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Shortfalls on States' April Tax Returns: Trump Effect, Weak Economy, or Both?

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April income tax returns brought bad news for state budgets. Payments with tax returns usually arrive in April and early May, and often they are surprising. By mid-to-late May, states know whether those payments were surprisingly good or surprisingly bad. The news often comes as states are finalizing the budget for the new fiscal year, complicating this already challenging task.[1]

To learn how states did this year, we collected data from forty-one states with broad-based income taxes.[2] This April, total state income tax revenue was down 4 percent compared to the previous year, driven by declines of 7.3 percent in final returns and 4.3 percent in estimated payments, more than offsetting 5.3 percent growth in withholding tax collections. April income tax revenue fell in twenty-four of forty-one states for which we have data. The declines were largest in the New England and Mid-Atlantic states, followed by Southern states. April revenue was up in the Great Lakes and Rocky Mountain states.

Although many states had forecasted declines in April and May, they were worse than expected. Nineteen out of twenty-one states that publish monthly cash flow forecasts fell short in April and May.[3] The median shortfall was 6.4 percent in the months of April and May. Many states that do not publish their monthly cash flows probably also fell short.

Forecasters are working to learn why tax revenue fell short, and what it means for the future. Fortunately, the revenue declines and shortfalls were not as large as some states have witnessed in recent years.

An April shortfall generally means that taxable income in the prior tax year, which is only an estimate at this point, was lower than estimated. This overestimation could occur in two ways: (1) taxable income may have diverged from economic measures of income in ways that aren't reflected in published data; or (2) the underlying economy in the prior year may have been weaker than preliminary data suggested.

We believe the first explanation — taxable income diverged from economic measures of income — is at least partly to blame. Taxpayers probably shifted taxable income out of 2016 into 2017 or beyond in the hope of benefiting from promised federal tax cuts — a "Trump Effect." Taxpayers may have shifted capital gains on stocks, which are relatively easy to defer and are not included in economic measures of income.[4] They may also have shifted other income, such as interest, dividends, and IRA distributions, albeit to a lesser extent. Some states anticipated these moves, revising their forecasts downward to project declines in estimated and final payments. Even so, actual personal income tax (PIT) revenue collections in April were significantly below state forecasts. To the extent that a Trump Effect was the cause, states may see strong revenue growth next April from this year's depressed April, if income shifted out of 2016 is taxed on 2017 returns.

The second explanation — a weaker-than-estimated economy — also could play a role. If preliminary economic statistics for 2016, which at this point in the federal government's reporting are based on partial data, overstated last year's income, then

revenue forecasters may have expected stronger final returns than perfect data would have warranted. Economic data are revised, sometimes substantially, as new data become available. If some of last year's income growth is revised away, economic forecasters may revise their assessment of current economic conditions downward and lower their expectations for growth over the year ahead. In this case, the implication for revenue forecasters could be the opposite of the Trump Effect: slower growth ahead, rather than a bump in next April's tax returns.

The Trump Effect or a weak economy may be to blame, or both could be at work at the same time. Data released in coming months will begin to unravel the mystery, but it could be a year or more before forecasters really understand what happened and why. Until then, we and state revenue forecasters will have little hard data to go on.

We begin with the gloomy news, and then discuss possible causes and implications.

April's Gloom

April windfalls and shortfalls in estimated and final payments are not uncommon. A single event can move like a wave through several year's budgets until it subsides. For example, in 2012 Congress raised top federal income tax rates for 2013 as part of "fiscal cliff" negotiations.[5] Taxpayers reacted, accelerating income into 2012 to avoid the coming higher tax rates. April 2013 payments with income tax returns for 2012 were much higher than they otherwise would have been, and higher than states expected, forming the peak of the wave. A year later, in April 2014 payments for tax year 2013 were depressed because income had been shifted out of 2013, and they were especially low in comparison to the April 2013 peak — April 2014 was the trough of the wave. April 2015 income tax collections were then relatively strong in comparison to the artificially depressed April 2014. A single congressional action in 2012 reverberated through state finances over three fiscal years.

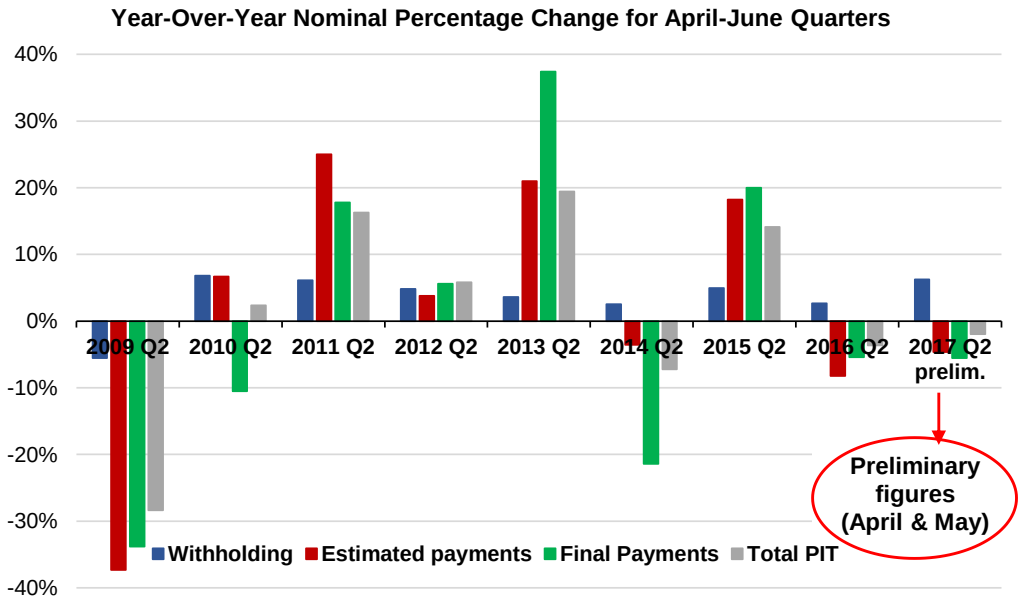
To obtain early information on personal income tax revenues for this year's tax filing season, the Rockefeller Institute collected statistics for April and May from forty-one states with broad-based income taxes. The data cover income tax withholding, final returns, declarations of estimated taxes, and refunds. April and May are critical months for personal income tax receipts as individual income tax returns are due and most income tax refunds are processed in these two months.[6] For the nation as a whole, final returns account for 45 percent of total income collections in April, 10 to 15 percent in May, but only about 3 percent for the rest of the year (outside of income tax season). The figures for April and May in any single state should be viewed cautiously as the picture can be distorted due to factors such as changes in processing times from one year to another.

Figure 1 shows that declines in personal income tax collections with returns filed with April returns this year were not as large as in some recent years. It also shows the volatility of estimated and final payments across all the years. In the 2009 quarter, for example, total income tax collections declined steeply by 28.4 percent driven by declines of 37.3 and 33.8 percent in estimated and final payments, respectively, reflecting the impact of the Great Recession on 2008 income. The strong 19.4 percent income tax growth in April-June 2013 was the start of the federal "fiscal cliff" cycle

mentioned above, as taxpayers accelerated income into 2012.[7] It was followed by a 7.2 percent decline in personal income tax collections for the April-June 2014 quarter, which was the near mirror-image effect of the federal fiscal cliff. This year's decline has been surprising in light of the economic growth and strong stock market in 2016, but as Figure 1 shows, it is much smaller than some recent swings in April tax returns.

