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Recent State Revenue Trends

Federation of Tax Administrators 2017 Revenue Estimating Conference

Omaha, Nebraska

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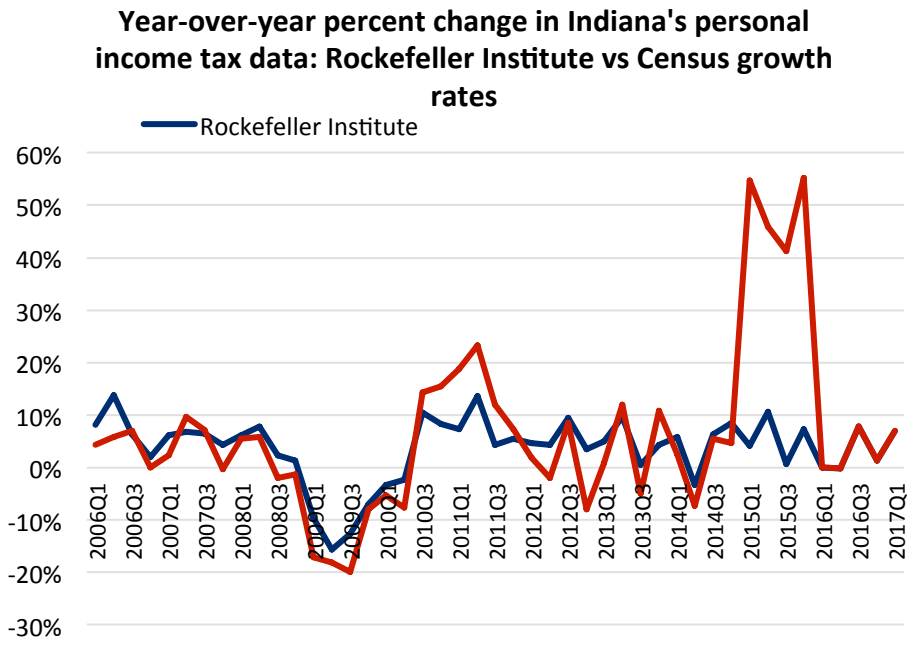
September 25, 2017

Roadmap

- Raw material for this presentation: Why we (i.e., my colleague Lucy Dadayan) collect our own data, work with revenue analysts in the states, and adjust Census data
- Revenue trends – bird's eye view
- Revenue trends – closer up
- April shortfalls: Trump effect or weaker economy?
- Sales tax and consumption
- Some thoughts about the future
- Preparing to analyze federal income tax reform

Why we treat our raw material (revenue data) with such loving care

Indiana's personal income tax revenue growth rates: Rockefeller Institute vs. Census Bureau



What happened?

- Census Bureau did not receive any data from Indiana **prior to 2015**
- Instead Census relied on Monthly Revenue Reports available through State Budget Agency's (SBA) website at: http://www.in.gov/sba/2363.htm
- Problem with SBA's numbers is they are for **General Fund only**
- In **2015** revenue forecasters in Indiana realized that Census Bureau's numbers were inaccurate
- Indiana officials contacted Census Bureau and started reporting **All Funds** data to Census Bureau as of 2015
- Census **did not correct** historical data
- Rockefeller Institute obtained data from Department of Revenue and **corrected** historic data

Iowa's personal income tax revenues: Rockefeller Institute vs. Census Bureau

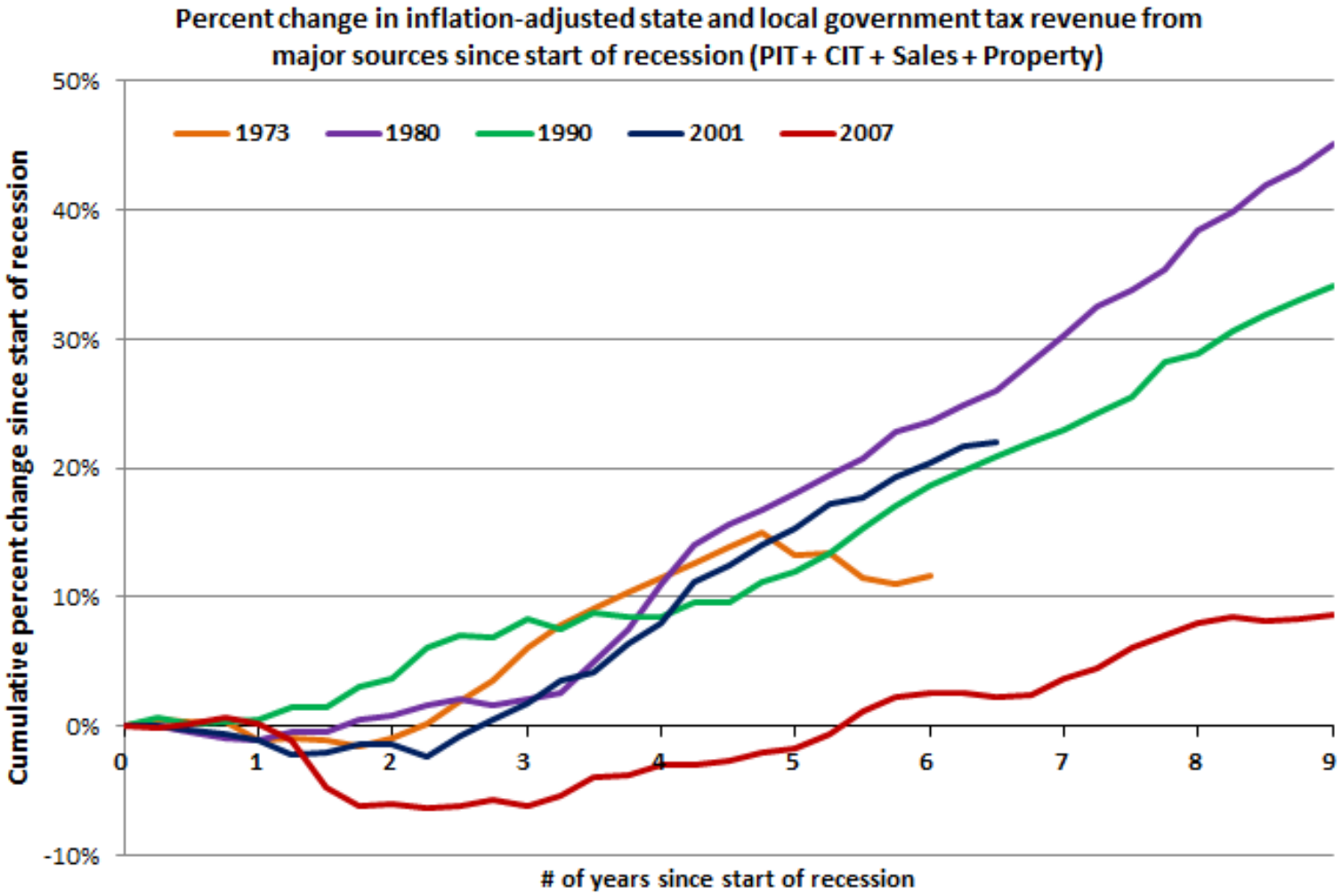
Year/Quarter	Rockefeller Institute	Census	Difference	Rockefeller Institute	Census
	Dollars in thousands			Year-over-year % change	
2011Q1	620,191	620,191	0	9.5%	9.5%
2011Q2	797,862	797,862	(0)	10.1%	10.1%
2011Q3	738,291	550,391	187,900	3.8%	3.7%
2011Q4	770,564	766,564	4,000	7.2%	7.3%
2012Q1	617,759	617,759	(0)	-0.4%	-0.4%
2012Q2	872,710	872,710	0	9.4%	9.4%
2012Q3	794,082	571,798	222,284	7.6%	3.9%
2012Q4	846,103	842,103	4,000	9.8%	9.9%
2013Q1	720,683	720,683	0	16.7%	16.7%
2013Q2	1,089,819	1,089,819	0	24.9%	24.9%
2013Q3	821,644	609,289	212,355	3.5%	6.6%
2013Q4	824,067	820,067	4,000	-2.6%	-2.6%
2014Q1	690,834	690,834	(0)	-4.1%	-4.1%
2014Q2	857,065	857,065	(0)	-21.4%	-21.4%
2014Q3	856,605	636,281	220,324	4.3%	4.4%
2014Q4	880,546	883,345	(2,799)	6.9%	7.7%
2015Q1	736,154	739,163	(3,009)	6.6%	7.0%
2015Q2	972,926	1,211,409	(238,483)	13.5%	41.3%
2015Q3	886,293	653,003	233,290	3.5%	2.6%
2015Q4	945,375	948,929	(3,554)	7.4%	7.4%
2016 Q1	738,831	741,404	(2,573)	0.4%	0.3%
2016 Q2	958,490	1,209,988	(251,498)	-1.5%	-0.1%
2016 Q3	907,583	661,903	245,680	2.4%	1.4%
2016 Q4	951,059	953,526	(2,467)	0.6%	0.5%

What happened?

- Historically Census Bureau did not report accrual data
- Starting **2015Q2** Census started reporting **accrual data** and assigning them to the 2nd quarter instead of the quarter in which it arrives with the goal of having the numbers look right on a fiscal year basis
- Assignment of accruals to the 2nd quarter causes tax revenue to look huge in the 2nd calendar quarter and small in the 3rd calendar quarter
- Census **did not correct** historic, pre-2015q2 data
- As a result we see rapid growth of **41.3%** in 2015q2 Census data, which is inaccurate
- Rockefeller Institute obtained data directly from Iowa officials and **corrected historic data.** However, accruals are reported in the quarter in which they occur (that's what Iowa officials provided).

