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## Comparing CBO's Long-Term Projections With Those of the Social Security Trustees

Presentation to the Social Security Advisory Board

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This presentation draws on the testimony of Keith Hall, Director, Congressional Budget Office, before the Subcommittee on Social Security, House Committee on Ways and Means, on September 21, 2016, [www.cbo.gov/publication/51988](http://www.cbo.gov/publication/51988), and Congressional Budget Office, *The Long-Term Budget Outlook* (July 2016), [www.cbo.gov/publication/51580](http://www.cbo.gov/publication/51580).

CBO's long-term Social Security projections are based on a detailed microsimulation model that starts with data about individuals from a representative sample of the population and projects economic and demographic outcomes for that sample over time.

Projections of economic and demographic variables are key inputs into that model.

Economic projections are extensions of CBO's 10-year economic forecast, which underlies the agency's budget projections.

Those economic projections reflect not just historical averages but also trends that many forecasters expect to continue.

CBO consults a variety of sources— including our own analysis of historical data, forecasts made by other government agencies, panels of advisors, and academic literature—when creating our projections.

We regularly review our projections, sometimes in light of revised and recent data and sometimes in light of recent analyses.

# CBO's Projection of the 75-Year Actuarial Balance Is Larger Than the Trustees' Projection

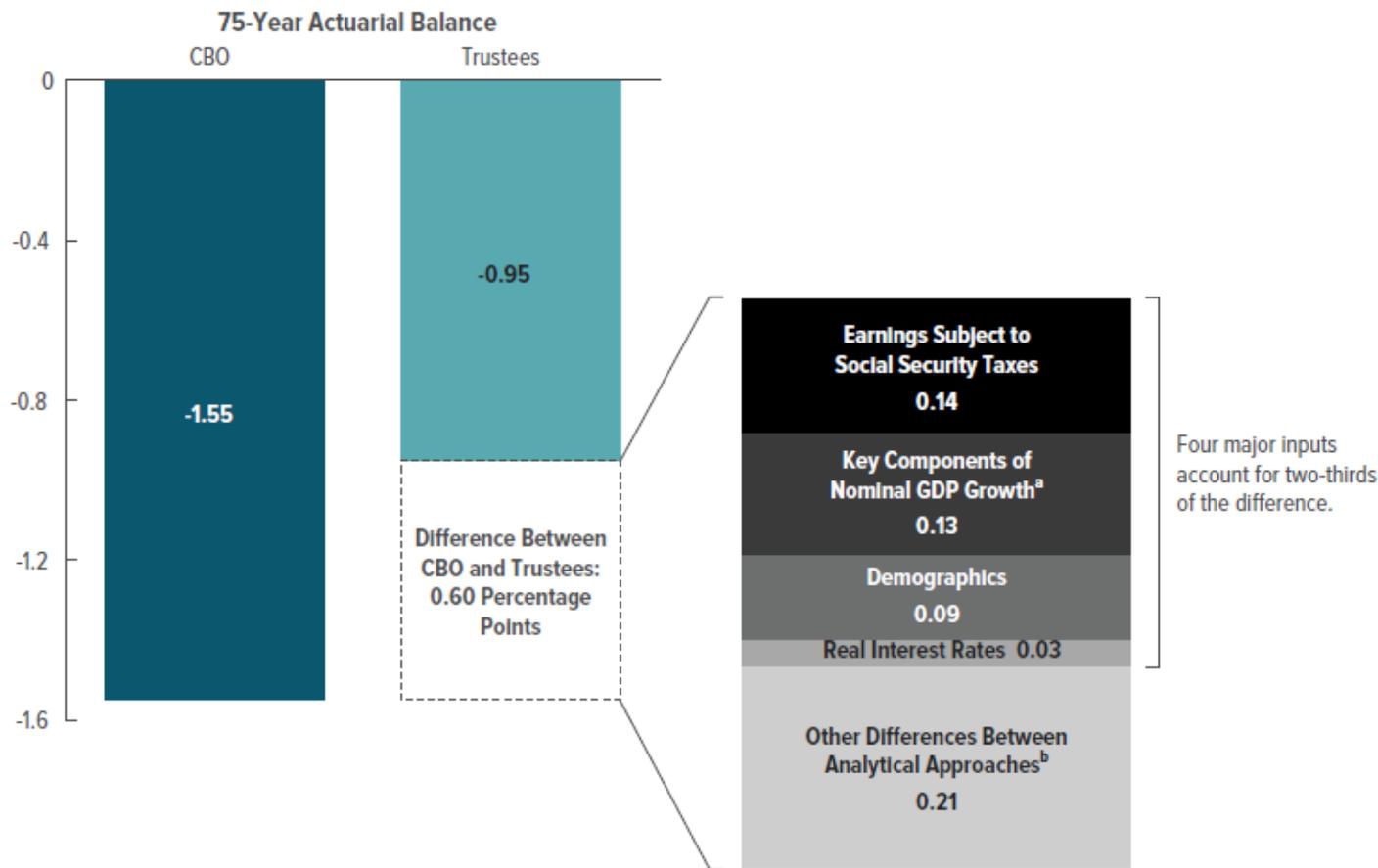
## Differences Between CBO's and the Social Security Trustees' Projections of the 75-Year Actuarial Balance

