette Tax, by Program



DIFFERENT EVIDENCE SOURCES DIFFERENT UTILITY

- **Federal and state government data:** initial prices and quantities
- **Nonpartisan sources** (CBO, CRS, GAO, OIGs): additional price and quantity benchmarks
- **Academic research:** elasticities and other key inputs
- **Industry data:** market insights
- **Expert calls:** reality check your assumptions

DATA BEST PRACTICES

- Beware of bias and data's limitations
- Prioritize high-quality research designs
- Consider timeliness and relevance of data
- Validate your assumptions through multiple sources
- Document your sources
- Acknowledge limitations
- Update analysis as new data becomes available

BEST PRACTICES FOR UNCERTAINTY

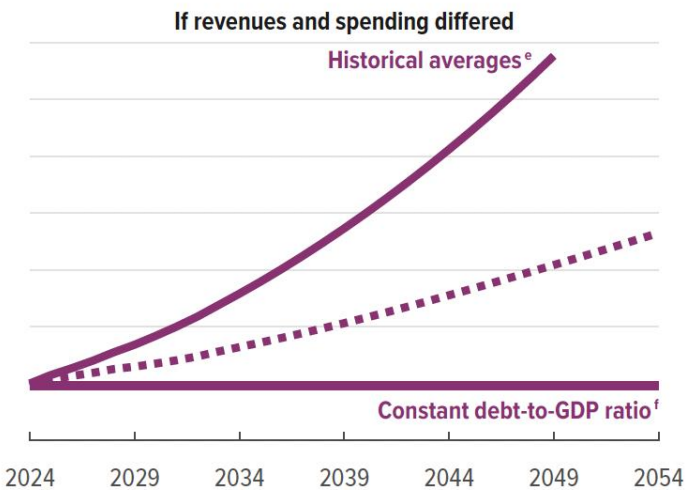
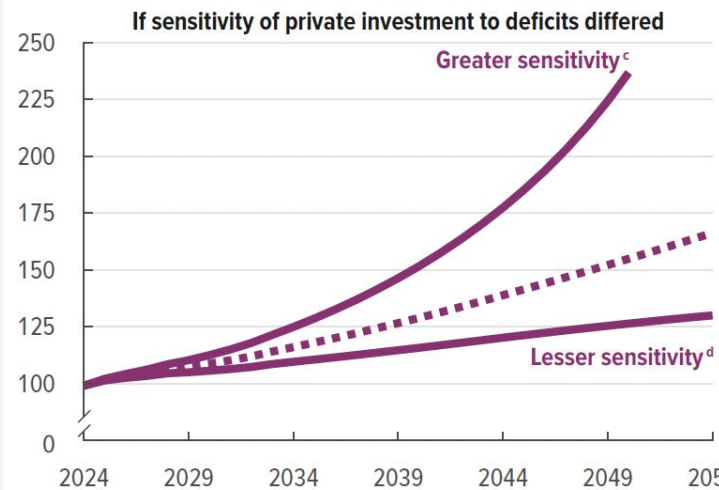
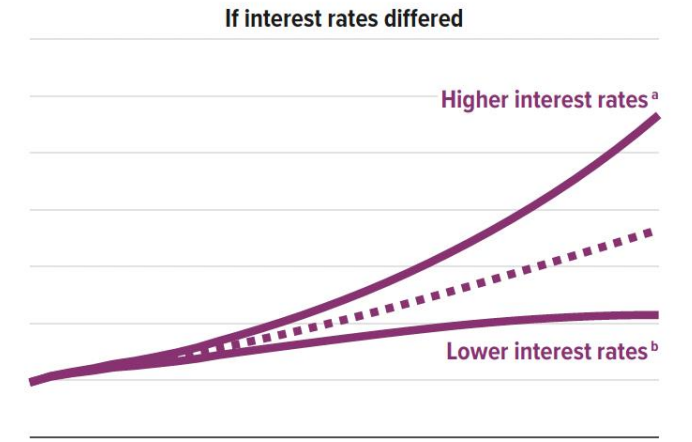
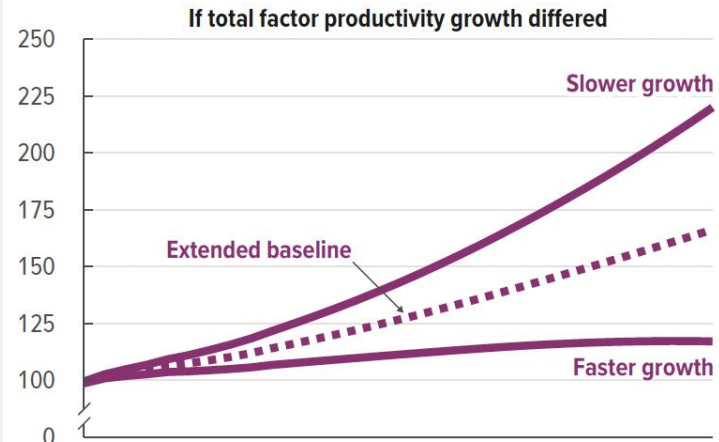
- Acknowledge uncertainty – do not hide it
- Document key sources
- Work around limitations with reasonable approximations
- Upper and lower bounds
- “50/50” assumption

TESTING YOUR ANALYSIS PT. I

- **Does the sign and magnitude of the analysis make sense given:**
 - Affected population
 - Typical per-person costs (or savings)
 - Comparable programs
- **Are the results consistent with:**
 - Existing benchmarks?
 - Past estimates?
 - Expert opinions?

Federal Debt Under the Extended Baseline and Eight Alternative Scenarios, by Fiscal Year

Percentage of GDP



Data source: Congressional Budget Office. See www.cbo.gov/publication/60169#data.

TESTING YOUR ANALYSIS PT. 2

- **Validation Methods**

- *Quantitative*

- How much does the estimate change based on changing key parameters and assumptions?

- *Qualitative*

- Expert interviews and historical examples

- **Checklist**

- Compare results against initial expectations
- Identify and justify any counterintuitive findings
- Quantify range of possible outcomes
- Explain key drivers of uncertainty
- Consider implications of extreme scenarios

COMMUNICATING YOUR FINDINGS

- Start with your conclusion
- Layer in details
- Explain uncertainty

USEFUL RESOURCES

- **Budget Process and CBO**
 - [GAO Glossary of Terms Used in Budget Process](#)
 - [CBO Glossary](#)
 - [CBO Cost Estimate Explained](#)
 - [CRS Introduction to the Federal Budget Process](#)
 - [CBO Prevention and Public Health Explainer](#)
 - [CBO Explains Common Sources of Uncertainty](#)
- **Historical Information**
 - [CRS Appropriations Status Table](#)
- **Legislative Analysis & Drafting**
 - House Office of Legislative Counsel's [Drafting Resources](#)
- **Other**
 - [CBO A Guide for Choosing Graphics](#)