

CBO's Projection of the Distribution of Wage Earnings

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How Does CBO Use Its Projected Wage Earnings Distribution?

CBO uses its projection of the earnings distribution to help keep its various models, projections, and estimates consistent with one another.

Those models include:

- Individual tax model: income and payroll taxes;
- Social Security model: payroll taxes and benefit projections; and
- Health insurance simulation model (HISIM): premium tax credits, Medicaid, and employer-sponsored health insurance.

CBO's macroeconomic and population projections are also used throughout the agency to help keep models, projections, and estimates consistent.

How Does CBO Define Wage Earnings?

As defined by CBO, wage earnings equal the sum of federally taxable wages and employee-paid retirement contributions.

The Social Security Administration (SSA) calls this “net compensation” and reports detailed distributions for the prior year’s earnings every October.

Wage earnings exclude:

- Employee-paid premiums for employer-sponsored health insurance;
- Employee contributions for flexible spending accounts;
- Employer contributions to retirement accounts; and
- Employer-paid premiums for employer-sponsored health insurance.

Those types of income are generally not observed in W-2 data and are excluded from the federal income tax and payroll taxes.

SSA Net Compensation Data, 2022

Distribution of wage earners by level of net compensation

Net compensation interval	Wage earners			Net compensation	
	Number	Cumulative number	Percent of total	Aggregate amount	Average amount
\$0.01 — 4,999.99	17,719,251	17,719,251	10.30004	\$37,324,850,994.65	\$2,106.46
5,000.00 — 9,999.99	11,166,330	28,885,581	16.79092	82,544,092,946.05	7,392.23
10,000.00 — 14,999.99	9,688,022	38,573,603	22.42248	120,596,184,287.88	12,447.97
15,000.00 — 19,999.99	9,004,758	47,578,361	27.65686	157,305,695,217.81	17,469.18
20,000.00 — 24,999.99	8,731,938	56,310,299	32.73266	196,479,269,468.85	22,501.22
25,000.00 — 29,999.99	9,047,502	65,357,801	37.99189	248,853,191,103.09	27,505.18
30,000.00 — 34,999.99	9,607,391	74,965,192	43.57658	312,121,164,372.59	32,487.61
35,000.00 — 39,999.99	9,502,181	84,467,373	49.10011	356,089,106,765.35	37,474.46
40,000.00 — 44,999.99	8,867,642	93,335,015	54.25479	376,454,266,278.39	42,452.58
45,000.00 — 49,999.99	8,067,856	101,402,871	58.94456	382,877,319,987.20	47,457.13
50,000.00 — 54,999.99	7,385,606	108,788,477	63.23774	387,258,331,132.31	52,434.20
		⋮			
		⋮			
		⋮			
4,000,000.00 — 4,499,999.99	3,897	172,011,606	99.98877	16,512,310,946.97	4,237,185.26
4,500,000.00 — 4,999,999.99	2,909	172,014,515	99.99046	13,771,711,656.67	4,734,173.82
5,000,000.00 — 9,999,999.99	11,182	172,025,697	99.99696	75,777,854,352.40	6,776,771.09
10,000,000.00 — 19,999,999.99	3,712	172,029,409	99.99911	50,153,891,703.09	13,511,285.48
20,000,000.00 — 49,999,999.99	1,296	172,030,705	99.99987	37,199,621,603.27	28,703,411.73
50,000,000.00 and over	227	172,030,932	100.00000	22,674,775,199.17	99,888,877.53

CBO interpolates the shares of net compensation that accrue to various parts of the distribution assuming a Pareto distribution as described in Atkinson (2005).

SSA net compensation data can be found online at www.ssa.gov/oact/cola/netcomp.html.

A. B. Atkinson, "Top Incomes in the UK Over the 20th Century," *Journal of the Royal Statistical Society, Series A: Statistics in Society*, vol. 168, no. 2 (March 2005), pp. 325–343, <https://doi.org/10.1111/j.1467-985X.2005.00351.x>.