	Published Projections	
	As a Percentage of GDP	As a Percentage of Taxable Payroll
CBO	-1.55	-4.68
Trustees	-0.95	-2.66
Difference Between the Projections	0.60	2.02

# Two-Thirds of the Difference Is Explained by Different Projections of Four Major Inputs

## Distribution of Differences Between CBO's and the Social Security Trustees' Projections

Percentage of Gross Domestic Product



# The Effect on the 75-Year Actuarial Balance of Adopting Each of the Trustees' Major Inputs

Changes to CBO's Projections That Would Result From Adopting Each of the Trustees' Major Inputs to the Projections

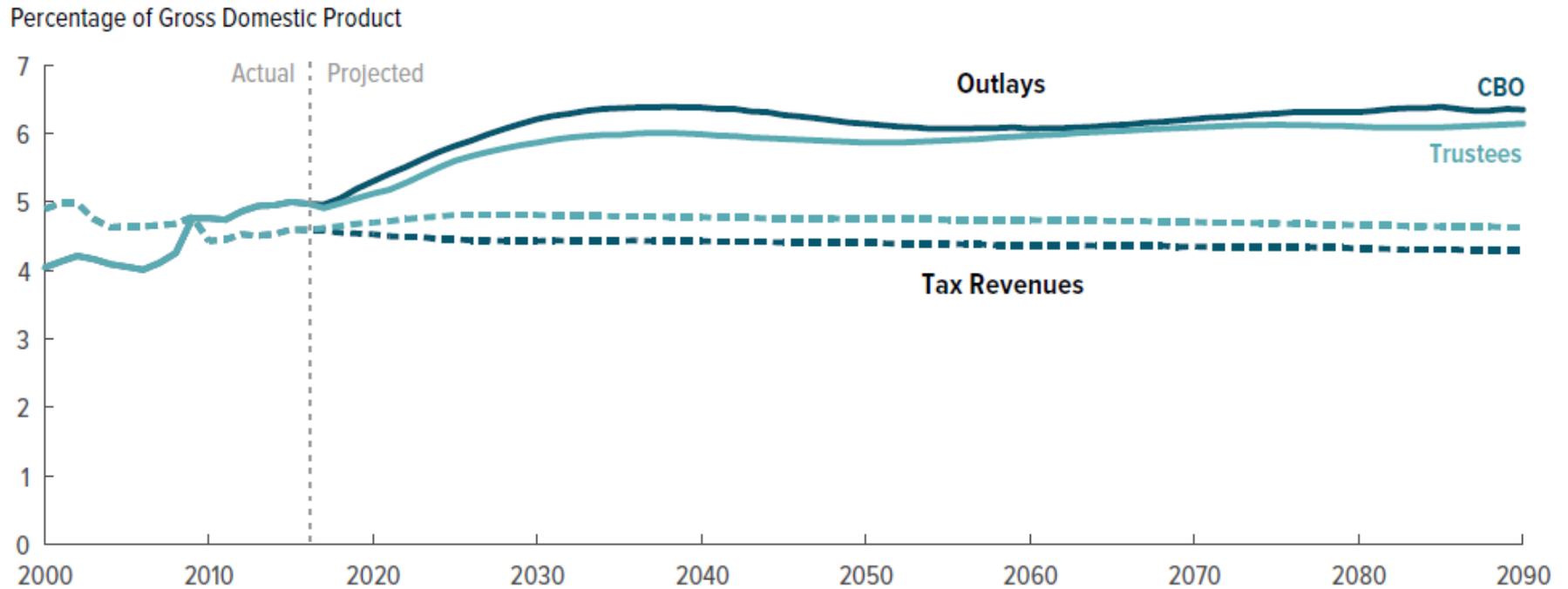
	As a Percentage of GDP		As a Percentage of Taxable Payroll	
	Percentage-Point Change	Difference Explained (Percent)	Percentage-Point Change	Difference Explained (Percent)
Earnings Subject to Social Security Taxes	0.14	23	0.72	36
Key Components of Nominal GDP Growth <sup>a</sup>	0.13	22	0.40	20
Demographics	0.09	15	0.28	14
Real Interest Rates	0.03	6	0.11	5
Other <sup>b</sup>	*	-1	-0.08	-4
Sum of all changes	0.39	65	1.43	71