Withholding tax collections have been much less volatile. The largest decline in withholding in the last nine years was 5.6 percent in April-June of 2009, and the greatest growth was 6.8 percent in April-June of 2010.

Figure 1. April-June Income Tax Collections Are Volatile



Source: Individual state data, analysis by the Rockefeller Institute.

Notes: For 2017, we use growth rates for April and May combined as an estimate for the quarter.

The April 2016 to April 2017 declines were widespread, as Figure 2 shows. Personal income tax revenues fell in all regions but the Great Lakes and Rocky Mountain in April 2017 compared to April 2016. In the Great Lakes region, the growth in Illinois income tax collections is mostly attributable to reclassification of taxes on pass-through entities as personal rather than corporate income taxes (CIT). We are talking to other Great Lakes and Rocky Mountain states in order to understand the reasons for income tax growth.

Figure 2 shows growth for the January-March period, making April collections a dramatic change for virtually all regions. Detailed data, not presented here, confirm that final returns are the reason for the decline in total April income tax collections. Total income tax revenues grew in all regions but New England in the first four months of calendar year 2017. Several state forecasters in the New England region we spoke with said they thought that the declines in their region were mostly related to their high reliance on capital gains, which contributed to large declines in final payments.

Figure 2. State Personal Income Tax Collections Were Down in April in Most Regions

Source: Individual state data, analysis by the Rockefeller Institute.

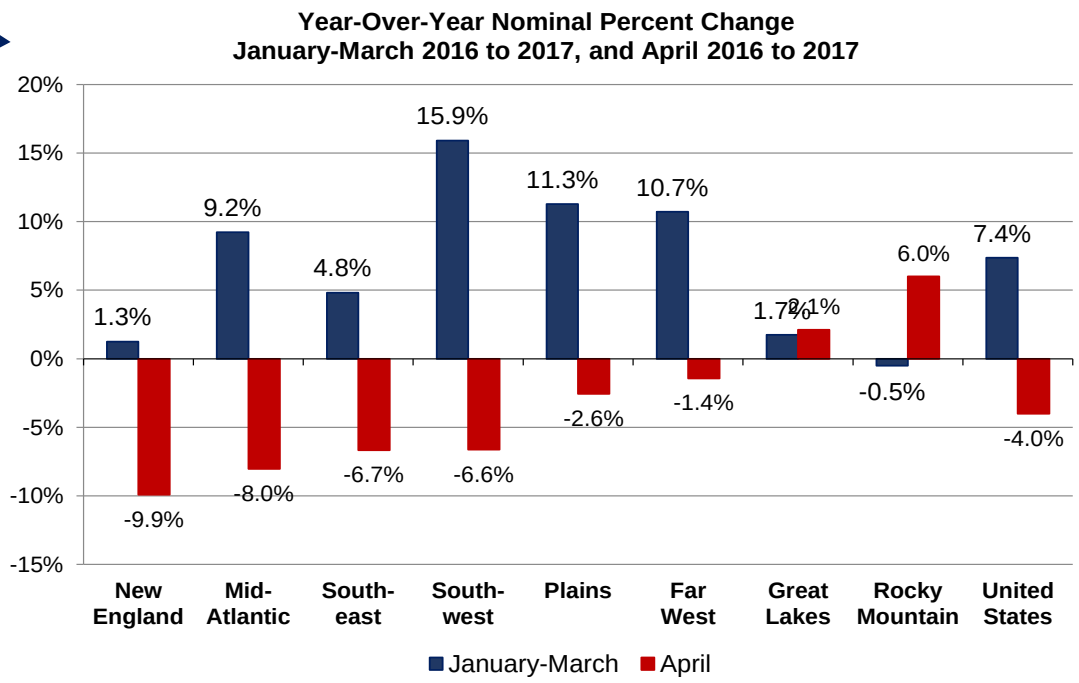


Table 1 shows state-by-state details for April-May combined. Withholding grew in comparison to the same period last year, with two exceptions. Estimated payments declined in twenty states, while final payments declined in thirty-one.

In Appendix 1, we examine growth in the income tax over the January-May period in greater detail. We look at how April was a significant turnaround from experience to date because of declines in payments with April returns (see page 16, Appendix 1: Personal Income Tax Collections From January Through April/May).

Table 1. Nominal Percentage Change in April-May State Personal Income Taxes

State Tax Revenue by Major Component of Personal Income Tax
April-May 2016 vs. April-May 2017, Percentage Change

	Withholding	Estimated	Final payments	Refunds	Total PIT
United States	**6.3**	**(4.6)**	**(5.5)**	**11.4**	**(2.0)**
Alabama	3.4	0.5	(0.5)	52.7	(16.5)
Arizona	3.2	10.2	(3.0)	12.0	(4.5)
Arkansas	9.8	(1.7)	(14.9)	69.1	(9.2)
California	7.8	0.6	(10.7)	16.0	(1.3)
Colorado	9.2	7.5	2.3	12.8	3.3
Connecticut	1.3	(6.5)	(12.6)	14.2	(9.4)
Delaware	8.2	5.1	(4.1)	30.6	(2.0)
Georgia	6.2	2.3	(2.1)	(11.8)	9.9
Hawaii*	3.5	37.3	(16.1)	0.6	8.6
Idaho	6.4	ND	0.5	(4.7)	5.3
Illinois	1.2	16.4	(3.5)	8.2	(1.2)
Indiana	6.5	2.3	(1.5)	10.2	1.5
Iowa	4.7	11.4	(4.6)	105.4	(38.5)
Kansas	2.5	(2.1)	(9.0)	2.4	(3.0)
Kentucky	3.2	(3.2)	NM	ND	4.4
Louisiana	2.8	10.8	27.6	(22.5)	58.9
Maine	3.5	1.4	(2.5)	19.3	(4.1)
Maryland	4.9	3.7	2.9	1.0	5.6
Massachusetts	4.3	(29.0)	(4.7)	(19.4)	0.0
Michigan	5.8	7.0	(3.3)	2.5	4.1
Minnesota	5.6	(4.7)	(9.1)	28.5	(6.7)
Mississippi	1.4	(2.6)	ND	11.5	(2.8)
Missouri	3.6	(5.0)	(9.9)	ND	(3.5)
Montana	3.5	3.9	(9.7)	23.3	(9.2)
Nebraska	2.6	(5.7)	(16.9)	(5.9)	(6.1)
New Jersey	20.9	(7.0)	1.7	(11.0)	15.4
New Mexico*	(4.1)	ND	9.5	32.1	(1.4)
New York	7.0	(13.0)	(8.0)	29.6	(17.1)
North Carolina	1.2	5.5	(12.2)	22.1	(8.9)
North Dakota	(1.3)	(10.3)	(5.6)	50.0	(13.6)
Ohio	4.2	(0.7)	0.6	(2.3)	3.3
Oklahoma	8.0	(16.5)	(2.9)	(4.4)	1.9
Oregon	8.4	11.0	ND	(20.1)	19.3
Pennsylvania	10.7	(5.0)	(3.6)	8.9	3.8
Rhode Island	1.2	(11.9)	(8.0)	4.3	(6.7)
South Carolina	5.8	13.9	(4.8)	(0.3)	7.1
Utah	9.4	ND	6.0	12.1	7.1
Vermont	5.8	(8.3)	(3.8)	24.5	(10.7)
Virginia	4.2	(7.8)	(7.8)	3.8	(2.0)
West Virginia	5.5	(9.5)	(17.5)	(3.1)	(4.7)
Wisconsin	5.7	(3.7)	(8.1)	5.2	0.0

Source: Individual state data, analysis by the Rockefeller Institute.
Notes: ND - no data, NM – not meaningful.
* Data for Hawaii and New Mexico exclude May collections.