Revenue trends: Bird's eye view

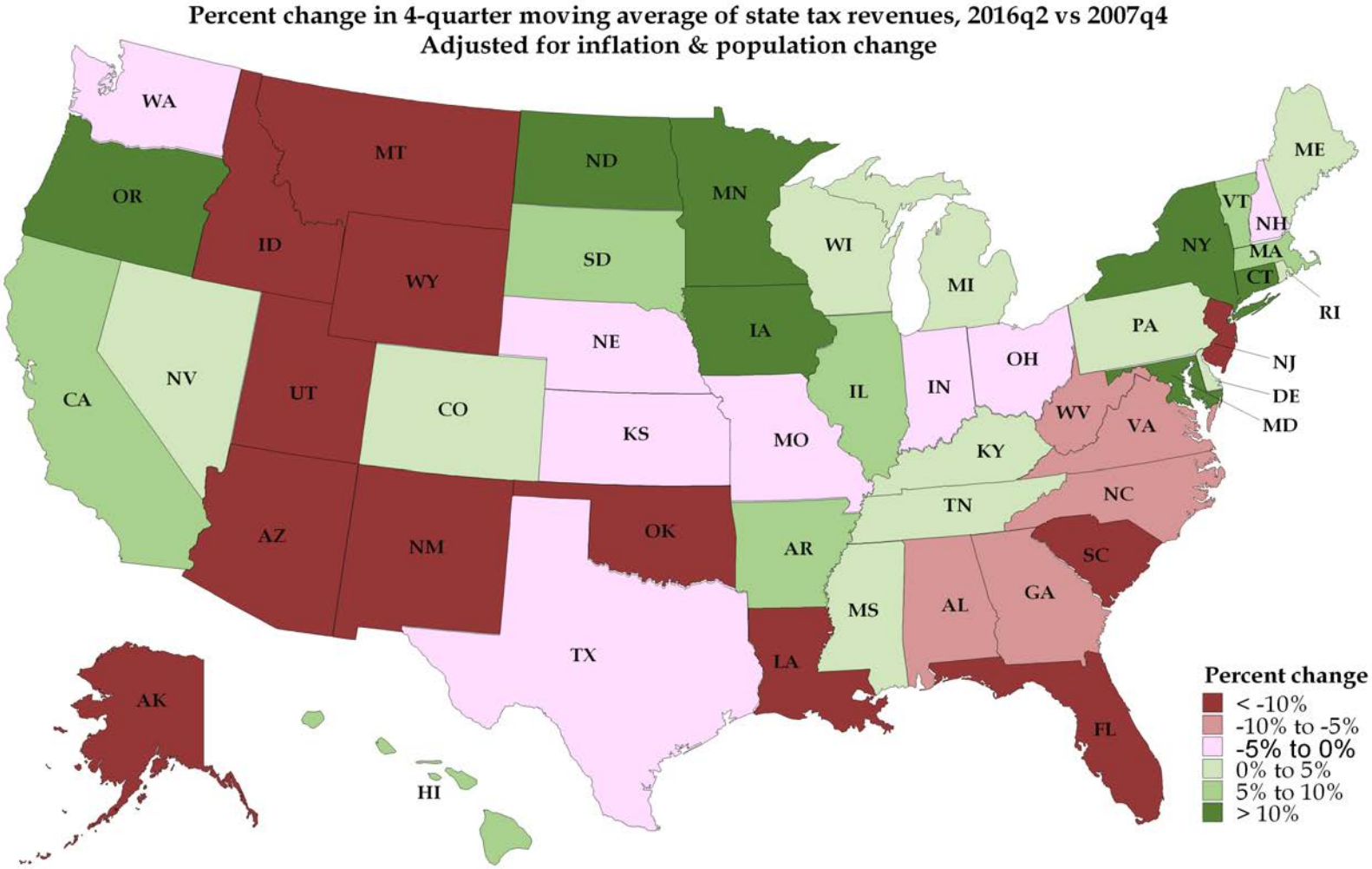
Slow tax revenue recovery



Source: Rockefeller Institute analysis of data from U.S. Census Bureau.

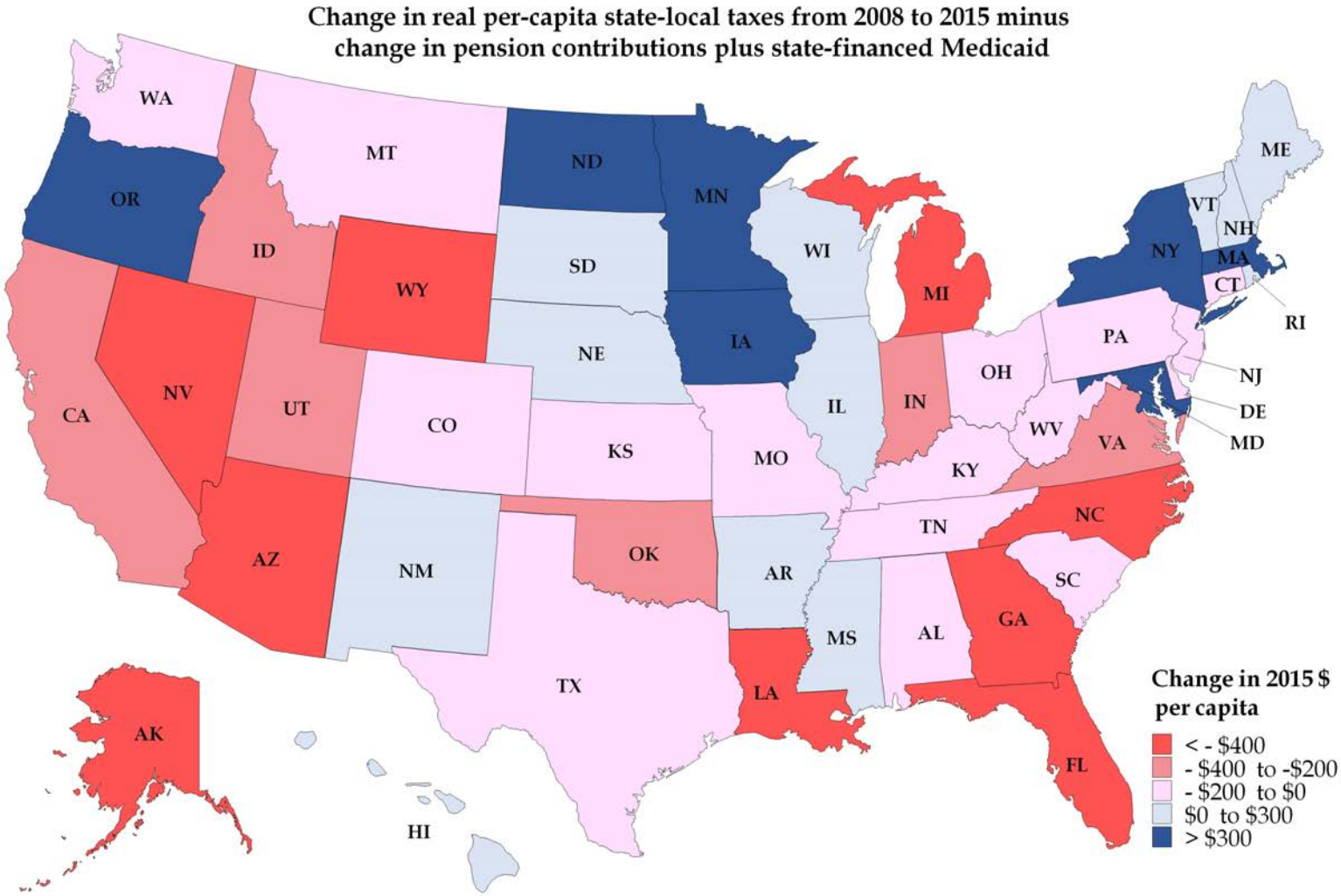
Notes: Data are shown only until the start of the next recession; 1980 & 1981 recessions are treated as single recession.