- a. The key components of nominal GDP growth are the labor force participation rate, the unemployment rate, the rate of productivity growth, and the inflation rate.
- b. Other changes include the differences in estimated income taxes paid on Social Security benefits and the interactions among the four major inputs.

Like the actuarial balance, outlays and revenues as a percentage of GDP are useful measures of the system's finances.

Over the next 75 years, CBO projects, Social Security's outlays as a percentage of GDP will be higher, and revenues will be lower, than the Trustees project.

# Social Security Tax Revenues and Outlays



# Differences Between CBO's and the Social Security Trustees' Projections of Tax Revenues and Outlays in 2090

	As a Percentage of GDP		As a Percentage of Taxable Payroll	
	Tax Revenues	Outlays	Tax Revenues	Outlays
	<b>Published Projections</b>			
CBO	4.29	6.34	13.59	20.08
Trustees	4.63	6.14	13.33	17.68
Difference Between the Projections	0.34	-0.20	-0.26	-2.40
Percentage Difference Between the Projections	8	-3	-2	-12
	<b>Projections Using All of the Trustees' Major Inputs</b>			
CBO With Trustees' Major Inputs	4.62	6.42	13.31	18.50
Trustees' Projections	4.63	6.14	13.33	17.68
Difference Between the Projections	0.01	-0.28	0.02	-0.82
Percentage Difference Between the Projections	0	-4	0	-4

# Four Major Inputs That Affect Social Security Projections

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- Earnings subject to Social Security payroll taxes
- Key components of nominal GDP growth
- Demographics—fertility, mortality, and immigration
- Real interest rates