April Was Gloomier Than Expected

We collected data from twenty-one states that provide easily retrievable forecasts of monthly revenue. The forecasts, along with the comparison to actual collections, are presented in Table 2.

Many states overestimated income tax collections for April and May of 2017. One possible reason is that they prepared forecasts before the presidential elections and did not take into account the possibility of federal income tax cuts. Some states actually revised forecasts after the elections and tried to factor in how taxpayers might shift income to benefit from potential federal tax cuts. Yet, many states still overestimated April/May tax revenue.

In eleven of twenty-one states, actual personal income tax collections in April/May 2017 were lower than in April/May 2016, with a median decline of 1.4 percent (see Table 2). In nineteen states, actual income tax collections in April/May 2017 were below the forecasts, with a median underestimation of 6.4 percent and with seven states having double-digit underestimates.

When tax revenue falls short, state forecasters look for explanations.

Table 2. Actual vs. Projected Personal Income Tax Revenues ($ in millions)

State	April-May 2016 actual	April-May 2017 actual	April-May 2017 forecast	% change in actual, 2016 to 2017	% variance, April-May 2017 actual from forecast
Arizona	913	839	896	(8.2)	(6.4)
Arkansas	722	731	730	1.3	0.2
California	17,638	17,397	18,073	(1.4)	(3.7)
Colorado	1,479	1,528	1,604	3.3	(4.7)
Idaho	421	443	435	5.3	1.8
Illinois	2,862	3,139	3,451	9.7	(9.0)
Indiana	1,284	1,303	1,337	1.5	(2.5)
Kansas	490	477	501	(2.6)	(4.8)
Maine	337	323	331	(4.0)	(2.4)
Mississippi	411	415	458	0.8	(9.5)
Montana	280	254	294	(9.2)	(13.5)
Nebraska	527	494	571	(6.1)	(13.4)
New York	8,570	7,103	8,472	(17.1)	(16.2)
North Dakota	110	95	114	(13.7)	(16.7)
Ohio	1,296	1,338	1,534	3.3	(12.7)
Pennsylvania	2,651	2,759	2,978	4.0	(7.4)
Rhode Island	264	234	262	(11.5)	(10.7)
South Carolina	552	592	610	7.1	(3.1)
Vermont	189	174	201	(8.1)	(13.5)
West Virginia	412	392	419	(4.8)	(6.3)
Wisconsin	1,484	1,485	1,540	0.0	(3.6)
Median				**(1.4)**	**(6.4)**

Source: Individual state data, compiled by the Rockefeller Institute.

The Usual Suspects

The Forecaster's Puzzle

Revenue forecasters work with imperfect information. They know that April tax returns are a residual: the difference between what has been paid in taxes on the prior year so far and what total tax liability is. They know that total tax liability is driven by income in the prior year. Table 3 provides a stylized view of the information and estimates that a forecaster might have had early in 2017 about income and taxes for 2016 using hypothetical values that are roughly consistent with state tax systems.[8]

Table 3 shows what the forecaster knows about income and tax liability for the prior year, again using hypothetical numbers. The top panel shows the forecaster's view of income, and the bottom panel shows the forecaster's view of tax liability.

The forecaster has a good — but imperfect — estimate of wages, the largest component of income. He or she has tried to reconcile the wage estimate with employment and wage data from multiple surveys perhaps including unpublished data, and to reconcile this with withholding tax collections and other information sources.

The forecaster's estimate of interest income, dividends, business income, and most other nonwage income will be far less reliable than the wage estimate, even though the forecaster will reconcile it to the extent practical with published economic statistics, interest rates, and other data. The published economic data do not correspond fully with the associated tax concepts, and often the initial estimates of economic data rely on incomplete data. The forecaster will have a wide mental range around this estimate.

The smallest, but most difficult to understand, income component on this table is capital gains — taxed by states, but with no direct counterpart in economic statistics. The only true measures of capital gains come when tax returns for the year are computerized and tabulated, and generally that is many months in the future. Forecasters know capital gains are related to the stock, bond, and real estate markets; to economic conditions; and to current and expected tax rates and associated tax planning actions of individuals, among other factors. They base estimates upon models that take these factors into account, but due to poor data and unsteady relationships the models are not highly accurate. Computer models can often be wrong by 20 percent or more, even though the prior year is completely over.

Table 3. A Stylized View of a Revenue Forecaster's Information on Income

A state revenue forecaster's view of 2016 income, early in 2017		
Income in 2016, as estimated by state revenue forecaster in early 2017	**Amount**	**Degree of confidence**
Wages	$ 700	high, but not perfect
Interest, dividends, business income, other	230	moderate
Capital gains	70	extremely low
Total income	**$ 1,000**	

A state revenue forecaster's view of 2016 taxes, early in 2017		
Tax payments on 2016 income, as estimated by state revenue forecaster in early 2017	**Amount**	**Degree of confidence**
Expected total tax on 2016 income	$ 60	moderate
Already paid:	52	
Withholding in calendar 2016	42	high, but not perfect
Estimated payments on 2016 income	10	moderate
Still to be paid:		
Net final payments due in April	8	extremely low

The forecaster uses estimates of last year's income (the top panel) to help estimate last year's tax liability, in some cases quite directly, and in other cases using this information to supplement other methods. The bottom panel shows hypothetical tax values to go along with the hypothetical income values: The forecaster estimates there was $60 of tax liability in 2016 associated with the $1,000 estimate of income. Some of that liability has already been paid through withholding and estimated payments — $42 and $10, respectively, in this example, but these are just illustrative numbers. The remaining amount, $8, is to be paid with April final returns.[9]

An April shortfall — a shortfall in the hypothetical $8 April estimate shown in the table above — generally means that taxable income in the prior tax year — some portion of the $1,000 of income shown in the table — was lower than estimated. This could occur if taxable income diverged from economic measures of income in ways that aren't reflected in published data — in this case, a possible Trump Effect, or it could occur if the underlying economy in the prior year was weaker than preliminary data suggest.

A Possible Trump Effect

Taxpayers often arrange their affairs to minimize expected tax liabilities, all else equal. This is particularly true for the highest-income taxpayers, who have the highest tax rates, the most income subject to tax and, often, the greatest ability to rearrange income. If taxpayers know that federal tax rates will be going down, they have an incentive to shift income out of the current year into the future to take advantage of lower rates, and to shift deductions into the current year, to get the greatest benefit from deductions.

Taxpayers had an incentive to shift income out of 2016, into 2017 and beyond, and to shift deductions into 2016. Candidate Trump had promised to slash the top income tax rate from 39.6 percent to 35 percent, which would not generally have affected capital gains, but he also proposed to eliminate the Affordable Care Act's 3.8 percent net investment tax, which applied to capital gains and other investment income. This was not as large a change for capital gains as the increase in tax rates in 2013, which had the effect of increasing the top federal rate on long-term capital gains from 15 percent to 23.8 percent but it was still an incentive to shift income. Before the election, taxpayers may have held off on selling stocks and realizing other forms of income while they assessed candidate Trump's chances of victory. After the election, but still in tax year 2016, they may have become more confident in the prospect of tax cuts, and may have hoped that Congress would up the ante. Thus, it would have been attractive to hedge bets and defer income.

