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State and local government - US

Reliance on top earners exposes states and downstream entities to revenue volatility

The high-income states of California (Aa3 positive), Connecticut (A1 stable), New Jersey (A3 stable) and New York (Aa1 stable) rely heavily on tax revenue from their biggest earners to fund services. Such earners make up between 1% and 3% of these states' taxpayers but account for more than 40% of personal income taxes. This dependence exposes the states to the volatility in high earners' income, particularly as tax increases enacted since the 2007-09 recession have fallen predominantly on the top earners. If large revenue declines occur, states have broad powers to balance their budgets, including the ability to make spending cuts that may pass revenue vulnerability downstream to municipalities, school districts, and public colleges and universities.

» **California, Connecticut, New Jersey and New York are high-income states that rely heavily on their biggest earners.** Each has a very progressive income tax structure that results in a very large share of revenue coming from a small minority of the population. These states' budgets have also become more reliant, to varying degrees, on personal income taxes since the last recession.

» **These states are heavily exposed to their high earners' income volatility.** The relationship between high tax base concentration and past revenue volatility is clear for some states. All four states have raised taxes on their highest earners over the past several years. Rising incomes of these high earners over the past several years has benefited state budgets, but inevitable wide swings in these taxpayers' incomes will likely drive much higher revenue volatility going forward. Raising taxes again to counteract new budget pressure may be difficult, especially in the wake of the 2017 federal tax law changes.

» **States have tools to counteract revenue declines, including cuts to downstream entities.** Budget reserves, especially the larger buffers built up in California and Connecticut, are available to bridge a period of revenue loss. States also have flexibility to share budget strain with lower levels of government by reducing state funding. This ultimately exposes municipalities, school districts, and other public entities to the revenue vulnerabilities of their states.

California, Connecticut, New Jersey and New York are high-income states that rely heavily on their biggest earners

California, Connecticut, New Jersey and New York are four of the highest-income states in the US, ranking 6th, 1st, 4th and 3rd, respectively, in per capita income as of 2017 (see Exhibit 1). They rank similarly in the share of taxpayers earning more than $500,000, though California is 5th on this measure (see Exhibit 2).

Exhibit 1

California, Connecticut, New Jersey and New York are four of the highest-income states in the US...

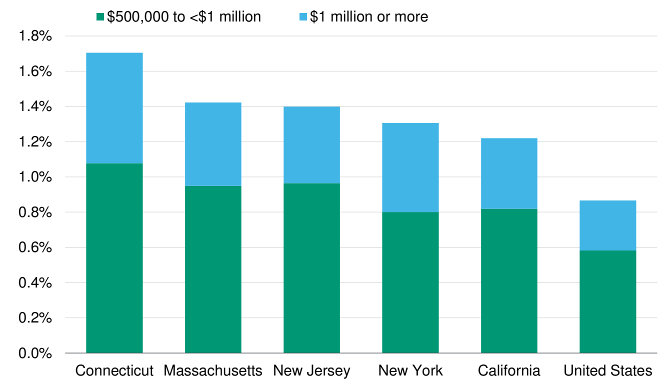
State	Per capita income	State	Per capita income
Connecticut	$71,823	Virginia	$55,105
Massachusetts	$67,630	Colorado	$54,646
New York	$64,540	Minnesota	$54,359
New Jersey	$64,537	Illinois	$54,203
Maryland	$60,847	Pennsylvania	$53,300
California	$59,796	Hawaii	$52,787
New Hampshire	$59,668	Rhode Island	$52,786
Washington	$57,896	North Dakota	$52,269
Wyoming	$57,346	Vermont	$52,225
Alaska	$57,179	Nebraska	$50,809

Source: US Bureau of Economic Analysis

Exhibit 2

...and they are also home to relatively large populations of very high income earners

Share of state taxpayers with noted reported adjusted gross income



Source: US Internal Revenue Service

The four states lean heavily on their high-income populations to fund their services. Personal income taxes have always made up a significant share of these states' general fund revenue, but that share is higher now than it was before the 2007-09 recession, most notably in California (see Exhibit 3). This increase has been driven by a combination of economic and income growth and tax rate increases enacted by the states.