State taxes, adjusted for inflation & population growth, below pre-recession in 25 states at FY-end 2016



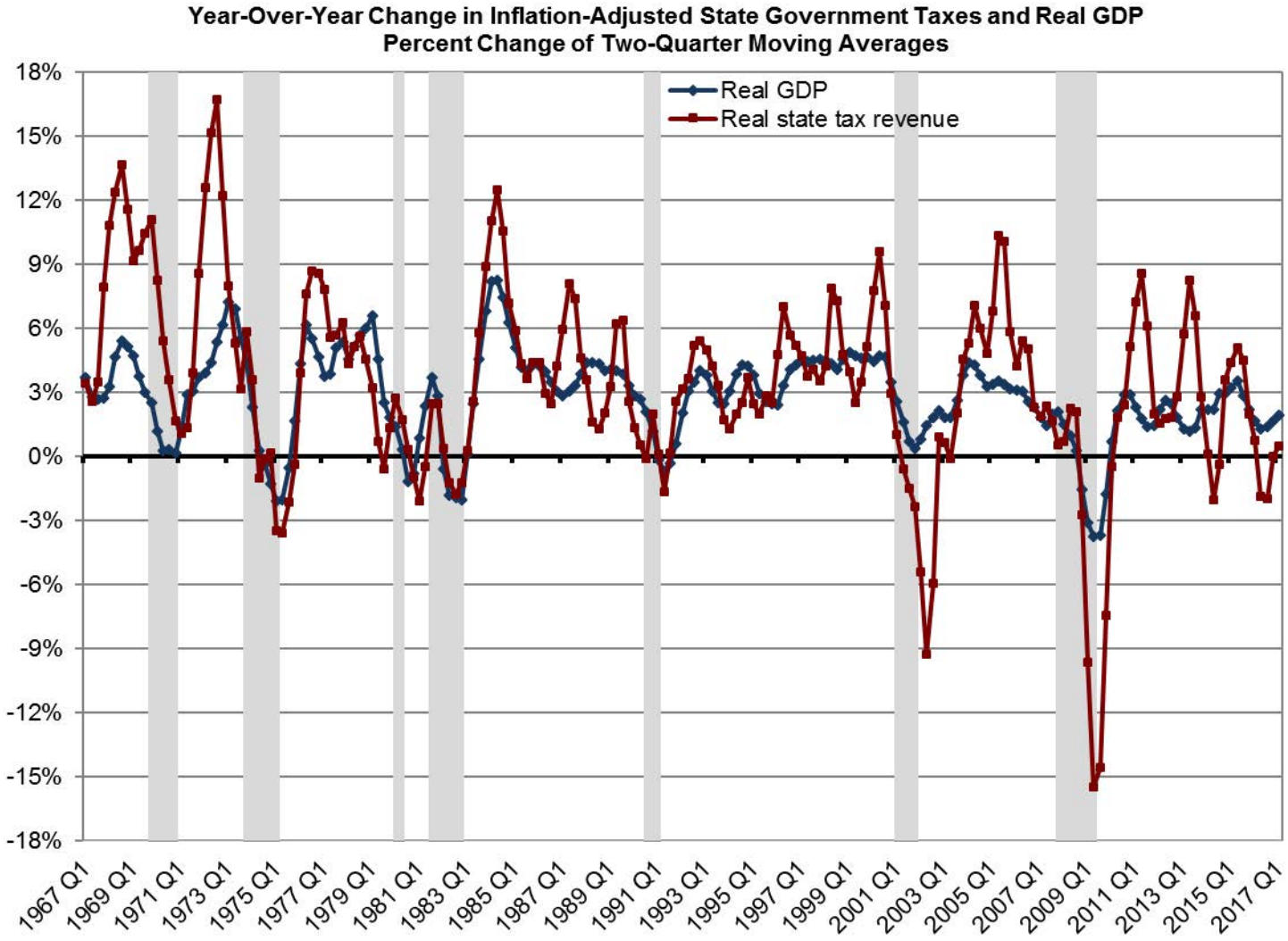
Sources: U.S. Census Bureau (tax revenue and population), Bureau of Economic Analysis (GDP price index).

Tax revenue growth hasn't kept up with pension contribution & Medicaid increases



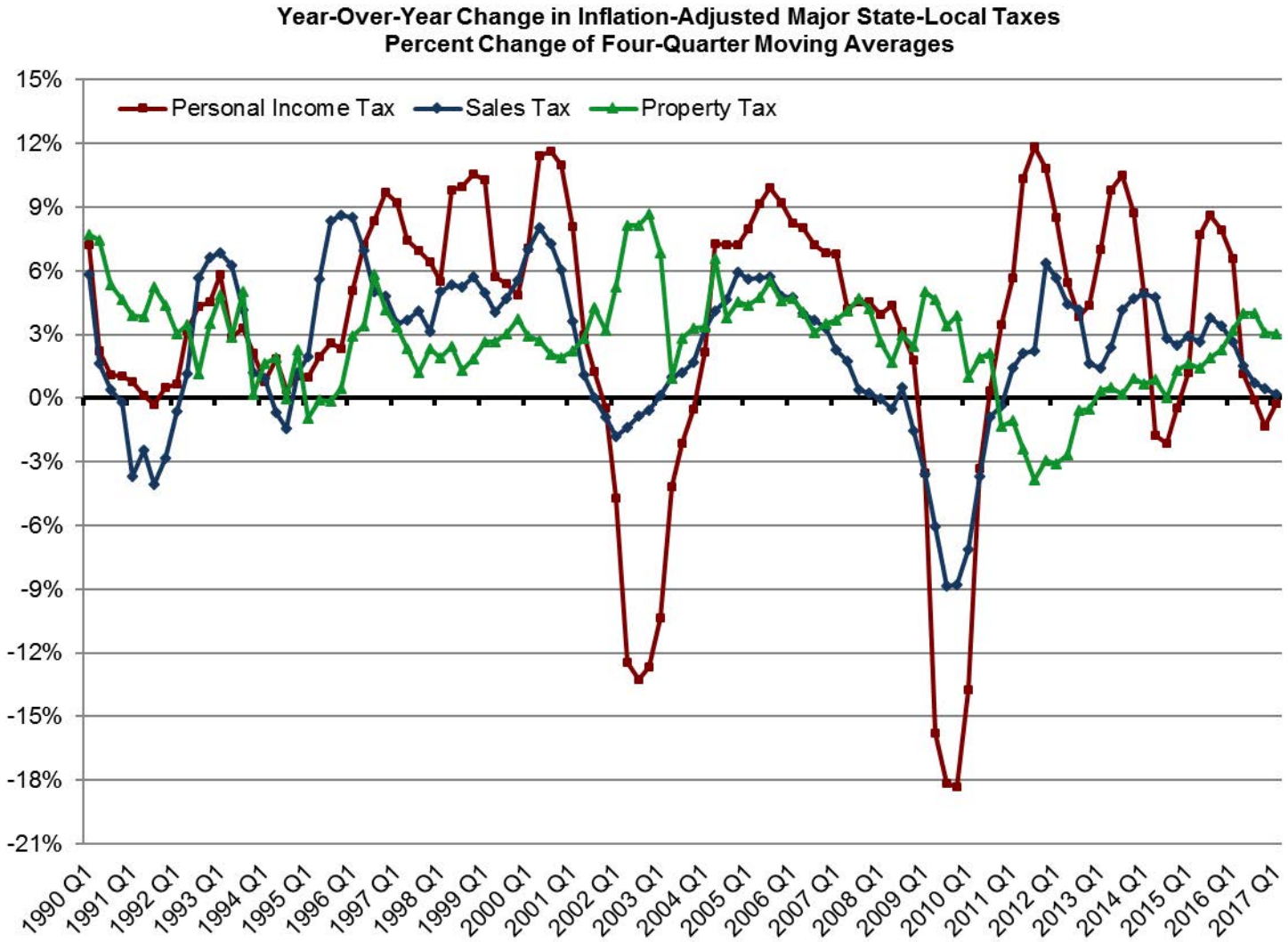
Sources: CMS (Medicaid), U.S. Census Bureau (pension contributions and population), and Bureau of Economic Analysis (GDP price index).

Real tax revenue growing more slowly than real economy



Sources: U.S. Census Bureau (tax revenue) and Bureau of Economic Analysis (GDP).
Notes: (1) Percentage change of two-quarter moving averages; (2) No legislative adjustments; (3) Recession periods are shaded.

PIT and sales tax 4qma have slowed, property tax (local) continues to do well



Sources: U.S. Census Bureau (tax revenue) and Bureau of Economic Analysis (GDP).
Notes: (1) Percentage change of 4-quarter moving averages. (2) Data are adjusted for inflation.

Revenue trends: Closer up

First quarter stronger than prior quarters, but…

- Strong PIT growth in CA and NY boosted national PIT growth by 2.7% pts (5.5% growth excluding these 2 states)
- PIT growth was driven by strong withholding growth and refund declines
- Data and state analysts suggest some income and taxes may have been shifted into Q1 from 2016
- Corp tax 6th consecutive decline, but Q1 driven by change in C corp federal filing date from March to April 15.
- Declines in total tax in 12 states

State and Local Government Tax Revenue Growth
Year-Over-Year Change
(Dollar amounts in millions)

	2016 Q1	2017 Q1	$ change	% change	Prior 4 quarters /2
State and Local Government					
Total, major taxes /1	**$317,533**	**$330,791**	**$13,258**	**4.2%**	**1.9%**
State Government					
Total state taxes	**$223,527**	**$230,381**	**$6,853**	**3.1%**	**0.5%**
Total major taxes	**$164,883**	**$170,421**	**$5,538**	**3.4%**	**0.6%**
Sales tax	70,785	72,396	1,611	2.3%	2.1%
Personal income tax	79,771	86,352	6,581	8.2%	0.3%
Corporate income tax	10,736	7,846	(2,890)	-26.9%	-7.1%
Property tax	3,591	3,827	236	6.6%	3.7%
Total, other state taxes	**$58,644**	**$59,959**	**$1,316**	**2.2%**	**0.2%**
Local Government					
Total major taxes	**$152,650**	**$160,370**	**$7,720**	**5.1%**	**3.5%**
Sales tax	19,059	19,284	225	1.2%	0.7%
Personal income tax	9,024	9,051	27	0.3%	0.1%
Corporate income tax	2,410	2,159	(251)	-10.4%	-7.6%
Property tax	122,157	129,876	7,719	6.3%	4.6%

Source: U.S. Census Bureau (tax revenue), with Rockefeller Institute of Government adjustments.
Notes: 1/ The Census Bureau only reports on major taxes of local government (sales, personal income, corporate income, and property tax). 2/Average of four prior year-over-year percent change.