CBO's Projection of the Distribution of Wage Earnings

CBO projects earnings shares for three subgroups of the top decile of wage earners:

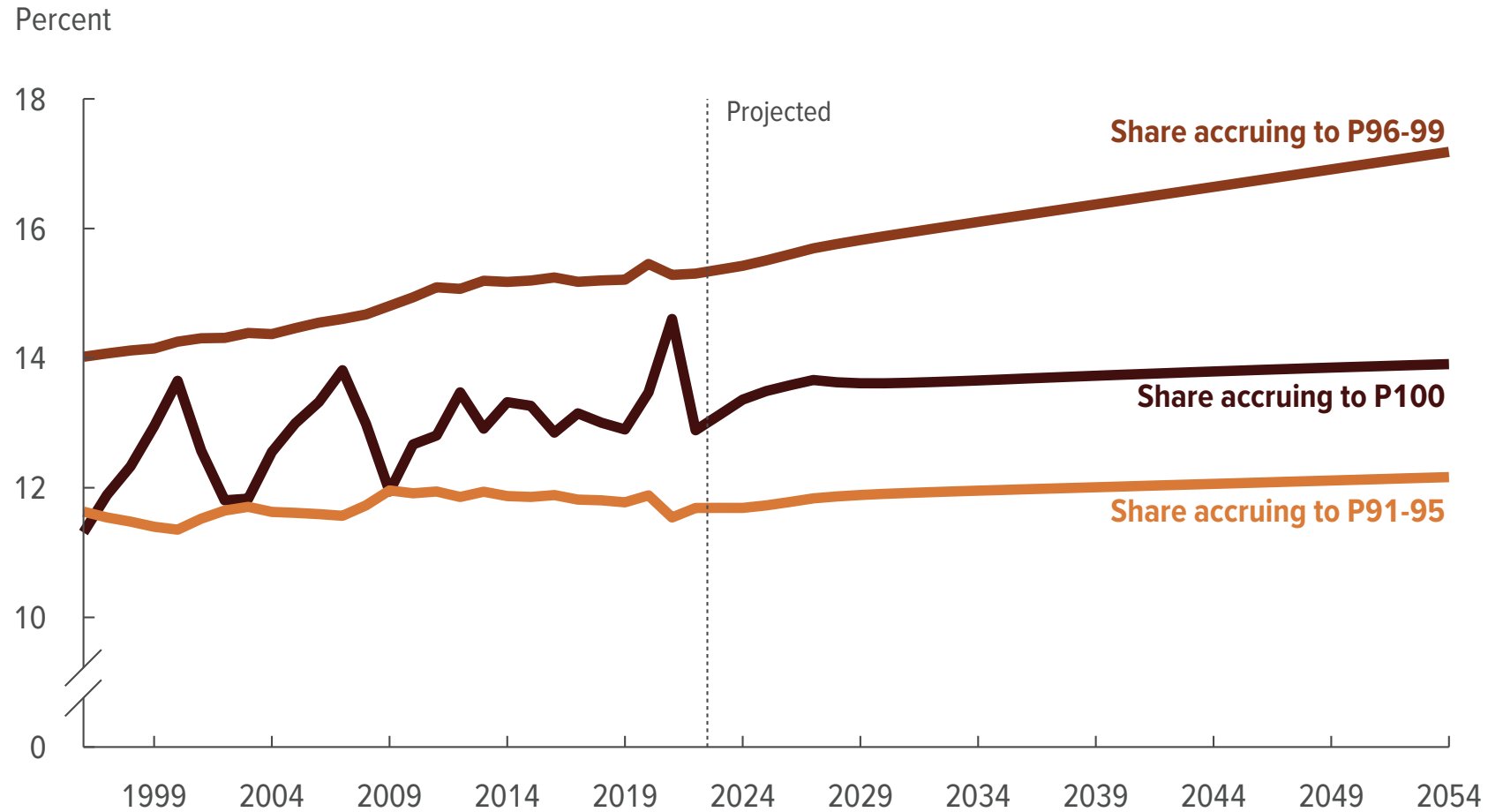
- The top percentile of earners (P100);
- The next four highest percentiles of earners (P96-99); and
- The remaining five percentiles of earners (P91-95).

CBO uses basic time series regression models that include a time trend and a measure of the GDP gap to control for cyclicalities in the economy.