Some forms of income are easier to shift than others. Wage income is hard to shift: One would have to work less this year and more next to shift income to next year, which may not be compatible with employer rules or individual needs. Firms in bonus-paying industries may have the ability to control the timing and tax year of bonuses they pay to well-compensated employees. Some high-income people may be able to shift dividend income — for example, owners of a closely held corporation may be able to control whether it pays dividends in December of one year or January of the next. Retirees may have control over the year in which they take IRA distributions. But capital gains, by far, is the easiest income to shift. Taxpayers can choose to sell assets later than they otherwise might have done, without necessarily having to change their work or consumption habits. Economic statistics provide very little information about whether this has happened. This income shifting generally is concentrated among the highest-income taxpayers: In 2014, the latest year for which we have data, 70 percent of all capital gains were claimed by just 0.7 percent of taxpayers, with adjusted gross income of $500,000 or more.[10]

Changes in taxpayer behavior for fewer than 1 percent of taxpayers thus can have a significant impact on capital gains and ultimately on state tax revenues. For example, California recently noted:

> For the 2014 tax year, the top 1 percent of income earners paid 48 percent of personal income taxes. This percentage has been greater than 40 percent for ten of the past eleven years. The share of total adjusted gross income from the top 1 percent of income earners has increased from 13.8 percent in 1993 to almost 24 percent in 2014. This number has exceeded 20 percent in ten of the past eleven years.[11]

Because capital gains are relatively easy to shift, are highly uncertain, and can have a large impact on state income taxes we pay particular attention to them. In Appendix 2: Volatility and Forecasts of Capital Gains, we discuss states' forecasts of capital gains. In the next section we present a measure that indicates states' relative reliance on capital gains in their income taxes.

States' Reliance on Capital Gains

States vary widely in their reliance on capital gains. Table 4 shows, for each of the forty-one states with a broad-based income tax: (1) capital gains as a share of adjusted gross income in 2014 (the latest year available) based on federal Statistics of Income data, (2) the state's top tax rate on capital gains from corporate equities as reported by the Tax Foundation for 2015,[12] and (3) the state's reliance on the income tax as a share of total taxes for fiscal year 2016 from the Census Bureau. The table also ranks states by an indicator of capital gains importance, which was constructed by indexing each state's capital gains share and its top capital gains tax rate to the nation, and then multiplying the two resulting indexes and ranking the result.

States at the top of the list have relatively high reliance on capital gains while those low on the list do not. The measure should be taken as a broad indicator of capital gains reliance within the income tax; small differences between states should not be considered meaningful. Table 4 also shows the income tax as a share of total taxes, but that is not reflected in the ranking measure in the table. A state with a high rank that also relies heavily on the personal income tax will find its budget particularly susceptible to capital gains volatility.

Table 4. Income-Tax States Ranked by a Measure of Capital Gains Dependence

State	Capital gains as share of AGI (2014)	Top capital gains tax rate on corporate equities (2015)	Rank (1=highest), considering capital gains share and top rate together	Personal income tax as share of total taxes (2016)
United States	***7.14***	***6.10***		***37.33***
California	9.01	13.30	1	52.02
New York	11.50	8.80	2	57.17
Vermont	7.30	9.00	3	23.66
Connecticut	9.61	6.70	4	49.57
Oregon	5.92	9.90	5	69.64
Minnesota	5.84	9.90	6	42.61
Montana	7.64	6.90	7	44.94
Massachusetts	9.97	5.20	8	52.89
New Jersey	5.38	9.00	9	42.34
Nebraska	6.77	6.80	10	43.87
Idaho	5.88	7.40	11	36.14
Wisconsin	5.33	7.70	12	42.52
Iowa	4.51	9.00	13	37.17
Maine	5.04	8.00	14	37.57
Rhode Island	6.49	6.00	15	37.85
Hawaii	5.30	7.30	16	30.58
Colorado	7.70	4.60	17	50.69
Louisiana	5.50	6.00	18	30.79
Virginia	5.63	5.80	19	57.67
South Carolina	4.60	7.00	20	40.51
Missouri	5.20	6.00	21	49.19
Georgia	5.15	6.00	22	48.66
Utah	6.06	5.00	23	47.64
North Carolina	4.92	5.80	24	45.96
Oklahoma	5.30	5.30	25	35.29
Arkansas	4.01	7.00	26	29.42
Kansas	5.84	4.80	27	27.69
Kentucky	4.66	6.00	28	36.35
Illinois	6.96	3.80	29	37.69
Delaware	3.97	6.60	30	31.58
Maryland	4.45	5.80	31	40.77
Arizona	5.34	4.50	32	27.04
New Mexico	4.83	4.90	33	25.81
Ohio	4.45	5.30	34	28.47
North Dakota	6.82	3.20	35	9.47
West Virginia	3.11	6.50	36	35.99
Alabama	3.85	5.00	37	35.21
Michigan	4.27	4.30	38	33.91
Mississippi	3.35	5.00	39	23.50
Pennsylvania	5.23	3.10	40	31.91
Indiana	3.78	3.30	41	29.67

Sources:
(1) Capital gains as share of adjusted gross income (AGI): IRS Statistics of Income File;
(2) Top capital gains tax rate: "The High Burden of State and Federal Capital Gains Tax Rates in the United States," The Tax Foundation, March 24, 2015;
(3) PIT as share of total taxes: Census Bureau State Government Tax Collections data;
(4) Rank calculated by the Rockefeller Institute by first indexing each state's capital gains share and top rate, multiplying the two resulting indexes, and ranking them.

A Weaker Economy Than Estimated?

Could one or more components of income for 2016 be overestimated in the currently available economic statistics, and could that be why April returns fell short? We have relatively little available data to help with that question. Revenue forecasters stand on shifting sands: They try to forecast the future, even as the past — i.e., economic data — changes under their feet. When April returns come in above or below expectations, revenue forecasters may try to evaluate whether the prior-year economy was stronger or weaker than what currently reported statistics suggest.

The Bureau of Economic Analysis (BEA), which is the federal government's main economic statistics agency, develops estimates of economic activity based on data from other federal agencies, from private organizations, from tax returns, and from many other data sources. Their initial economic activity estimates, which are released quickly, are based upon the data they have available soonest, and often are revised later as other sources become available.

Wages tend to be the most reliably estimated income component because the Bureau of Labor Statistics (BLS), upon which BEA draws, has high quality surveys of employment and payroll upon which estimates of wages are based.[13] Thus, revisions to wages tend to be smaller than revisions to other income components. However, wages also are the largest component of income, so small percentage revisions can have large impacts on revenue forecasts. For example, the initial BEA estimate of wages for 2014, in January 2015, showed 4.3 percent growth from 2013. The currently available estimate for 2014 shows growth of 5.1 percent — a 0.8 percentage point increase in growth rate.[14] While this is small relative to wages, it is still important because wages are so important to state income taxes.