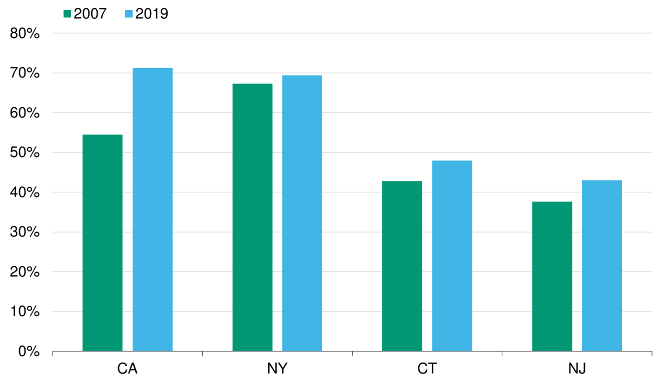
In each of these states, residents reporting more than $500,000 of income typically account for more than 40% of the states' own personal income taxes (see Exhibit 4). The share of taxpayers earning more than $500,000 ranges from 1.2% in California to 2.8% in New York, which includes residents of Connecticut and New Jersey that work in and pay income taxes to New York.

These states' income tax bases are much more concentrated than other states, even those that have greater dependence on income taxes. For example, the State of Oregon's (Aa1 stable) income taxes typically make up 85% or more of annual general fund revenue, the highest ratio of all 50 states. However, a smaller 0.6% of Oregon's taxpayers earn more than $500,000, and that group accounts for a much more modest 18% of the state's annual personal income taxes. Maryland (Aaa stable), another high-income state with a progressive income tax, also carries a much smaller dependence on its highest earners to fund state services.

Exhibit 3

Personal income taxes are growing as a share of each state's budget...

Share of general fund revenue consisting of personal income taxes

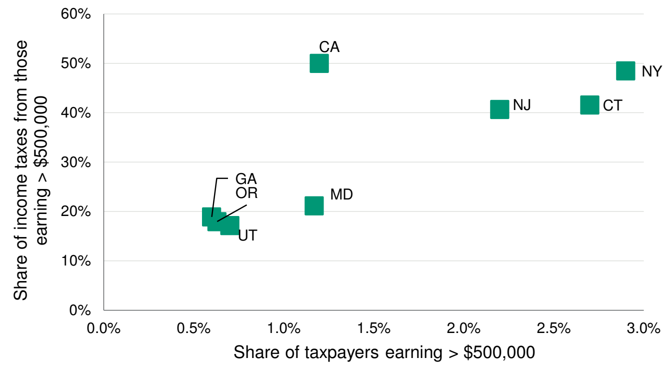


Source: National Association of State Budget Officers' Annual Fiscal Survey of the States

Exhibit 4

...and very large shares of personal income taxes come from these states' small populations of very high income earners

Share of taxpayers earning more than $500,000 vs. the share of state income taxes from these taxpayers



Source: State CAFRs and New York State Department of Taxation and Finance

These states are heavily exposed to volatility in the income of their high earners

Dependence on high income taxpayers to fund state government exposes these four states to swings in the income of their highest earners. This can, in turn, drive volatility in taxes levied on that income and in state revenue in general.

Among a sample of states with high dependence on income taxes, California stands out with regard to volatility in both personal income taxes and general fund revenue (see Exhibit 5). The connection between revenue volatility and income tax base concentration is less pronounced in Connecticut, New Jersey and New York. In Connecticut and New Jersey, this likely follows from a lower reliance on income taxes to fund state government, while in New York the lower volatility in large part reflects the fact that the state increased its income tax rate just before the effect of the 2007-09 recession was felt. New York's fiscal year starts earlier than other states (April 1) and it enacted its rate increase in time to see only a 5.7% decline in income taxes in its fiscal 2010.

Exhibit 5

California exhibits the greatest volatility in income taxes and total general fund revenue among a sample of states

State	Income tax share of general fund revenue	Standard deviation of annual change in personal income taxes, 1999-2018	Largest peak-to-trough decline in personal income taxes, 2007-09 recession	Standard deviation of annual change in total general fund revenue, 1999-2018
California	71%	11.9%	-19.9%	9.0%
New Jersey	43%	9.8%	-18.1%	5.8%
Colorado	65%	9.6%	-17.9%	7.5%
Connecticut	48%	9.1%	-15.0%	5.9%
Utah	58%	8.6%	-19.4%	7.4%
Oregon	88%	8.2%	-11.7%	8.1%
Virginia	68%	8.2%	-10.2%	6.3%
New York	69%	8.2%	-5.7%	5.0%
Arkansas	60%	8.1%	-10.8%	2.8%
Georgia	49%	7.9%	-20.5%	6.6%
Iowa	65%	7.7%	-15.3%	4.1%
Missouri	70%	6.9%	-14.9%	6.6%
Maryland	56%	5.5%	-11.0%	4.2%