Differences Attributable to

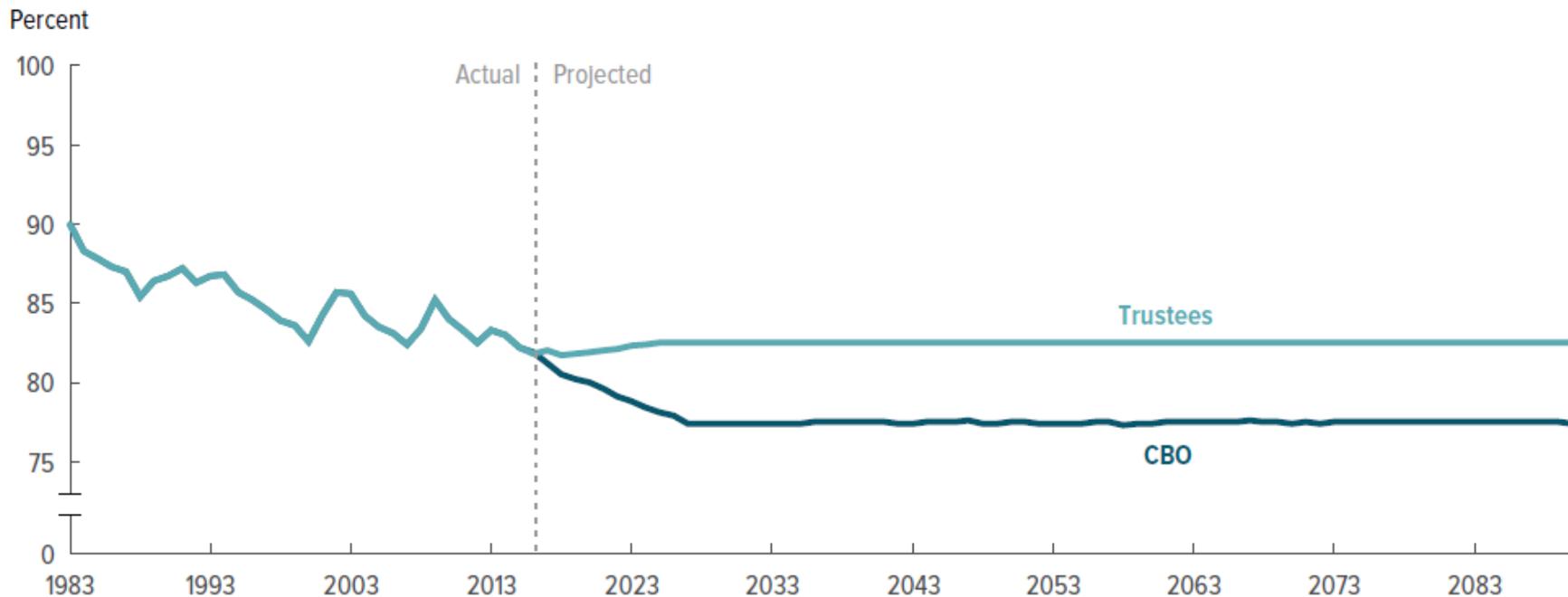
**Earnings Subject to**

**Social Security Payroll Taxes**

The amount of earnings subject to Social Security payroll taxes, as a percentage of GDP, depends largely on the share of total earnings that is at or below the taxable maximum, the share of total compensation that is paid as earnings, and total compensation as a share of GDP.

Differences in the projection of the amount of earnings subject to the payroll tax account for 23 percent of the difference between CBO's and the Trustees' projections of the 75-year actuarial balance.