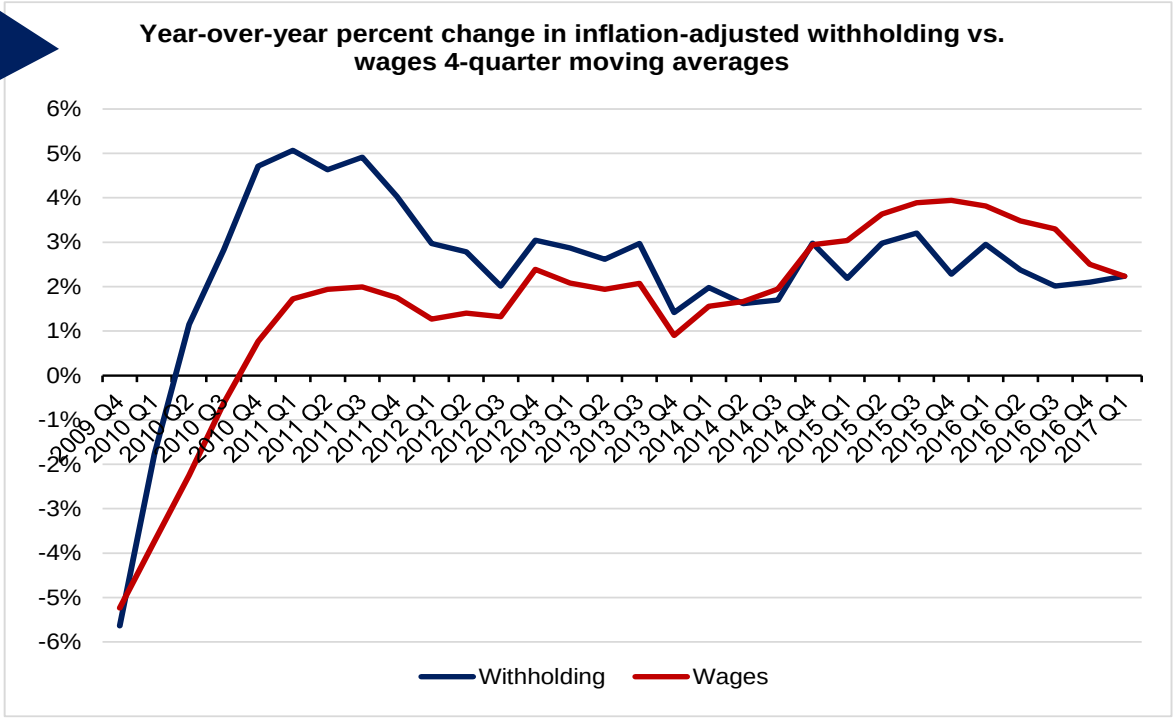
Interest and dividend income, by contrast, can be subject to large revisions after BEA gains access to data sources not available at the time of the initial estimate, such as summaries from federal tax returns. For example, the initial estimate for dividend income for 2014, in January 2015, showed growth in dividend income of 4.4 percent compared to 2013. A year later, revised data showed growth of 3.4 percent, so there was a slight downward revision. But the current estimates for dividend income show 16.6 percent growth in dividends between 2013 and 2014, a very large upward revision.

When the federal government revises its estimates of the past, revenue forecasters take note and adjust their view of the past accordingly. This can help them understand why revenue came in above or below what they had expected, and can help them set their expectations for the future.

Still, given the data we do have, in recent quarters withholding has been growing more slowly than wages, as Figure 3 shows. Because most state income taxes are progressive, ordinarily we expect withholding to grow more quickly than wages unless states are cutting taxes. The relatively slower growth of withholding could suggest that wages are not as high as economic data suggest, or there could be other technical reasons for the difference. We will be watching this closely, and welcome comments from revenue forecasters.

Figure 3. Withholding Has Been Growing More Slowly Than Wages; Overall Weakness in Both

Sources: Withholding: individual state data; wages: Bureau of Economic Analysis.



In any event, as the revisions to dividend income for 2014 show, it is possible for there to be large revisions to data on income subject to tax. If that is the case for 2016, it would help explain the April 2017 shortfall.

April Surprises and State Budget Processes

An April income tax shortfall or windfall comes at the worst time of year for three reasons. First, by the time it is recognized in late April or mid-May, there are just six to ten weeks before the end of the fiscal year for forty-six states. For states without large cash balances, April windfalls or shortfalls can create a cash flow crunch or even a cash flow crisis. There is not enough time to enact and implement new legislation to cut spending, lay off workers, raise taxes, or otherwise obtain resources sufficient to offset the lost revenue before the June 30th fiscal year end. As a result, a state without sufficient cash on hand to pay bills must resort to stopgap measures to "roll" the problem into the future. For example, states may delay income tax refund payments. Such actions do not save any money, but they do temporarily avert a cash flow crisis. In so doing, they increase the budget problem for the fiscal year about to start (by pushing payment requirements into that year), requiring greater action to close that gap.

Second, an April surprise can have a "double whammy" effect on state revenue in the budget negotiation period. If the shortfall was caused by income that is lower than had been estimated, then income may be lower in future years, and the state will have to lower its forecasts for future years as well. Last year, for example, many states overestimated nonwage income for tax year 2016 and built their forecasts for fiscal year 2017 and beyond upon that overestimate. When they learned that tax year 2016 income was lower than expected, they had to lower their forecasts for 2017 and potentially for taxes due in 2018.

Third, the April income tax shortfalls or windfalls come late not only in the fiscal year but in the budget process too, often as states wrap up their budget negotiations. It takes time for revenue analysts to evaluate the shortfalls or windfalls, and for budget forecasters to revise their forecasts, and for elected officials to come to grips with the magnitude of the new problem they face. The April surprises, whether good or bad, for elected officials can unsettle carefully balanced budget plans already tentatively negotiated. Indeed, income tax revenue shortfalls for tax year 2016 came at a time when many states were facing budget shortfalls for fiscal year 2017 and in the midst of budget negotiations. As a result, budget negotiations for fiscal year 2018 were extended and several states missed the June 30th deadline to pass a fiscal year 2018 budget that started on July 1st in forty-six states. As of July 1st, legislatures in eight states — Connecticut, Illinois, Maine, Massachusetts, New Jersey, Oregon, Rhode Island, and Wisconsin — had yet to finalize the fiscal year 2018 budget. Two state governments — Maine and New Jersey — temporarily shut down due to late budgets.

Conclusions

April 2017 was surprising, as most April tax filing periods are. This year, it brought bad news. We believe much of the surprise was related to a Trump Effect — people shifting income out of 2016 in the hope of benefiting from promised cuts in federal tax rates. If this was the cause, state tax revenue is likely to grow more strongly next April. However, the shortfall could also reflect weakness in last year's economy that has not yet made its way into published data. If that is the case, economists may revise their assessments of current economic conditions downward, and revise forecasts as well. Or, the right answer might be a combination of the Trump Effect and a weaker economy. Only time — and more complete data — will tell.

As always, this news comes at the worst time, as states were finalizing budgets for the 2017-18 fiscal year. It has increased the strain on already-strained state finances and increased the complexity of budget negotiations.

Appendix 1: Personal Income Tax Collections From January Through April/May

Total personal income tax collections in January-May 2017 were 2.9 percent, or about $4.4 billion above the level of a year ago, according to preliminary data collected by the Rockefeller Institute. In April 2017 alone (the month in which many states receive the bulk of their balance due, or final payments), personal income tax receipts declined by 4.0 percent, or $1.9 billion.

In thirteen states, personal income tax receipts were lower in the first five months of calendar year 2017 compared to the same period in 2016 (see Table 5).