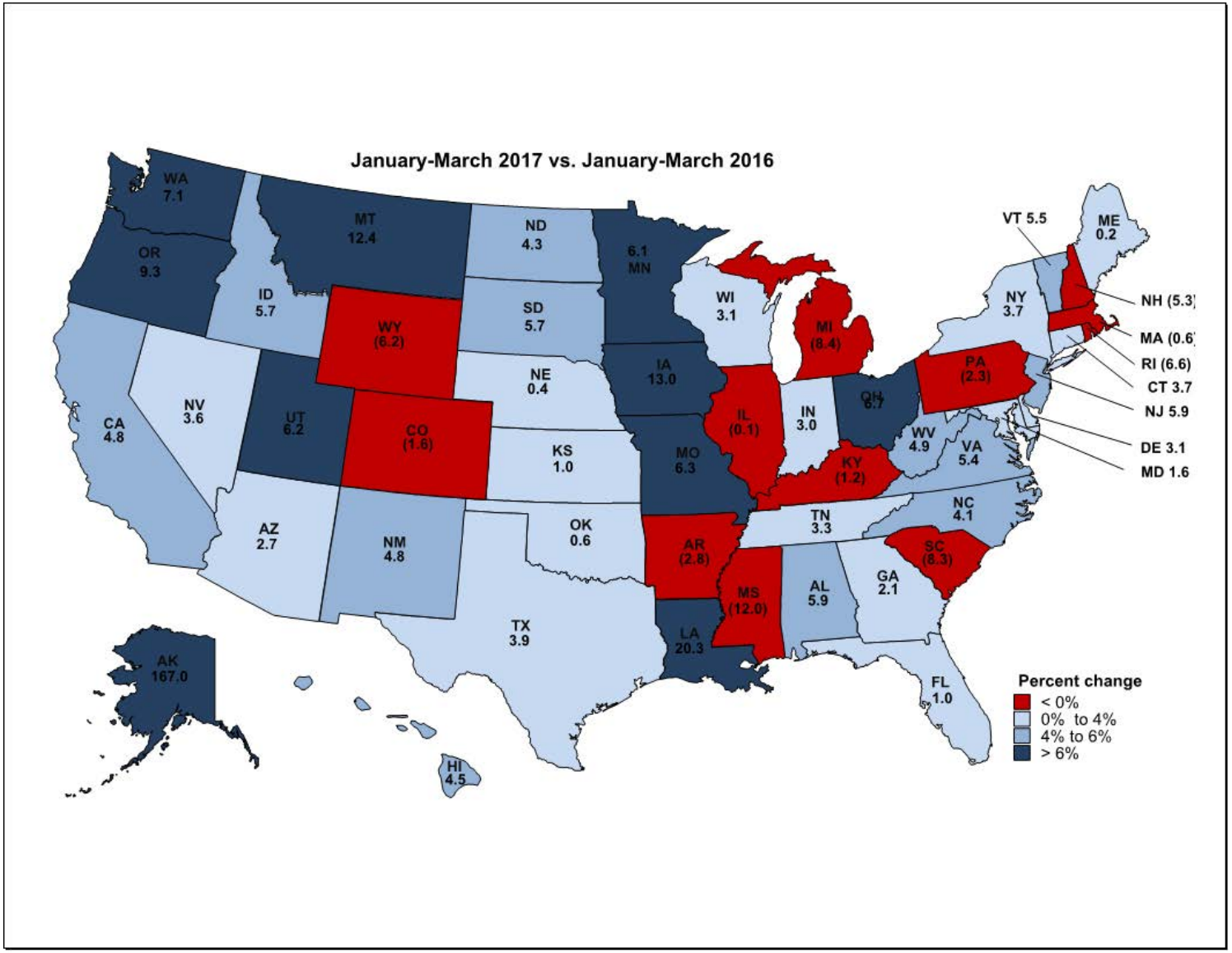
Regional breakdown of 2017q1

Percent Change in Quarterly State Tax Revenue					
January-March, 2016-2017, Percent Change					
	PIT	CIT	Sales	MFT	Total
United States	8.2	(26.9)	2.1	0.9	3.1
New England	1.1	(6.8)	4.2	(11.6)	0.3
Mid-Atlantic	9.7	(42.4)	2.7	6.1	2.3
Great Lakes	3.1	(26.4)	(1.3)	5.8	1.0
Plains	13.0	(31.2)	2.3	4.4	5.7
Southeast	4.9	(27.3)	5.1	(1.5)	2.4
Southwest	16.7	(92.4)	(0.1)	(1.0)	3.5
Rocky Mountain	1.5	(30.9)	3.4	5.5	2.1
Far West	12.3	(13.6)	1.6	(0.7)	5.5

Source: U.S. Census Bureau (tax revenue).

Notes: PIT – personal income tax; CIT – corporate income tax; MFT – motor fuel tax

State tax collections declined in 12 states in 2017q1

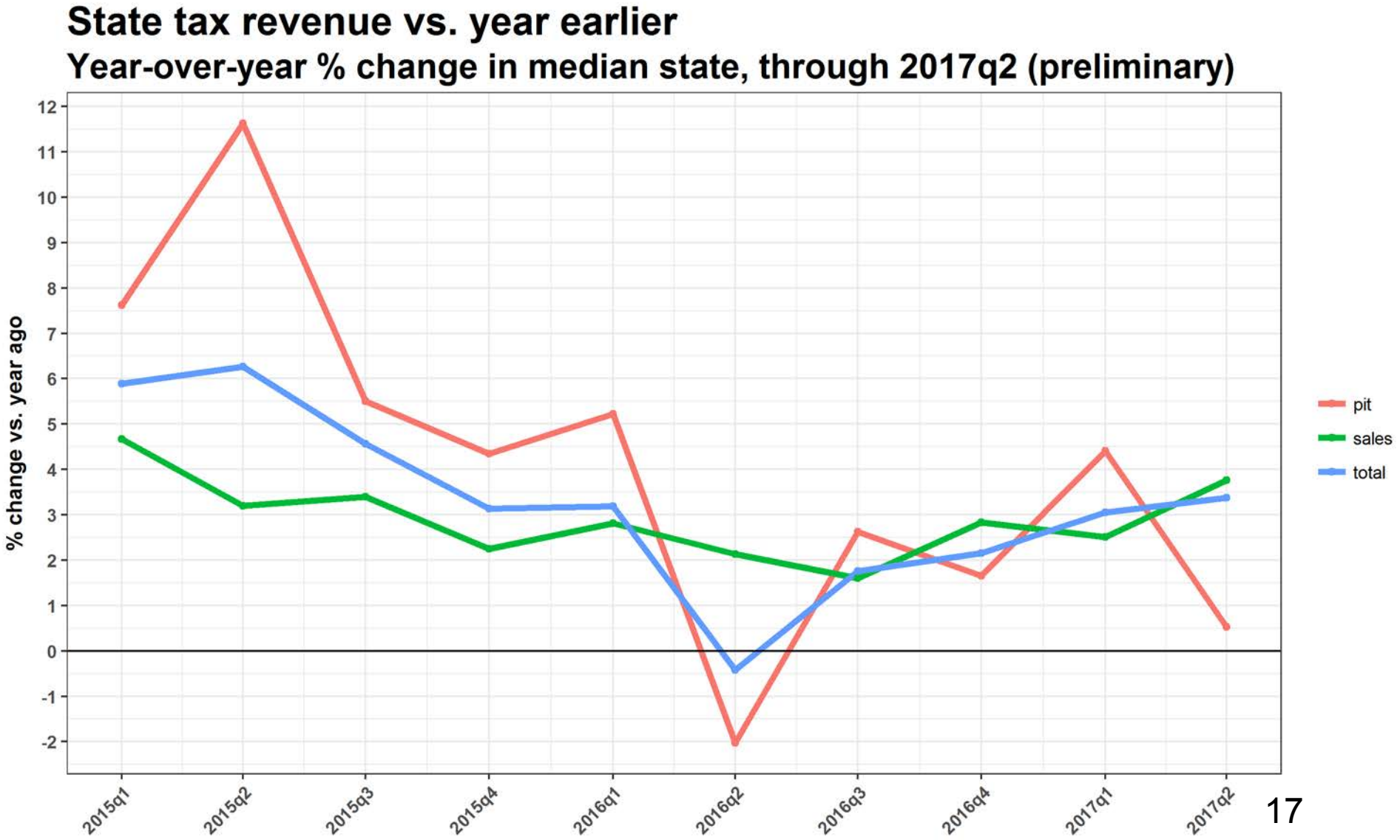


2017q2 (prelim) total was weak: April shortfalls more than offset strong withholding (+6.1%)