# Share of Covered Earnings Below Social Security's Taxable Maximum

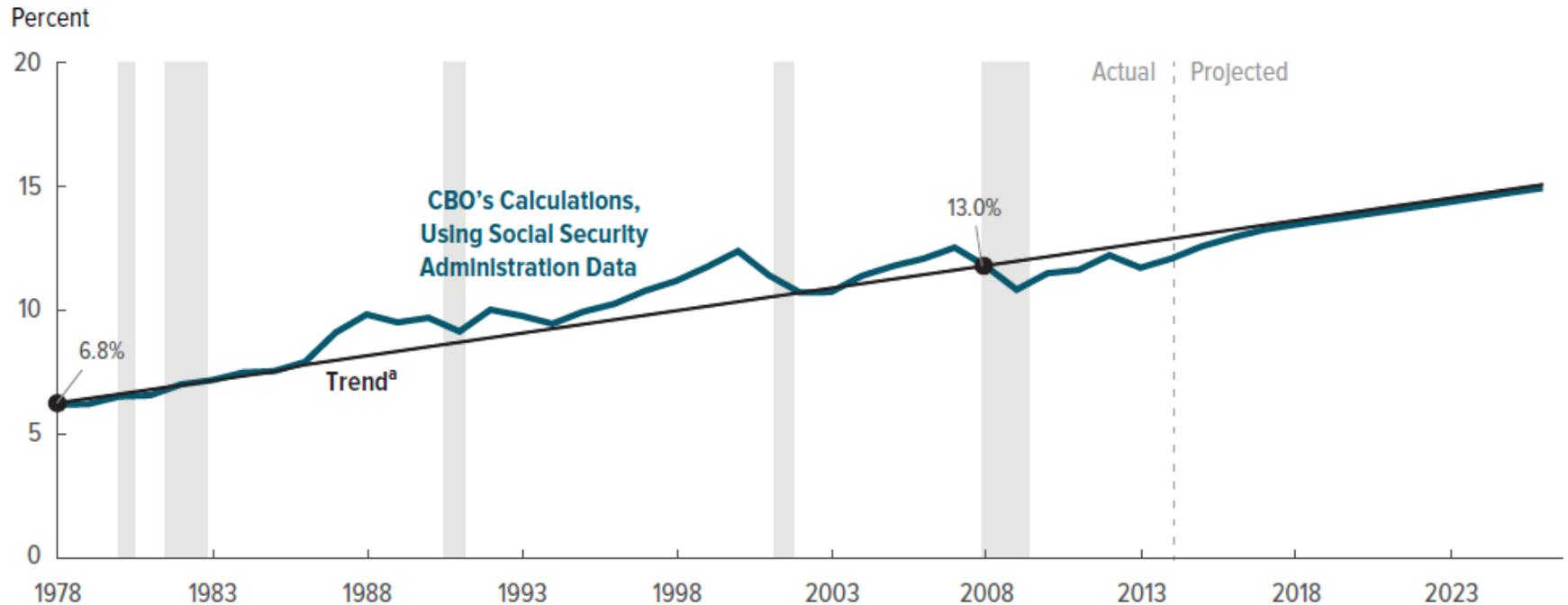


CBO's projections of the share of earnings below the maximum taxable amount (\$118,500 in 2016) are made on the basis of its projections of the entire distribution of compensation.

Those projections reflect an expectation that earnings will grow faster for higher-income people than for others during the next decade—as they have over the past several decades—and at similar rates thereafter.

(The projections underlie the agency's revenue projections.)

# Share of Wage and Salary Income Earned by the Top 1 Percent of Earners



Projections of earnings as a share of compensation reflect trends in the cost of health insurance and incorporate expected responses to future taxes on health insurance.

Projections of compensation as a share of GDP reflect the distribution of income among various categories, such as labor income and domestic economic profits.

(CBO revisits its projections as part of the development of each baseline forecast; the next revision will occur in January 2017.)

Differences Attributable to

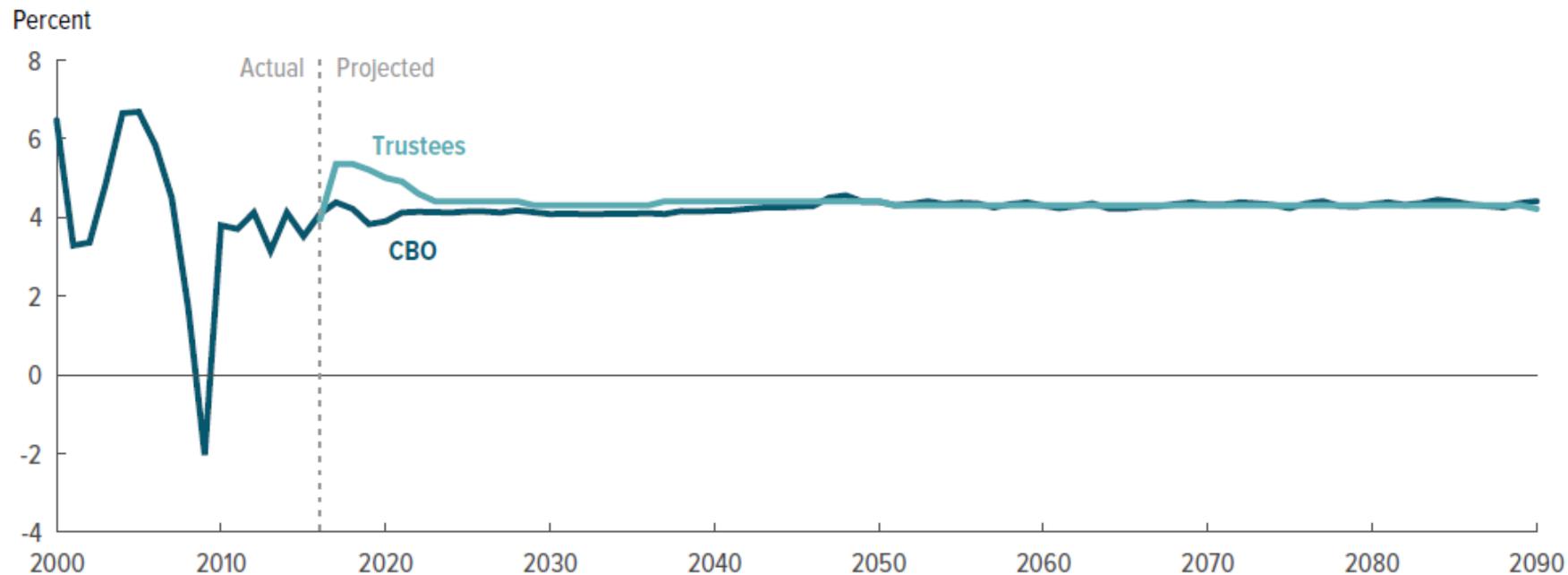
# **Key Components of Nominal GDP Growth**

The size of the economy affects Social Security revenues and spending. When nominal GDP is larger, Social Security receives more revenues initially, and then later—when beneficiaries retire—it pays higher benefits.