Growth rates for total personal income tax collections, as well as for withholding, were higher throughout fiscal-year-to-date 2017 compared to the same period in 2016, except for the month of July. Figure 4 shows estimated and final payments declining throughout the first ten months of fiscal year 2017. The declines in the most recent months probably were attributable in part to taxpayer behavior in the anticipation of lower federal income tax rates in 2017. Most states base their taxable income definitions largely on federal definitions, and so if taxpayers shift income for federal tax purposes, state taxes usually are affected.[15]

Table 5. State Tax Revenue by Major Component of Personal Income Tax

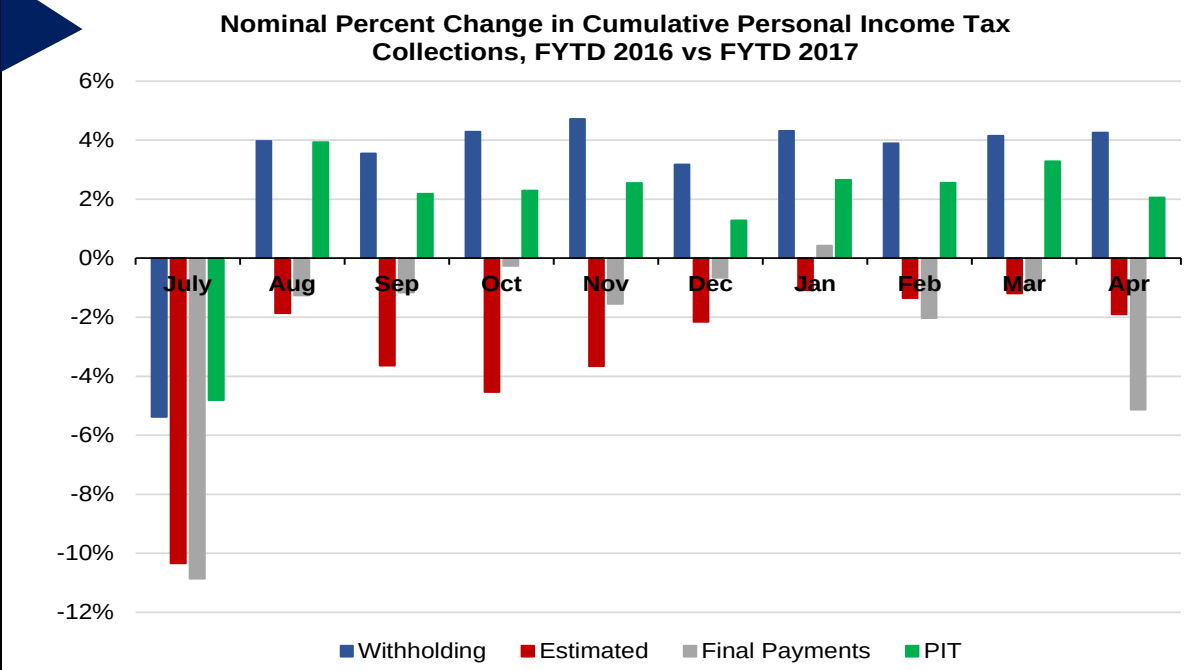
January-May 2016 vs. January-May 2017, Percentage Change

State	Withholding	Estimated	Final payments	Refunds	Total PIT
United States	**6.0**	**(1.9)**	**(4.9)**	**3.0**	**2.9**
Alabama	3.2	2.7	(0.3)	1.7	2.8
Arizona	6.1	11.5	(2.4)	2.6	5.6
Arkansas	6.7	(1.2)	(14.9)	36.2	(6.0)
California	9.0	8.1	(9.5)	12.5	4.9
Colorado	8.1	2.4	(1.1)	9.8	(0.0)
Connecticut	1.5	(4.8)	(9.3)	3.0	(3.8)
Delaware	8.9	(1.0)	(3.9)	9.6	4.4
Georgia	6.9	4.4	(2.5)	0.5	9.1
Hawaii*	9.9	41.8	(5.1)	25.1	11.4
Idaho	2.5	ND	2.1	7.1	0.3
Illinois	1.8	(12.1)	(4.3)	0.8	(0.9)
Indiana	5.8	(4.0)	(2.1)	(2.3)	4.8
Iowa	2.5	(0.7)	1.9	2.1	2.0
Kansas	3.3	(16.2)	8.9	1.9	3.7
Kentucky	2.6	(7.0)	(1.4)	ND	1.2
Louisiana	6.5	5.4	28.3	(1.0)	16.1
Maine	3.5	(2.6)	(1.3)	9.3	(2.0)
Maryland	4.8	(6.5)	(0.2)	(1.1)	4.1
Massachusetts	3.3	(19.4)	(5.5)	(12.9)	0.4
Michigan	4.6	11.8	(4.0)	3.7	4.0
Minnesota	6.6	(2.2)	(7.8)	5.6	0.8
Mississippi	1.5	(1.6)	ND	11.0	(3.3)
Missouri	4.3	1.6	(7.5)	ND	0.9
Montana	5.6	3.4	(11.1)	6.1	(1.8)
Nebraska	4.6	(6.1)	(13.5)	(0.6)	(1.7)
New Jersey	13.6	(0.4)	1.8	(3.0)	12.1
New Mexico*	4.0	ND	4.2	(2.6)	5.4
New York	5.7	(10.9)	(8.1)	(5.0)	0.9
North Carolina	1.9	3.0	(7.4)	18.4	(3.0)
North Dakota	(6.0)	(13.5)	(9.8)	(23.5)	(0.6)
Ohio	3.8	(18.0)	1.6	2.3	0.3
Oklahoma	4.9	(11.2)	(1.0)	(8.5)	6.4
Oregon	7.7	3.4	ND	(9.7)	11.6
Pennsylvania	6.7	(0.6)	(3.1)	45.0	1.9
Rhode Island	2.7	(0.7)	(2.9)	16.4	(5.8)
South Carolina	5.3	8.5	(8.0)	1.8	5.6
Utah	8.4	ND	3.6	6.3	6.7
Vermont	(5.4)	(6.9)	(4.8)	(4.8)	(0.6)
Virginia	5.8	6.8	(11.8)	3.4	2.9
West Virginia	3.4	(9.4)	(7.2)	2.2	(1.6)
Wisconsin	4.3	(4.0)	(5.5)	1.1	2.2

Source: Individual state data, analysis by the Rockefeller Institute.
Notes: ND - no data.
* Data for Hawaii and New Mexico exclude May collections.

Figure 4. Fiscal-Year-to-Date Figures Show Declines in Estimated and Final Payments

Source: Individual state data, analysis by the Rockefeller Institute.



Withholding

Withholding is a good indicator of the current strength of personal income tax revenue because it comes largely from current wages and is much less volatile than estimated payments or final settlements. Withholding tax collections showed 6.0 percent growth during the first five months of calendar year 2017. During April 2017 alone, withholding tax collections grew by 5.3 percent compared to April 2016. Only two states — North Dakota and Vermont — showed declines in withholding for the January-May period. Eighteen states had growth at 5 percent or above in withholding taxes for the first five months of 2017.

Estimated Payments

The highest-income taxpayers generally make estimated tax payments (also known as declarations) on their income not subject to withholding tax. This income often comes from investments, such as capital gains realized in the stock market. The first payment for each tax year is due in April in most states and the second, third, and fourth are generally due in June, September, and January. The early payments often are made on the basis of the previous year's tax liability and may offer little insight into income in the current year.

Different from the other three quarters, April includes two types of payment: an initial payment on income in the new tax year, and an estimated payment on income for the prior tax year from taxpayers who request extensions of time to file their final returns These payments are similar to final payments in that they are for the prior tax year. Some states report these two types of estimated payment separately, while others do not.