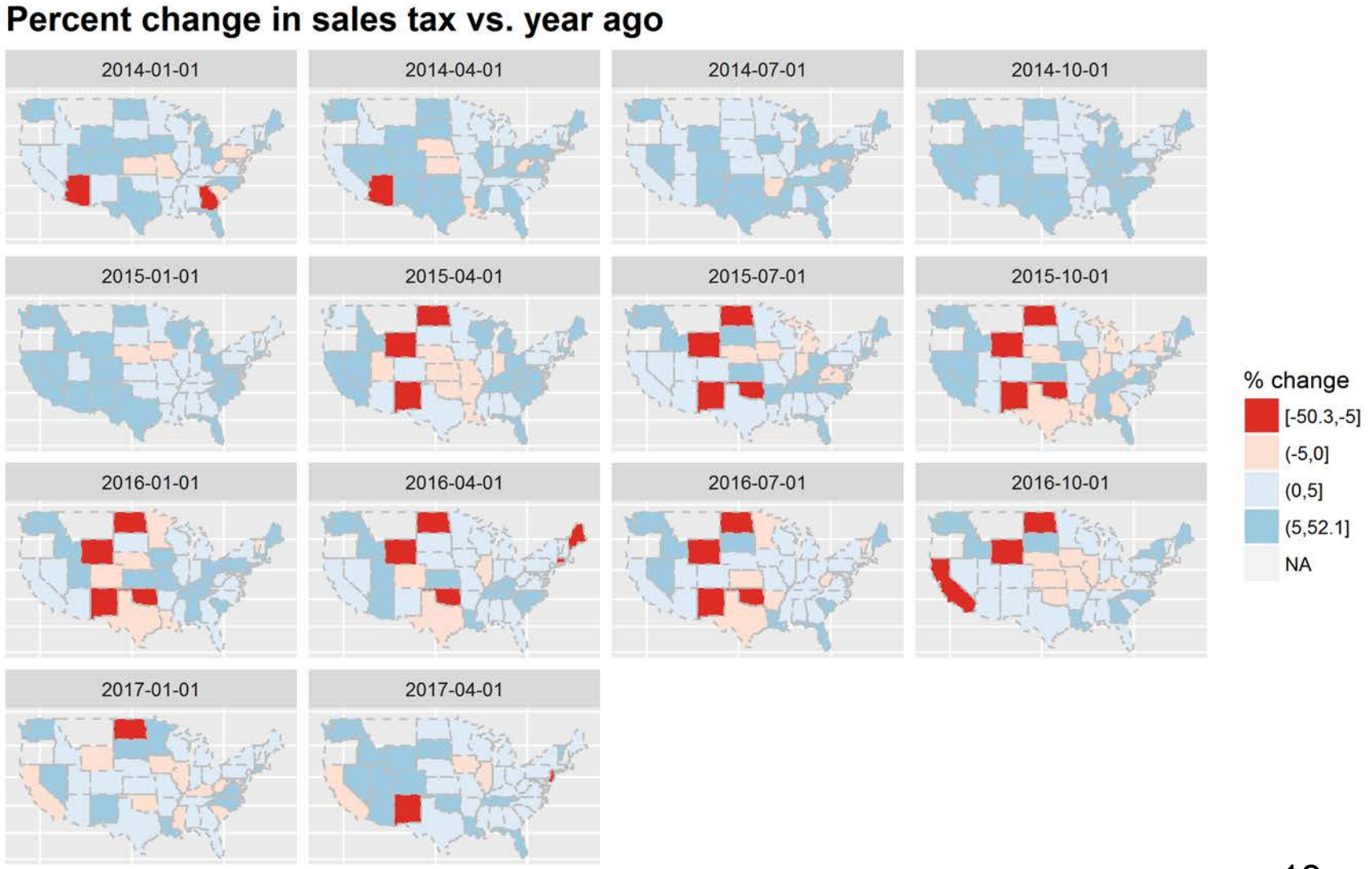
Preliminary Quarterly State Tax Revenue				
April-June 2016 vs 2017, Percent Change				
	PIT	CIT	Sales	Total
United States	(0.6)	15.7	3.2	2.3
New England	(1.3)	(7.7)	2.8	(3.4)
Mid-Atlantic	(5.7)	16.8	2.4	(0.9)
Great Lakes	2.4	34.5	2.3	4.0
Plains	(5.5)	13.0	2.2	(0.0)
Southeast	0.2	16.6	4.8	4.1
Southwest	(2.4)	(12.9)	4.8	1.7
Rocky Mountain	5.0	9.6	7.3	5.8
Far West	1.9	19.0	1.1	3.9

Source: Individual state data, analysis by Rockefeller Institute.

Recent improvement in sales tax in median state (not apparent in prelim data for sum of states)



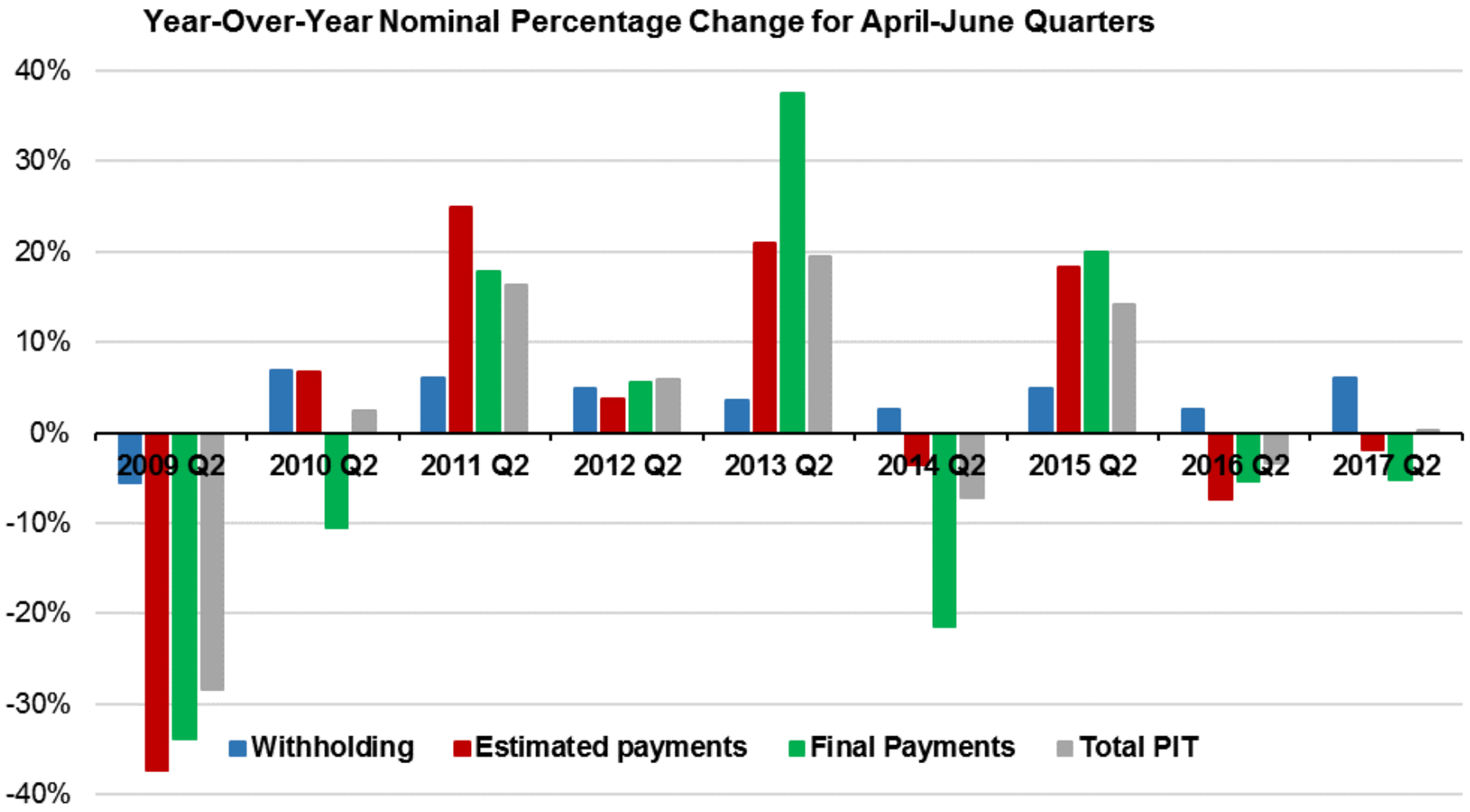
Sales tax appears to be improving in a fair amount of the country, but 2017q2 data are preliminary



Source: Rockefeller analysis of data from U.S. Bureau of the Census

April income tax shortfalls: Trump effect or weaker economy?

April-June Income tax quarter was weak



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

April-May PIT shortfalls were widespread

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.

Final returns are a residual

When they fall short, the search is on:

- What happened to income (and deductions) in the prior tax (calendar) year?
- Did something fall short in the well-measured economy? (wages, interest, etc.)
- Did something fall short in the very-hard-to-measure economy, perhaps driven by changes in taxpayer behavior?