Larger nominal GDP improves the actuarial balance because earlier years receive greater weight in the calculation of that balance.

Differences in the projection of factors affecting nominal GDP account for 22 percent of the difference between CBO's and the Trustees' projections of the actuarial balance.

# Growth of Nominal GDP

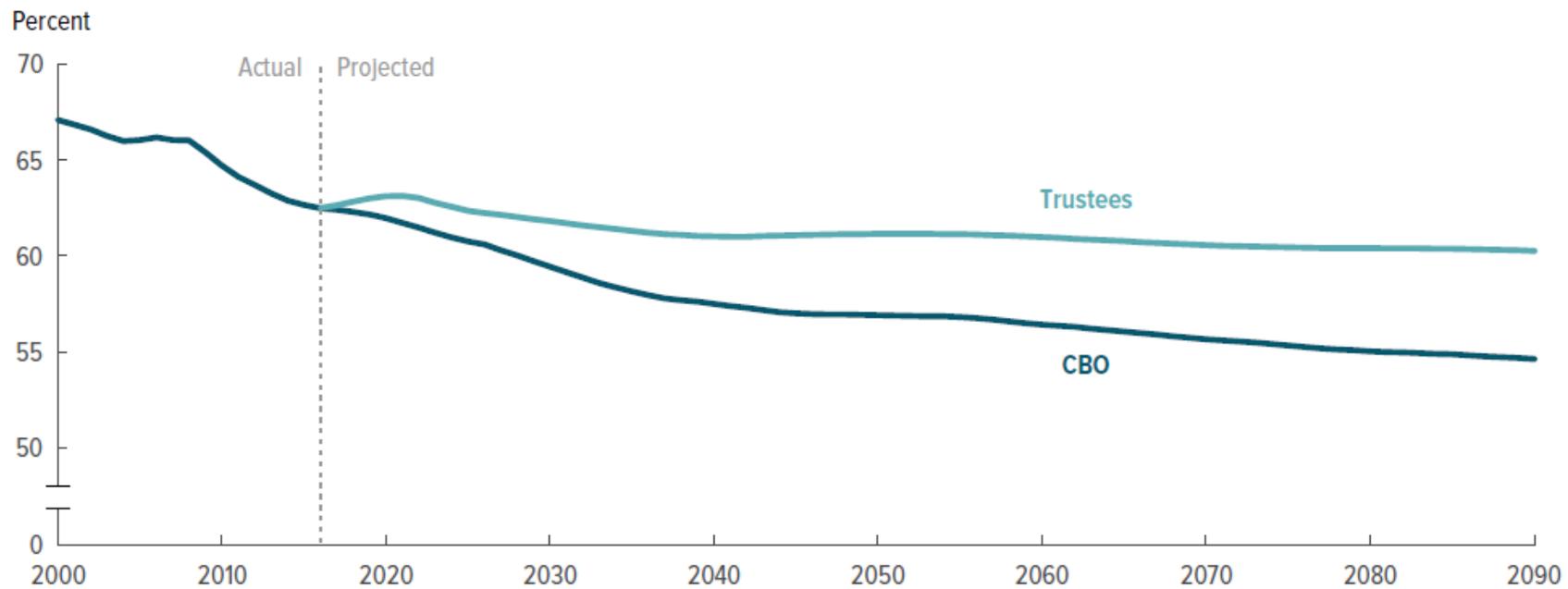


Four key components affect nominal GDP growth:

- Labor force participation rates
- Unemployment
- Productivity growth
- Inflation

The most important is labor force participation.

# Labor Force Participation Rate



## The Trustees' projection of GDP growth:

- Suggests stronger productivity growth than CBO's does through the mid-2040s.
- Shows faster growth in prices than CBO's does.

The Trustees also project that the unemployment rate will stabilize at a rate significantly above the current rate.

In contrast, CBO projects that it will stay roughly unchanged.