It is not wise to extrapolate trends from the first estimated tax payment. In the thirty-eight states for which we have complete data, estimated tax payments were down by $631.5 million, or 1.9 percent, for the January-May months of 2017, and by $562.2 million, or 4.3 percent, for the month of April 2017. Estimated tax payments declined in twenty-four states in the months of January through May of 2017, with seven states reporting double-digit growth. The largest decline was in Massachusetts at 19.4 percent.

Final Payments

Final payments normally represent a smaller share of total personal income tax revenues in the first, third, and fourth quarters of the calendar year, and a much larger share in the second quarter due to the April 15th income tax return deadline. As discussed above, and as illustrated in Figure 1, the second quarter is the most volatile quarter for final payments.

In the first five months of 2017, final payments accounted for $28 billion, or 18 percent, of all personal income tax revenues. Final payments with personal income tax returns in the thirty-nine states declined by $1.5 billion, or 4.9 percent, in the months of January through May.

Final payments declined in thirty-one states in January-May 2017 period, with four states reporting double-digit declines. Growth was recorded in eight states.

Refunds

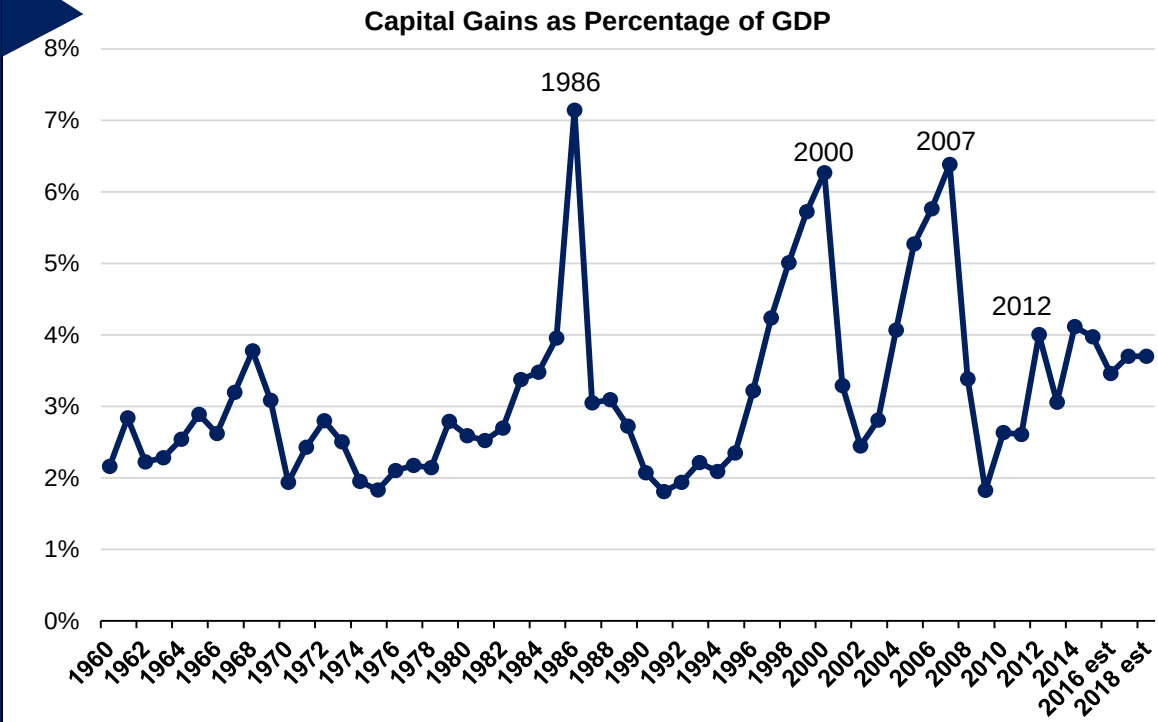
Personal income tax refunds processed by states grew by 3.0 in the months of January through May. In total, thirty-nine reporting states have paid out about $1.4 billion more in refunds in January-May of 2017 than in 2016. Twenty-seven of thirty-nine reporting states paid out more personal income tax refunds to taxpayers in the first five months of 2017 compared to the same period in 2016. Twelve states paid out less in personal income tax refunds for the same period.

Appendix 2: Volatility and Forecasts of Capital Gains

Capital gains play an important role in personal income tax receipts, as discussed in previous reports.[16] Figure 5 shows capital gains as a share of gross domestic product (GDP) from 1960 through 2015 and provides Congressional Budget Office (CBO) estimates for 2016 through 2018.[17]

Figure 5. Capital Gains Are Volatile

Source: (1) Capital gains for 1960-1994 are from the U.S. Treasury and for 1995-2016 are from the CBO at www.cbo.gov/about/products/budget-economic-data#7. (2) GDP from the Bureau of Economic Analysis.

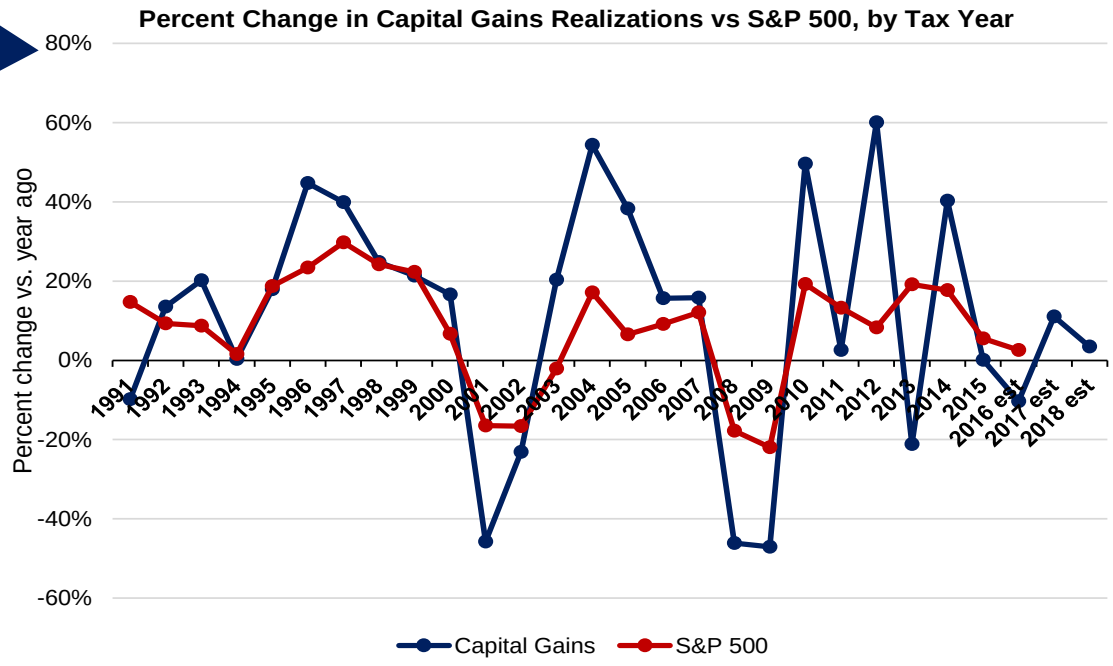


We have discussed this graph at length in past reports and simply summarize here: The near-doubling of gains in 1986 followed by a 55 percent decline in 1987 reflected taxpayers' responses to the approximately 40 percent increase in effective tax rates on capital gains in 1987, and shows the importance of actual and expected tax rates.[18] Capital gains surged upward and then dove after the stock market booms and crashes of the 1990s and 2000s. Capital gains grew by 60 percent in 2012 and declined by 21 percent in 2013, reflecting, we believe, the acceleration of income discussed above in reaction to congressional action on the federal fiscal cliff. The dip between 2015 and 2016 is based on CBO estimates of a 10 percent decline in 2016, which may be revised downward when tax-return data are available. While this decline (or a moderately greater decline, if revised downward) is unpleasant, it pales in comparison to previous shifts in capital gains.