In other words, Trump Effect, or Weaker Economy? (or both)

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

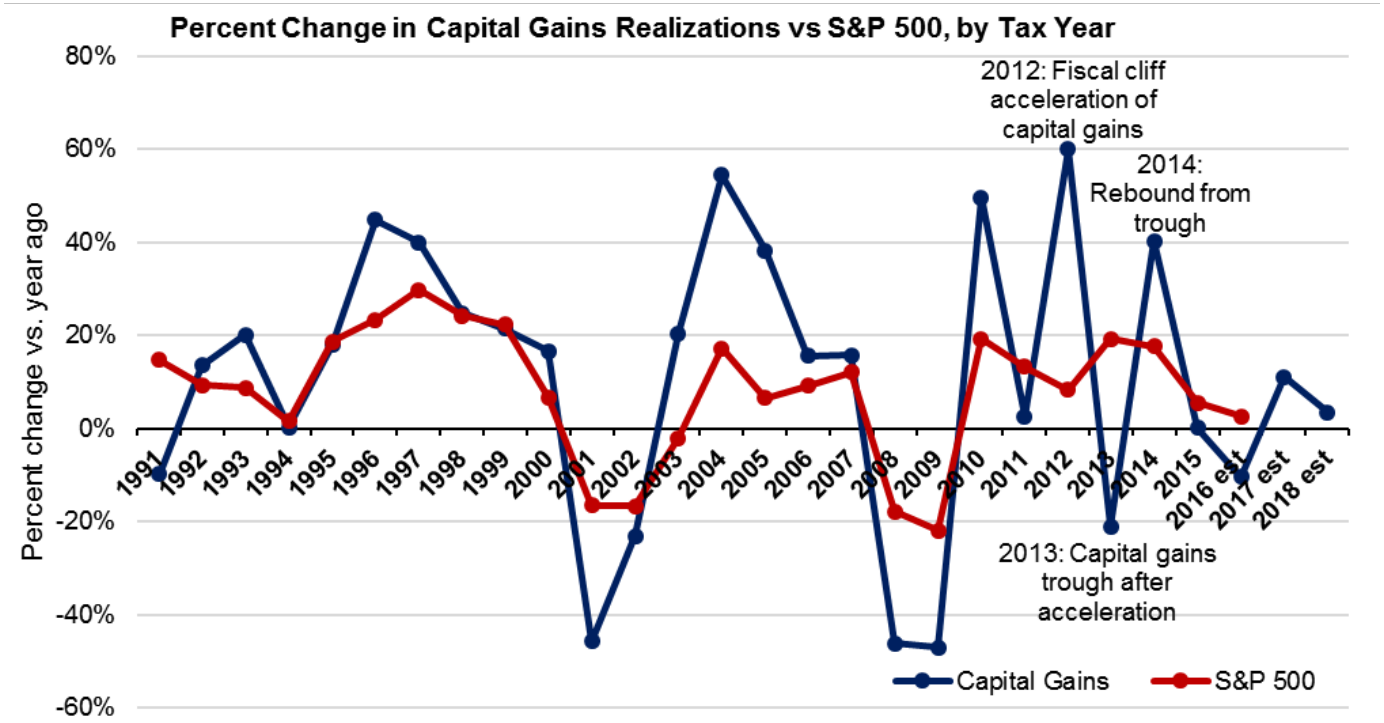
Potential explanations and implications

- Trump effect
  - Taxpayers in late 2016 see promises of rate reductions, elimination of ACA net investment income tax (3.8%), elimination of SALT deduction
  - Incentive to defer income out of 2016 (esp. cap gains and bonus wages), accelerate deductions into 2016, and even pay S&L taxes early
  - Taxpayers might realize deferred 2016 income in 2017, or defer/accelerate again fearing tax-cut failure in 2017. Implications for April 2018 returns, and for Dec/Jan estimated
- Weaker economy
  - Forecasters stand on shifting sands
  - Prelim economic data for 2016, at time forecasters had to put pencils down, were subject to significant uncertainty
  - Eg, initial BEA 2014 wage estimate of 4.3% later revised to 5.1%; initial 2014 dividends estimate of 4.4% revised to 16.6%
  - If 2016 economy was weaker than thought, could bring forecasts down, too

Income shifting and capital gains

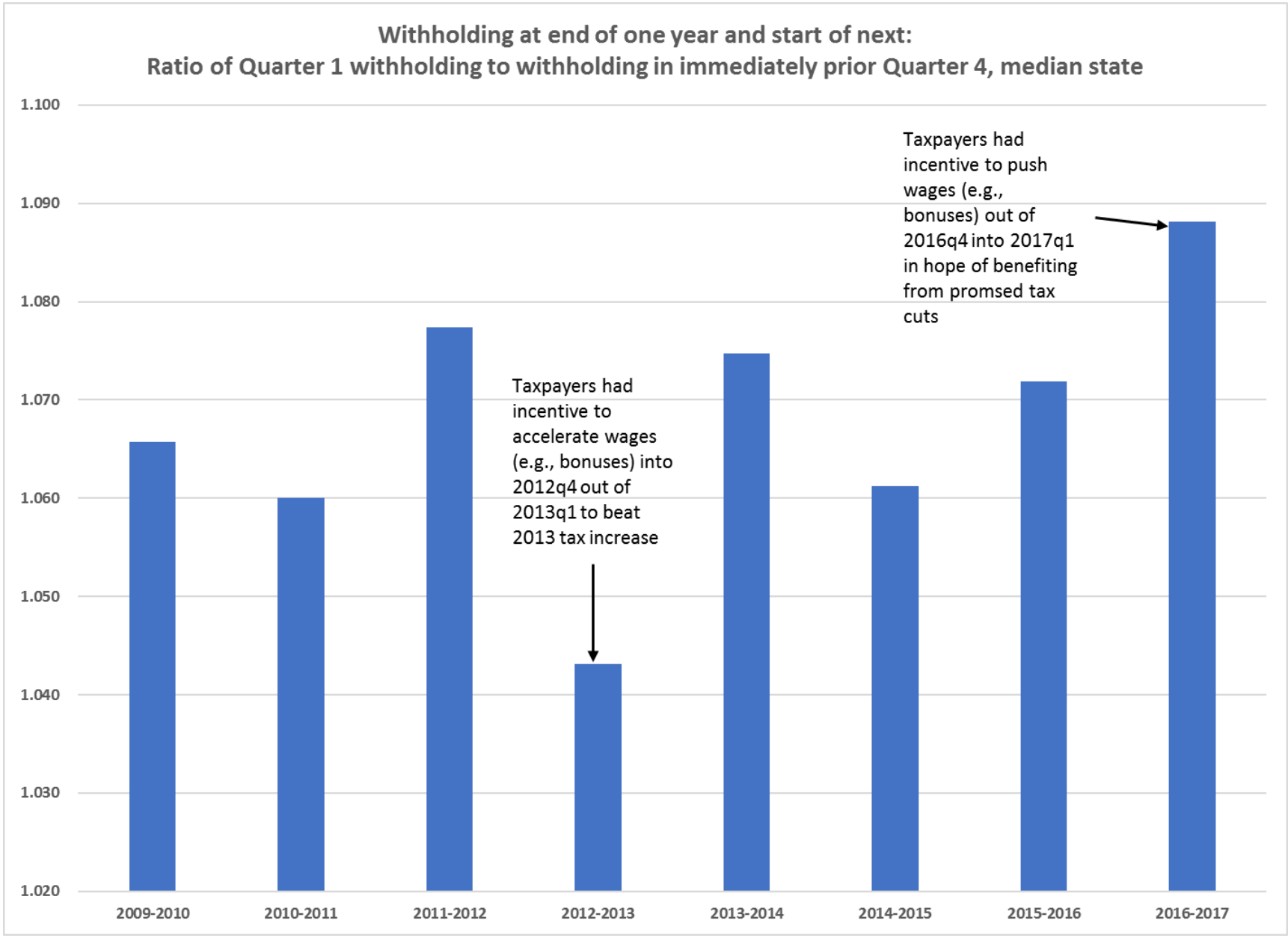
In concept, taxpayers can shift many kinds of income, but…:

- "Regular" wages – not so easy - work less now, more later
- Bonus wages - easier – firm could shift out of q4 into q1
- IRA distributions – maybe not so hard
- Dividends - boards of closely held firms could delay payouts
- Capital gains - easiest - defer stock sales (rearrange assets); concentrated – 70% of cap gains claimed by just 0.7% of taxpayers



Sources: Congressional Budget Office, https://www.cbo.gov/about/products/budget-economic-data#7 and S&P500 from Yahoo Finance, http://finance.yahoo.com/q/hp?s=^GSPC.

Were wages and withholding pushed out of 2016q4 into 2017q1? A simple view of data says this merits deeper investigation.



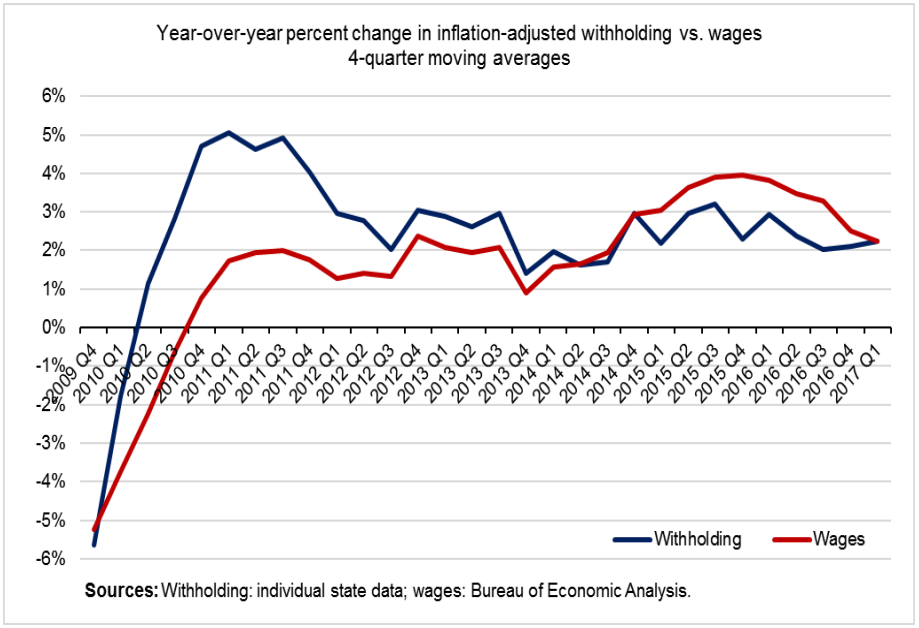
The past isn't what it used to be

In a mid-July report we showed the top graph and said, "in recent quarters withholding has been growing more slowly than wages…The relatively slower growth of withholding could suggest that wages are not as high as economic data suggest"*

In the July 28 benchmark revision, BEA incorporated QCEW data and adjusted wages downward significantly. The bottom graph shows the June-release and latest wage growth rates. (CAUTION: Different time period than top graph.)