(This slightly offsets other factors that make the Trustees' projection of nominal GDP higher than CBO's.)

# Differences Attributable to

## **Demographics**

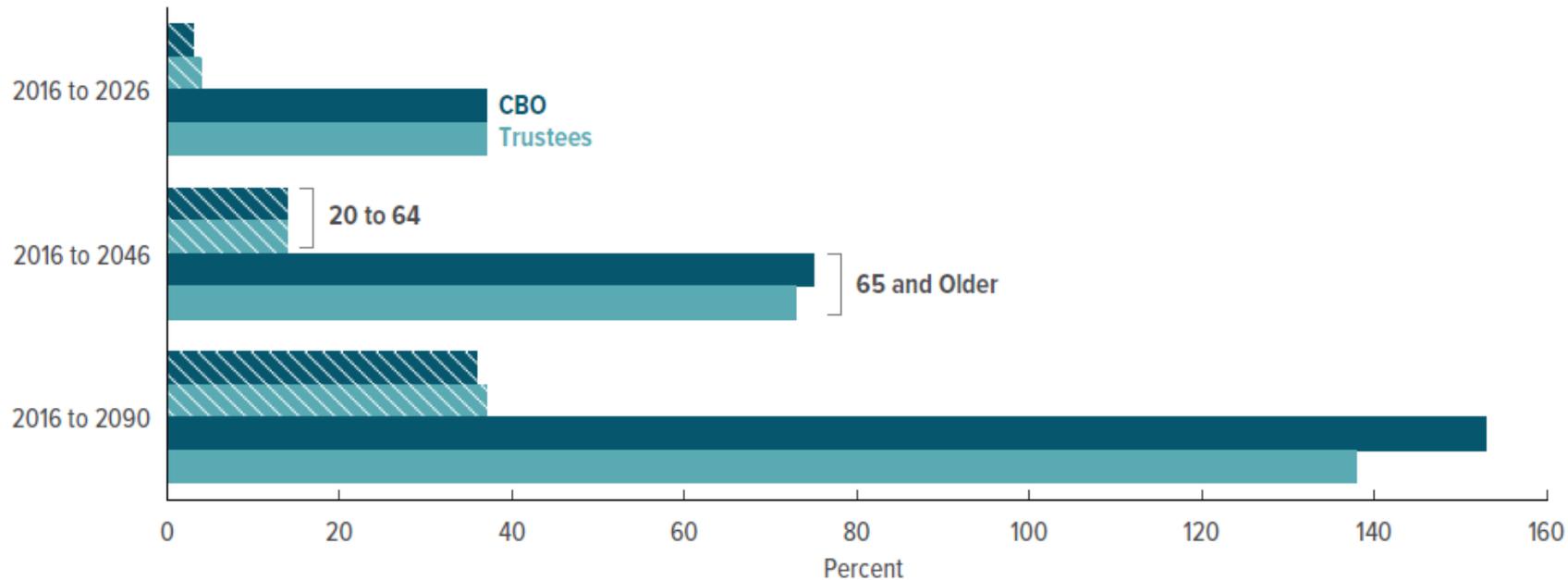
Demographics also affect Social Security projections.

The size of the labor force, which is related to the number of adults between the ages of 20 and 64, affects Social Security revenues.

Social Security outlays are closely linked to the size of the population age 65 or older.

Differences in demographics account for 15 percent of the difference between the Trustees' and CBO's projections of the 75-year actuarial balance.

# Increase in Population of Different Age Groups



These differences reflect different estimates of three factors: fertility, immigration, and mortality.

In the Trustees' projections:

- The total fertility rate is higher than in CBO's projections
- The net rate of immigration is lower
- The mortality rate declines slightly more slowly

Differences Attributable to

**Real Interest Rates**

Interest rates affect measures of the system's finances in two ways.

First, they determine interest on balances in the trust funds.

Second, in the calculation of the actuarial balance, they are used to compute present values of future cash flows. A higher interest rate improves the actuarial balance.

In the Trustees' projections, the average interest rate on special-issue bonds held in the trust fund is used as the discount rate. That rate is higher in the long run than CBO projects.

Differences in the projections of the interest rate account for 6 percent of the difference between the Trustees' and CBO's projections of the 75-year actuarial balance.

# Real Interest Rate Used to Calculate the 75-Year Actuarial Balance