Figure 6 shows the year-over-year percentage change in federal capital gains realizations versus the calendar-year-average S&P 500 index.[19] We have labeled fiscal-cliff-related events that we have discussed in previous *State Revenue Reports*. Capital gains and the stock market usually increase and decrease at similar times, but movements in capital gains generally are much greater.

Figure 6. Capital Gains Are Loosely Related to the Stock Market

Sources: Congressional Budget Office, https://www.cbo.gov/about/products/budget-economic-data#7 and S&P 500 from Yahoo Finance, http://finance.yahoo.com/g/hp?s=^GSPC.



Even if states could forecast the stock market accurately, that would not be sufficient. States also have to estimate the impact of other factors, such as the incentive to shift income. Even well-designed forecasting models are not reliable enough to predict capital gains accurately, as realizations are highly dependent on the stock market performance as well as taxpayers' decisions on when to buy or sell stocks.

States' forecasts for 2016 capital gains varied greatly. Some of the states that publish their capital gains forecasts initially expected capital gains to increase in 2016. For example, in late 2015 forecasters in Massachusetts projected that capital gains realizations would increase between 0.5 percent and 2.7 percent in tax year 2016 compared to tax year 2015.[20] However, in late 2016 Massachusetts forecasters revised their estimates, and projected declines of 9.5 percent to 10.1 percent in tax year 2016.[21] New York initially forecasted a 5.7 percent growth in capital gains in 2016,[22] but revised its estimate to a 3.0 percent decline.[23]

Unlike Massachusetts and New York, forecasters in California initially projected a 7.5 percent decline in 2016 capital gains. However, officials later revised their forecasts both for 2015 and 2016 and currently are projecting a decline of only 3.0 percent in 2016.[24]

The wide variation across states in projections for capital gains underscores the extreme difficulty of forecasting gains.

Endnotes

1 The state fiscal year starts on July 1st in all but four states.
2 See Table 1 for the states.
3 See Table 2 for the states.
4 See FAQ: "Why do the NIPAs exclude capital gains from income and saving?" U.S. Bureau of Economic Analysis, December 5, 2005.
5 See Lucy Dadayan and Donald J. Boyd, *States Are Not Out of the Woods Despite Strong Revenue Gains in the Fourth Quarter*, State Revenue Report, #91 (Albany: Nelson A. Rockefeller Institute of Government, April 2013).
6 Individual income tax returns are usually due on April 15th in thirty-five of forty-one states that have broad-based personal income tax. The remaining six states have individual income tax return due dates later than the usual April 15th. Those states are: Arkansas (May 15), Delaware (April 30), Hawaii (April 20), Iowa (April 30), Louisiana (May 15), and Virginia (May 1).
7 See Lucy Dadayan and Donald J. Boyd, *States Are Not Out of the Woods Despite Strong Revenue Gains in the Fourth Quarter*, State Revenue Report, #91 (Albany: Nelson A. Rockefeller Institute of Government, April 2013).
8 These tables gloss over issues that are critical for forecasters, but not essential for a conceptual understanding of the issues. There are forms of income other than those shown in the table, there are forms of tax payments other than those shown in the table, tax payment cycles stretch out longer than shown in the tables, income and tax payments can be mismeasured or miscategorized in ways not discussed here, and so on.
9 The remaining amount is a net amount — total payments with final returns, less refunds and other offsets. We describe the forecaster's confidence in withholding and estimated tax amounts as high and moderate, respectively, because state tax processing systems often cannot allocate tax payments to tax years perfectly.
10 "SOI Tax Stats - Historic Table 2," IRS, last reviewed or updated September 6, 2016.
11 See *Governor's 2017-18 Budget Summary – 2017-18* (Sacramento: California Department of Finance, n.d.).
12 See Kyle Pomerleau, "The High Burden of State and Federal Capital Gains Tax Rates in the United States," The Tax Foundation, March 24, 2015.
13 Experienced revenue forecasters often work directly with wage data from the Bureau of Labor Statistics and their own state Labor Departments, rather than with wage data from BEA because BLS "benchmark" data can be available sooner and can be obtained in more-useful forms.
14 The discussion of data revisions in this section is based on BEA vintage data available at https://www.bea.gov/histdata/histChildLevels.cfm?HMI=7.
15 It is important to note that thirty-six of forty-one states with a broad-based personal income tax have a starting point related to federal taxation: twenty-eight states use federal adjusted gross income as the starting point and eight states use federal taxable income. In five states — Alabama, Arkansas, Mississippi, New Jersey, and Pennsylvania — income taxation is not tied to federal taxation. See Federation of Tax Administrators, "State Personal Income Taxes: Federal Starting Points (as of January 1, 2017)."
16 See, for example, Lucy Dadayan and Donald J. Boyd, *Windfall April Surprises*, Special Report (Albany: Nelson A. Rockefeller Institute of Government, June 2015).
17 The CBO report does not mark 2016 as an estimate, but it was prepared in January 2017, before 2016 tax returns were filed, and thus is an estimate of amounts to be reported on those returns.
18 For detailed information on the Tax Reform Act of 1986, see *General Explanation of the Tax Reform Act of 1986* (Washington, DC: Joint Committee of Taxation, May 4, 1987).
19 Capital gains data are from the Congressional Budget Office. Please see CBO's "Budget and Economic Data, Detailed Revenue Projections" January 2017; S&P 500 data are from Yahoo Finance.
20 See *Briefing Book: FY2017 Consensus Revenue Estimate Hearing* (Springfield: Massachusetts Department of Revenue, December 16, 2015).

21 See *Briefing Book: FY2018 Consensus Revenue Estimate Hearing* (Springfield: Massachusetts Department of Revenue, December 5, 2016).
22 See *FY 2017 Economic & Revenue Outlook* (Albany: NYS Division of the Budget, n.d.).
23 See *FY 2018 Economic & Revenue Outlook* (Albany: NYS Division of the Budget, n.d.).
24 See *Governor's 2017-18 Budget Summary – 2017-18*.

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The Nelson A. Rockefeller Institute of Government, the public policy research arm of the State University of New York (SUNY), was established in 1981 to bring the resources of the sixty-four-campus SUNY system to bear on public policy issues. The Institute is active nationally in research and special projects on the role of governments in American federalism and the management and finances of both state and local governments in major areas of domestic public affairs.

The Institute Fiscal Studies Program, originally the Center for the Study of the States, was established in May 1990 in response to the growing importance of state governments in the American federal system. Despite the ever-growing role of the states, there is a dearth of high-quality, practical, independent research about state and local programs and finances.

The mission of the Fiscal Studies Program is to help fill this important gap. The Program conducts research on the trends affecting all fifty states and serves as a national resource for public officials, the media, public affairs experts, researchers, and others.

This report was researched and written by Donald J. Boyd, director of fiscal studies, and Lucy Dadayan, senior research scientist. Jim Malatras, president of the Institute, Thomas Gais, director, and Patricia Strach, deputy director for research, provided valuable feedback on the report. Michael Cooper, the Rockefeller Institute's director of publications, did the editing of the report. Michele Charbonneau, the Institute's publications assistant, did the layout and design of this report.

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