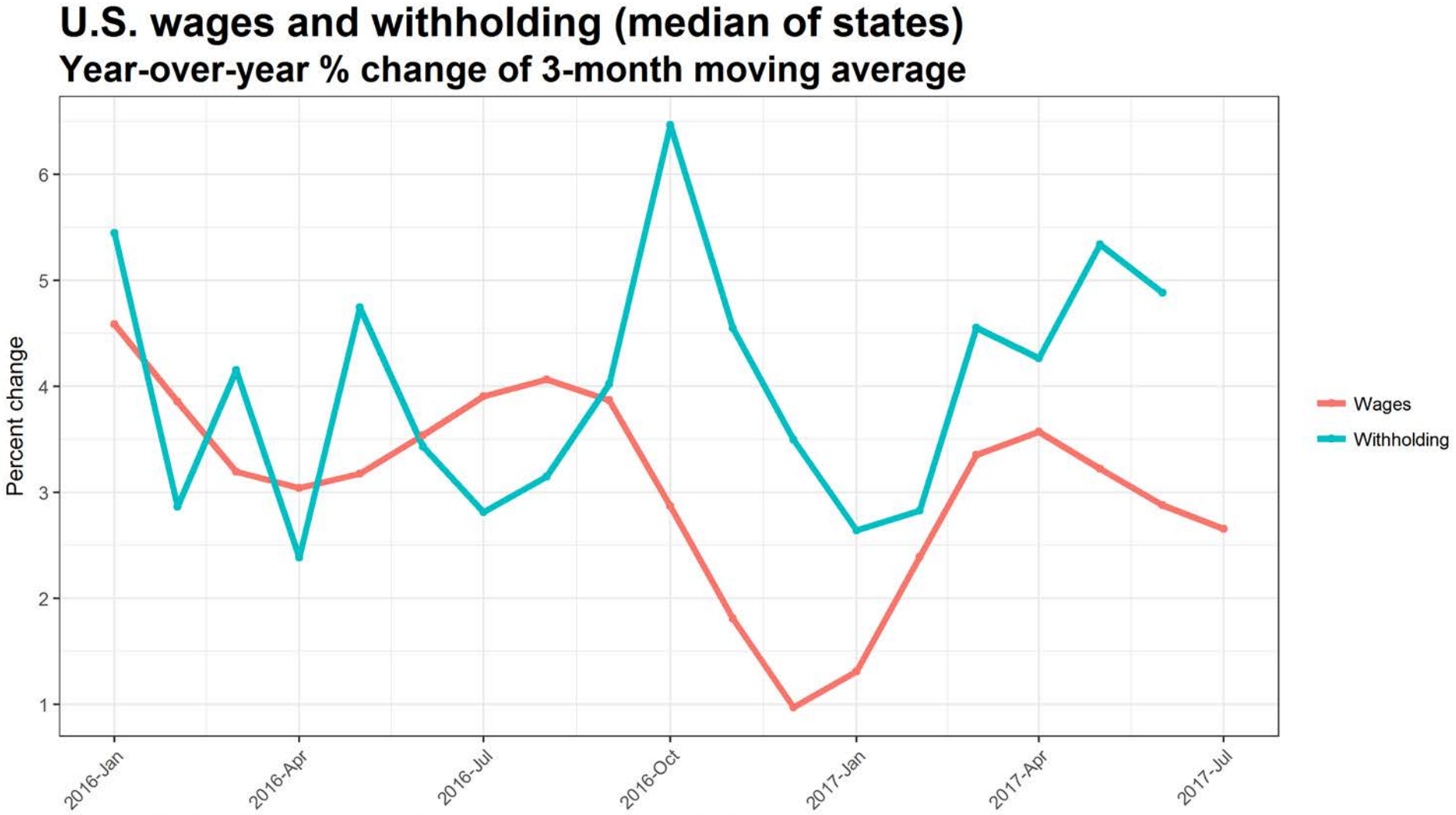
The 2016 calendar year growth rate is now 2.9%, down from 3.9% in prior release.

A good example of tax revenue as an indicator of the economy.



* Donald J. Boyd and Lucy Dadayan, "Shortfalls on States' April Tax Returns: Trump Effect, Weak Economy, or Both?", *By The Numbers Report*, Rockefeller Institute of Government, July 17, 2017.

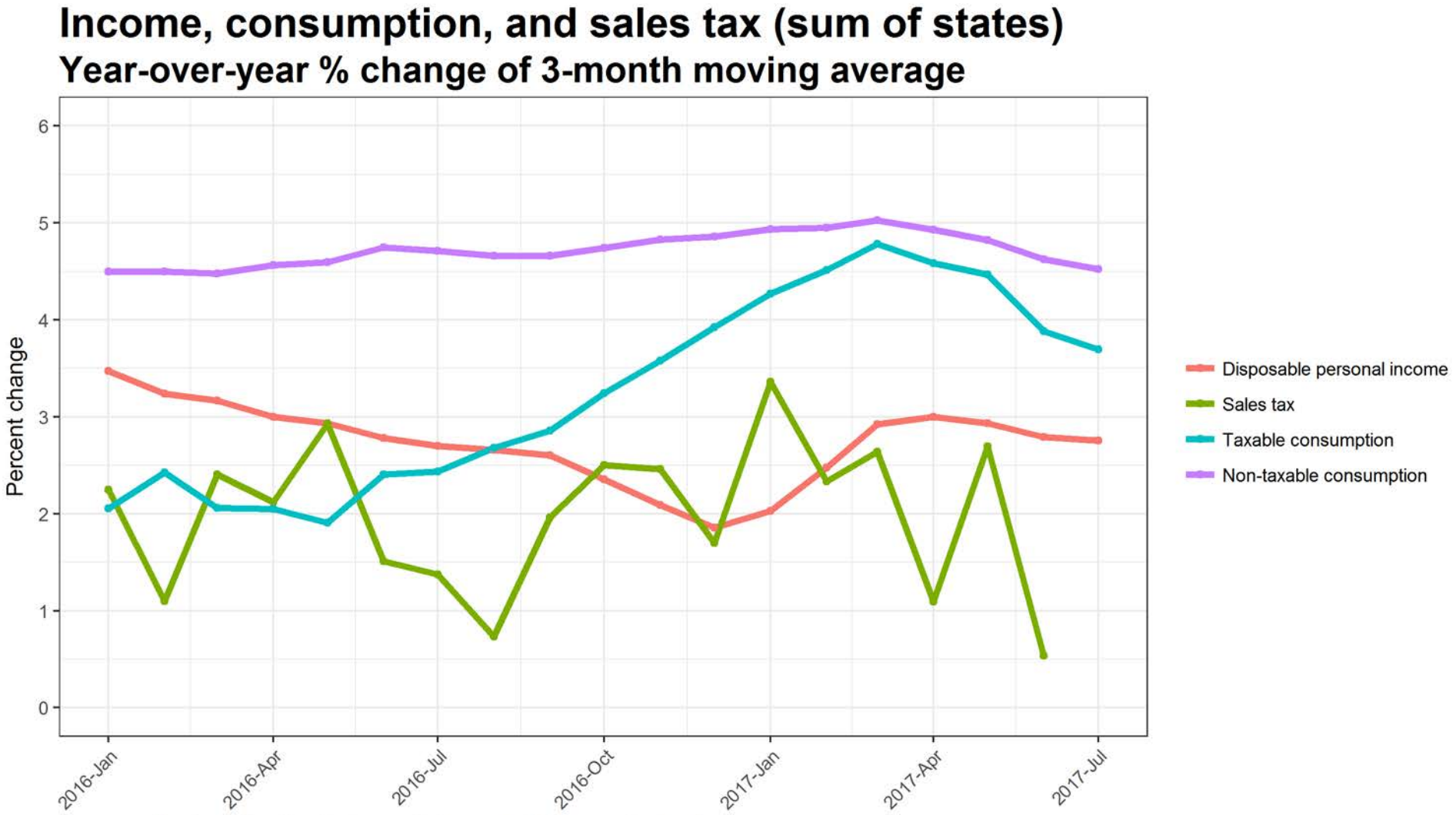
Revised data now show withholding growing faster than wages



Source: Rockefeller Institute and Bureau of Economic Analysis
Note: Taxable consumption reflects judgment about items commonly taxed by states.

