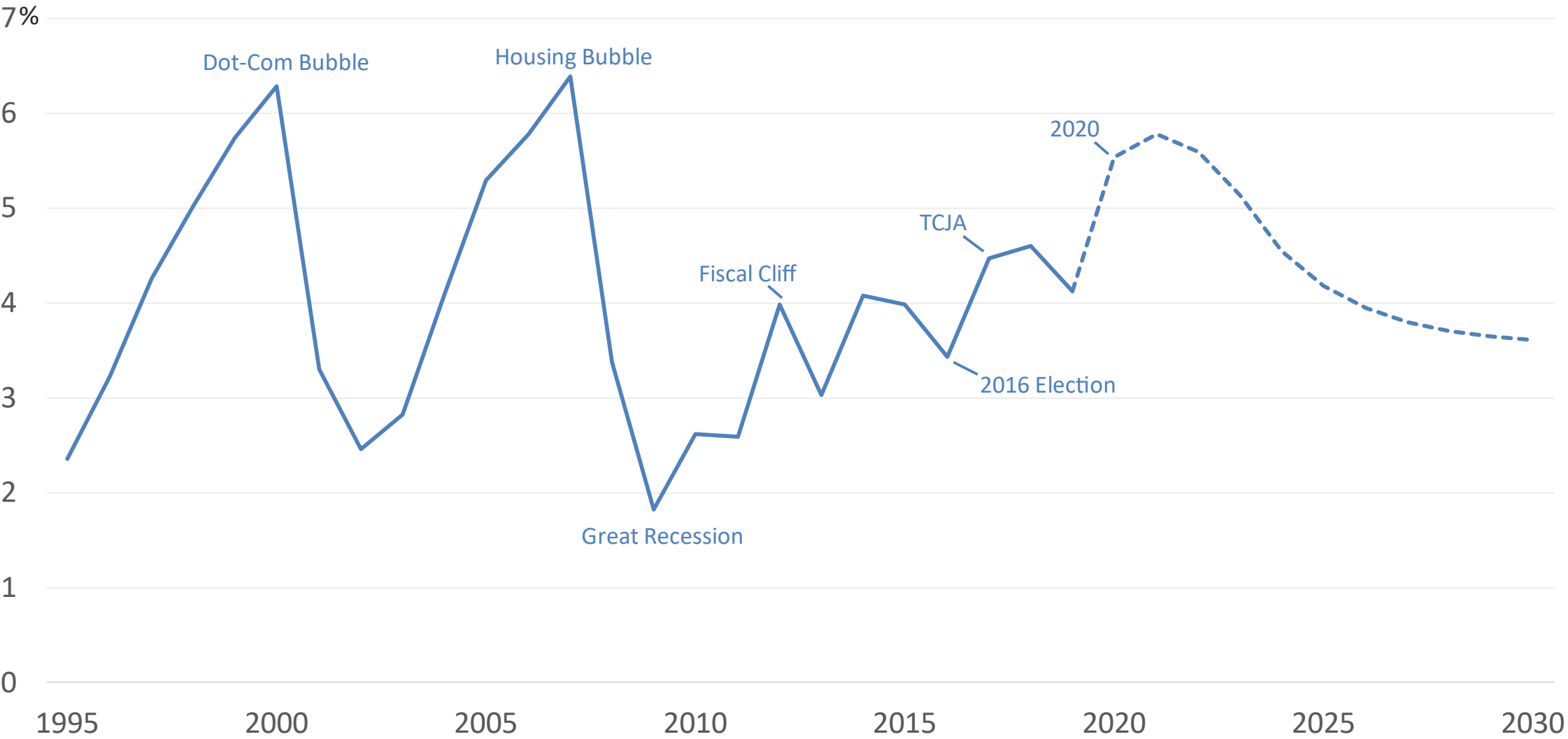


Back-Casting and Forecasting Capital Gains Realizations

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Capital Gains Realizations Have Been Extremely Volatile Over the Past 25 Years