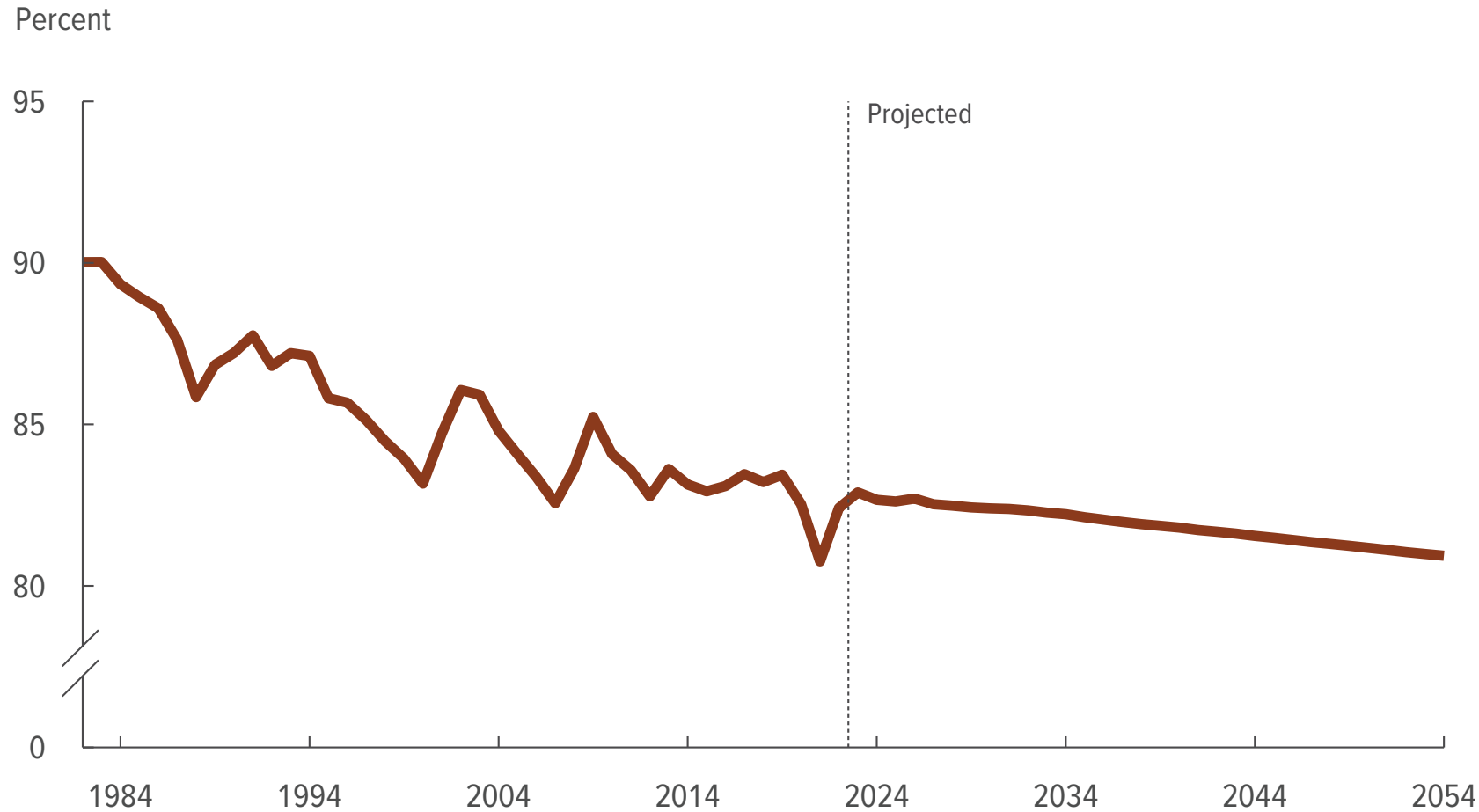
The share of wage earnings accruing to the bottom nine deciles is a residual. CBO holds the relative wage earnings shares for each of those deciles constant in its projections.



CBO's Projection of the Distribution of Wage Earnings, Spring 2024



CBO's Projection of the Social Security Taxable Ratio, Spring 2024



The Social Security taxable ratio is the share of work-related earnings that are subject to Social Security taxes and are below the Social Security taxable maximum.