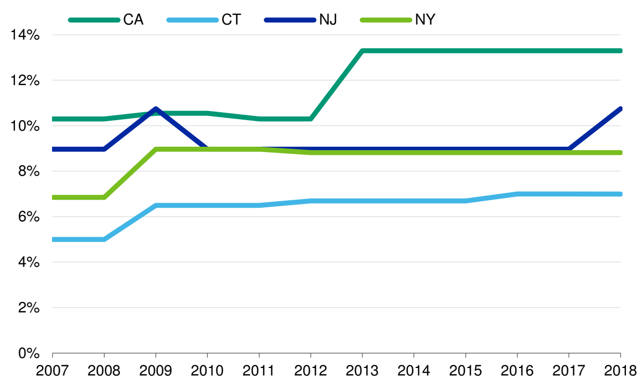
Source: Moody's analysis of data of the National Association of State Budget Officers' Annual Fiscal Survey of the States

Going forward, however, tax increases enacted by these states could increase revenue volatility because they fall predominantly on the highest-income taxpayers, whose earnings tend to be volatile. Since 2007, California, Connecticut, New Jersey and New York amended their personal income tax brackets and increased their top marginal tax rate (see Exhibit 6). New Jersey increased its tax rates for tax year 2009, but, as enacted, the tax rates reverted to their prior level for tax year 2010. More recently, the state enacted a 10.75% tax on income over $5 million for 2018. With the exceptions of Maryland and Oregon, the other states in Exhibit 5 either kept their top tax rate flat or reduced it. Colorado is the only state in Exhibit 5 with a flat personal income tax and it made no change to that rate since 2007.

Exhibit 6

These four states raised their top marginal income tax rates since the 2007-09 recession...

Top marginal personal income tax rate by state by year

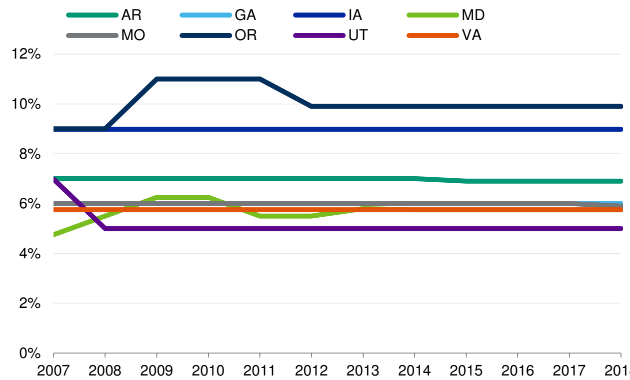


Source: Tax Policy Center

Exhibit 7

...while several other states made no change or even reduced taxes

Top marginal state income tax rate by state by year



Source: Tax Policy Center

Exhibit 8 below compares estimated state income tax burdens in tax year 2007 and tax year 2018 across four levels of taxable income in California, Connecticut, New Jersey and New York. Since 2007, these four states increased the tax burden on their highest earners, who, again, account for a very large share of their annual income tax revenue. New Jersey differs from the three other states in that its recent tax increase applies only to very high incomes. With the exception of the new tax on income over $5 million, its personal income tax brackets in 2018 were identical to those in place in 2007, although the governor is proposing more changes applicable to high earners in the 2020 budget.

Exhibit 8

Tax changes in California, Connecticut, New Jersey and New York significantly increased the burden on very high income earners since the last recession

Estimated change in state income tax liability in 2018 vs. 2007 by level of taxable income

Taxable income	$200,000	$1,000,000	$5,000,000	$10,000,000
California	-8%	7%	25%	27%
Connecticut	9%	39%	40%	40%
New Jersey	0%	0%	0%	10%
New York	-5%	0%	29%	29%

The figures above were estimated by applying each state's taxable income rate schedule (married, filing jointly) to the four levels of taxable income. With regard to New York, the calculations assume taxable income is equal to adjusted gross income.

Source: States' taxable income rate schedules

Greater volatility in these residents' incomes will likely lead to more volatility in state revenue than it has in the past - and there is plenty of income volatility among the country's highest earners. From 1997 to 2016, the standard deviation in the annual change in total adjusted gross income (AGI) among those earning $1 million or more across the US is more than twice the same measure among those earning between $500,000 and $1 million (see Exhibit 9). It is more than three times the standard deviation of those earning between $200,000 and $500,000.