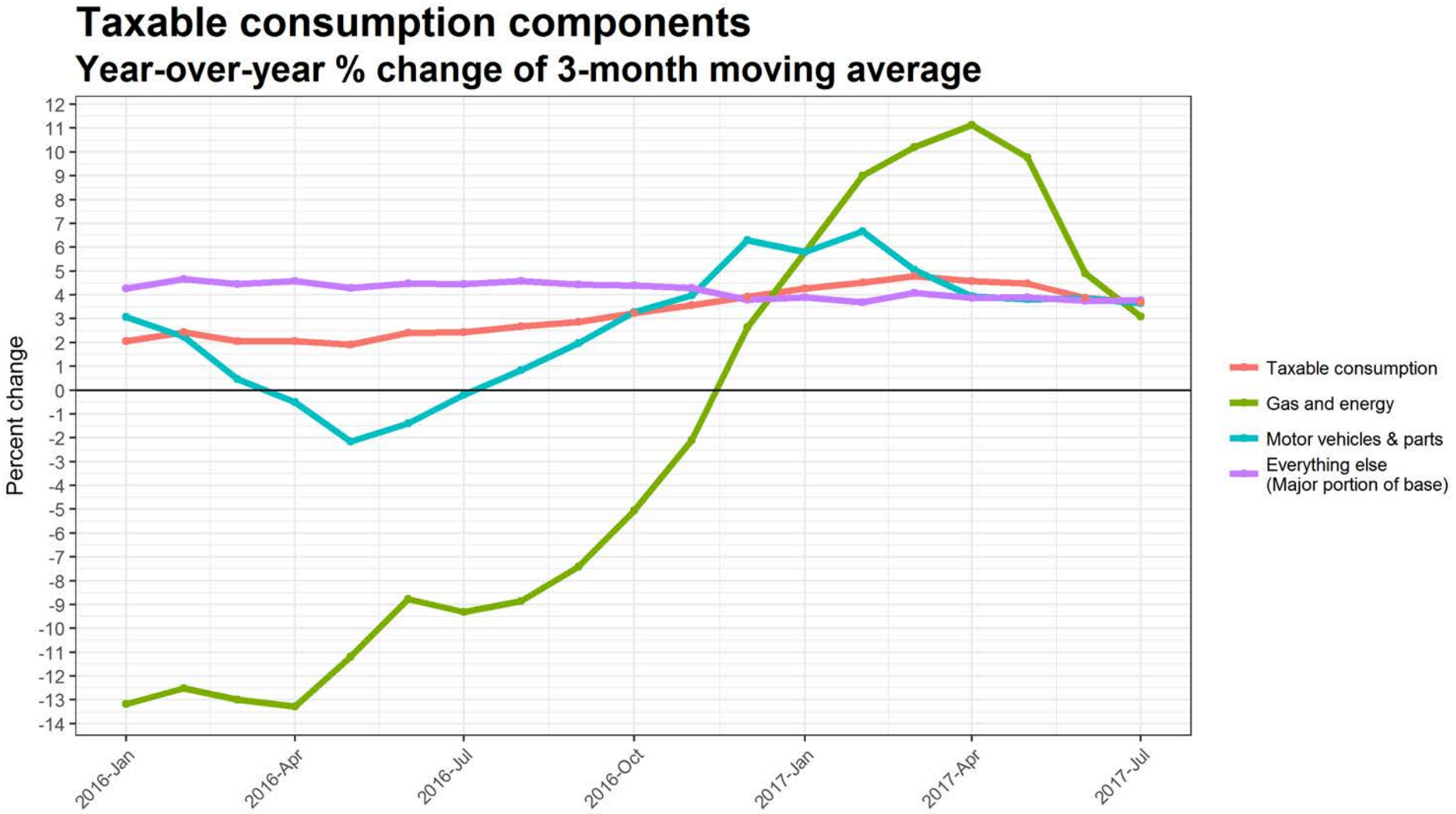
Sales tax and consumption

Sales tax growing more slowly than commonly taxed consumption. Slower than income, recently



Source: Rockefeller Institute and Bureau of Economic Analysis
Note: Taxable consumption reflects judgment about items commonly taxed by states.

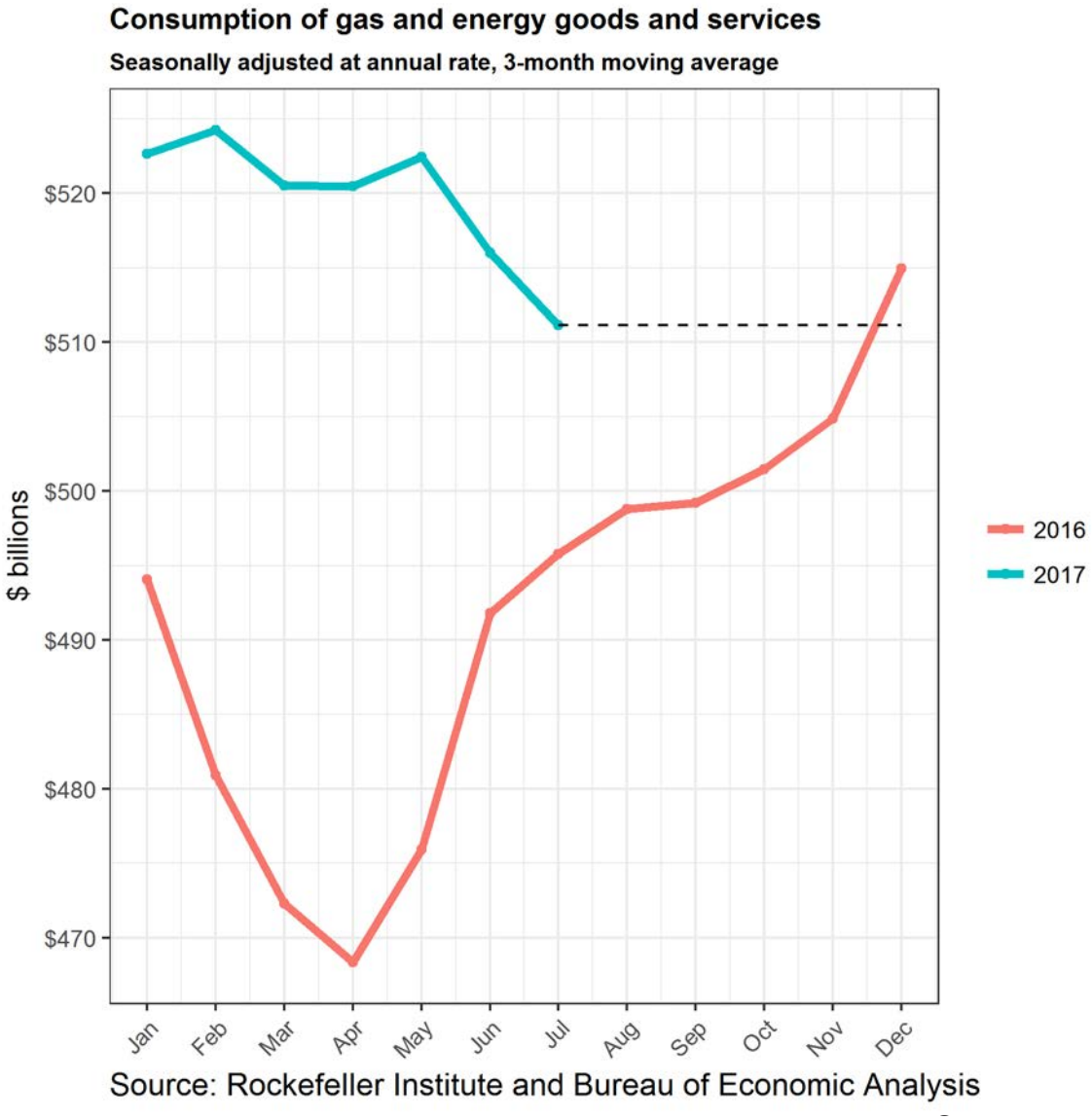
"Commonly taxed consumption" boosted by energy and autos late 2016 early 2017. That boost has gone.



Source: Rockefeller Institute and Bureau of Economic Analysis
Note: Taxable consumption reflects judgment about items commonly taxed by states.

Gas and energy comparisons vs. year ago are harder

- Consumption of gas and energy relative to year ago no longer is compared to extremely depressed levels
- Thus, it is unlikely to provide the large boost to year-over-year growth we saw in late 2016 and early 2017.
- U.S. Energy Information Administration expects only modest growth (https://www.eia.gov/outlooks/steo/report/us_oil.cfm)



Some thoughts about the future

- Not in the business of doing macro forecasts. Consensus real growth in the 2-2.5% range, inflation 2% or less. Suggests nominal growth 4+%
- Econ data show recent yoy wage growth slowing. Stock market strong YTD in 2017. But I think strong incentive to defer income again, to 2018. So I'd be very cautious about PIT.
- Sales tax some signs of improvement in some states. Taxable consumption had been boosted by energy and autos, but that boost has gone away. Trend toward internet-based purchases and decline of retail appears to have accelerated. Again, I'd be cautious.
- States continue to face other long-term pressures, as you no-doubt know – pensions, Medicaid, infrastructure.

Preparing to analyze federal income tax reform

- Building a microsimulation database designed to represent the 50 states
- Major steps:
  1. Fortify 2006 SOI public use file to represent states. (Update to later SOI PUF periodically.)
     a) Put state codes on returns without codes (generally >= $200k AGI)
     b) Enhance number of observations < $200k AGI in each state, using copies of returns from similar states (based on Euclidean distance)
     c) Calibrate to hit ~23 published SOI values per state per income range, using optimization methods
  2. Extrapolate to 2015, hitting published 2015 values by state and income range, again with optimization methods
  3. Project to 2018
  4. Analyze with federal income tax models
  5. Potentially in future: Extend to include state income tax models
- Done with step 1; nearly done with step 2
- Would love to share prelim results with interested states after step 2 is done, for critiquing.
- If interested, please drop Lucy and me an email

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