Realizations as a Share of GDP, Actual and CBO Projections



Source: Congressional Budget Office

Revenue and Budget Context

Question	Maine	Montana	New York City	North Carolina	Washington, D.C.
Size of annual General Fund budget (FY22)	\$4.1 billion	\$2.6 billion	N/A	\$26.0 billion	\$10.5 billion
General Fund Revenue (FY22)	\$5.4 billion	\$3.9 billion	\$68.7 billion	\$33.2 billion	\$10.3 billion
Individual Income Tax Revenues (FY22)	\$2.6 billion	\$2.4 billion	\$16.7 billion	\$17.6 billion	\$3.1 billion
YOY Change Individual Income Tax Revenues (FY21 & FY22)	12.7% (FY21) 24.7% (FY22)	23% (FY 21) 35.6% (FY 22)	11.4% (FY 21) 10.6% (FY 22)	27% (FY 21) 11% (FY 22)	11.2% (FY 21) 16.4% (FY 22)
Capital Gains Share of AGI (TY 2019)	5.6%	8.6% (TY 19) 9.8% (TY 20)	11.4%	5.7%	9%

Forecasting Capital Gains

Question	Maine	Montana	New York City	North Carolina	Washington, D.C.
Why forecast capital gains?	Source of income in microsimulation model. Volatile source of income	Currently forecast 10 sources of income CG receives a Preferential Rate (2% Credit) Volatile source of PIT	We forecast most non-wage income types. Apply an ETR directly to the total of these incomes	Input into some forecasting models for non-withholding individual income tax	Capital gains realizations makes up the most volatile component of individual income tax because of progressive rate structure
Forecast national or state/city capital gains?	State	State	Local Only	Both	State (DC)
Forecast methods	Use CBO forecast, estimated payments, YTD S&P 500, conversations with financial advisors and accountants, and tax policy considerations to forecast current tax year. Assume CG/PI will revert back to long-term average.	Currently: LS: CG Inc=-1 yr. S&P Chg., Proprietors' Inc, & Median Home value Exploring: LS Log-Log PIT= MT PI & 3 yr. S&P Chg.	Log-log equation with S&P, NYC Large Commercial, and rate change variables	ARIMAX models with 1-year S&P change, rate changes, and stock buybacks	Forecast is for "nonwithholding" and not specifically cg. Simple regression using sp500 and dummies for federal law changes Benchmark with CBO forecast of capital gains
Data Sources	latest IMF/IRTF from IRS, IRS SOI data, EFILE returns	Prior year Tax filings and S&P Global. Losing Prior Year tax detail after TY 23	1) Value of large commercial real estate transactions in NYC 2) S&P Global/IHS Markit	IRS Statistics of Income S&P Global (Buybacks)	SPGlobal/Moodys, tax return data, CBO

Past and Future Estimates of Capital Gains Realizations

Question	Maine	Montana	New York City	North Carolina	Washington, D.C.
Historical Range of Annual Realizations Change (years)	+61% to -59% (TY 2012 and TY 2008)	+51% to -37% (TY 2004 and TY 2001)	+76% to -40% (TY 2004 and TY 2009)	+62% to -51% (TY 2012 and TY 2009)	+60% to -60%
Tax Year 2020 Change	40.0% (Est. 3/22)	16% (actual)	37% (actual)	+2% to +9% (est.)	-23%
Tax Year 2021 Change	39.5% (Est. 3/22)	11.8% (Mar 21)	54% (Implied)	+55% to +74%	39%
Tax Year 2022 Change	-33.8% (Est. 3/22)	3.8% (Mar 21)	-45% (April 22)	-27% to -15%	-20%
Tax Year 2023 Change	2.0% (Est. 3/22)	0.9% (Mar 21)	-26% (April 22)	-15% to -9%	0

Challenges Forecasting Capital Gains Realizations

Question	Maine	Montana	New York City	North Carolina	Washington, D.C.
Challenge #1	Discretionary source of income that's not part of Personal Income forecast	Modeling complex behavior (w/necessarily simpler models)	Payment timing/taxpayer behavior	Data lags	Data lags
Challenge #2	Taxpayer behavior sensitive to federal and state tax changes	Federal tax changes (retroactive?) induce taxpayer changes in timing and source of income (if possible)	Market Volatility and Global Shocks	Unpredictable taxpayer behavior	Timing of realizations Extension payments lack detail
Challenge #3	Data lags	State change in starting point (AGI to FTI) / loss of most current data / Offsetting forecast errors	Disagreement with forecasts for underlying variables	General modeling uncertainty	Buildings/real estate/business sales
Challenge #4	Limit exposure to significant declines	Using MicroSim model to forecast(fiscal notes)	Desire for a conservative, consistent forecast	Pandemic-era modeling uncertainty	Federal tax uncertainty