Exhibit 9

The volatility in income of very high earners can be substantial

Select statistics of the aggregate AGI earned by those in the noted income class

Income class	Standard deviation of annual change in total income class AGI, 1997-2016	Peak-to-trough change in total income class AGI, 2001 recession	Peak-to-trough change in total income class AGI, 2007-09 recession
$1 million and above	24.4%	-41.8%	-48.1%
$500,000 - $1 million	11.2%	-15.6%	-24.8%
$200,000 - $500,000	8.0%	-10.6%	-9.9%
$100,000 - $200,000	5.1%	-0.4%	-2.4%
$50,000 - $100,000	2.5%	N/A	-3.2%
Under $50,000	1.5%	-1.8%	-6.3%

Statistics are based on aggregate annual AGI within the noted income class.
Source: Moody's analysis of US Internal Revenue Service data

This period includes many years of significant growth in the AGI of the highest earners, which substantially benefited the states with high income taxes. However, there were also large declines in aggregate AGI among this class of high-income earners during the two recessions that occurred in the previous decade. A similar decline in income at a time when income taxes on the highest earners make up a larger share of these states' total revenue could present California, Connecticut, New Jersey and New York with new budgetary pressure.

The tax increases enacted by California, Connecticut, New Jersey and New York after 2009 may make it more difficult to raise taxes again if these states face revenue declines. With the 2017 federal tax law change severely limiting state and local tax deductions, the post-2009 tax increases are already more expensive from a taxpayer's point of view than when they were enacted. The limitation on deducting state and local taxes could heavily temper both resident and political appetite for future state tax increases.

States have tools to counteract revenue declines, including cuts to downstream entities

Although California, Connecticut, New Jersey and New York now face even greater revenue volatility risk, as states they retain substantial tools to address a drop in revenue. The first place to look during a revenue downturn is a state's own budget reserves.

Over the past several years, California and Connecticut have built up strong reserves that will enhance their ability to weather a moderate economic recession. Both states anticipate closing the current fiscal 2019 with budget reserves of at least 10% of revenue, if not more. This is in large part due to strong growth in income taxes. Connecticut's reserves were built as a result of a formal “revenue volatility cap,” which mitigates some of the impacts of income volatility on the general fund by siphoning peaks in income tax revenue into its rainy day fund. New Jersey's reserve position has remained low since the last recession because of rapidly growing pension contributions. At 2.7% of revenue in fiscal 2018, New Jersey's reserves provide minimal cushion against future budget shocks. New York's formal reserves are also low, estimated at about 2% of revenue, though the state typically builds up reserves in other funds that can be freed up to support the general fund.

States also have a high degree of flexibility to cut spending. A large revenue loss that is not covered in its entirety by state reserves could effectively be passed to lower levels of government. Most state spending tends to fall into the areas of education and healthcare, and most states either cut spending in these areas or kept such spending from growing when revenue fell after the 2007-09 recession. This exposes those functions and other governments, such as school districts and public colleges and universities, to state revenue vulnerability. And if California, Connecticut, New Jersey and New York now face greater revenue volatility, their local governments that depend on state aid do so as well.

The states' shares of total K-12 spending range from 40% in Connecticut to almost 60% in California.[1] Both Connecticut and New Jersey fund 100% of the annual costs of their state teachers' pension plans. Cuts in general education funding or a shift in the pension funding burden from the state to school districts could help these states address budget gaps.

Still, cutting education or healthcare spending could be politically difficult. States have been under growing pressure in recent years to increase school funding. In some states, there have been widespread teacher strikes as part of an effort to increase teacher compensation. New cuts to education funding may be difficult and, if enacted, could present school districts with significant fiscal stress.

Likewise, cutting healthcare or other public welfare spending could face political obstacles. California and New York rank 4th and 2nd, respectively, in the share of state population enrolled in Medicaid. In New York, nearly 33% of residents are enrolled. The ratio in California is 31%, whereas, across the US, 23% of the population is enrolled in Medicaid. This puts big demands on these states' budgets, which can turn into a cost-cutting option should state revenue falter, but only at the expense of scaling back support for vulnerable populations or entities that serve them, such as public hospitals.

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Endnotes

1 Source: US Census Bureau.

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