



# State Tax Revenue Forecasts and Actual Trends in the Wake of the TCJA

FTA Revenue Estimation Conference, 2018

October 8, 2018

Lucy Dadayan

October 8, 2018

Lucy Dadayan



# State Tax Revenue Forecasts & Actual Trends

TCJA, South Dakota vs. Wayfair, Sports Betting

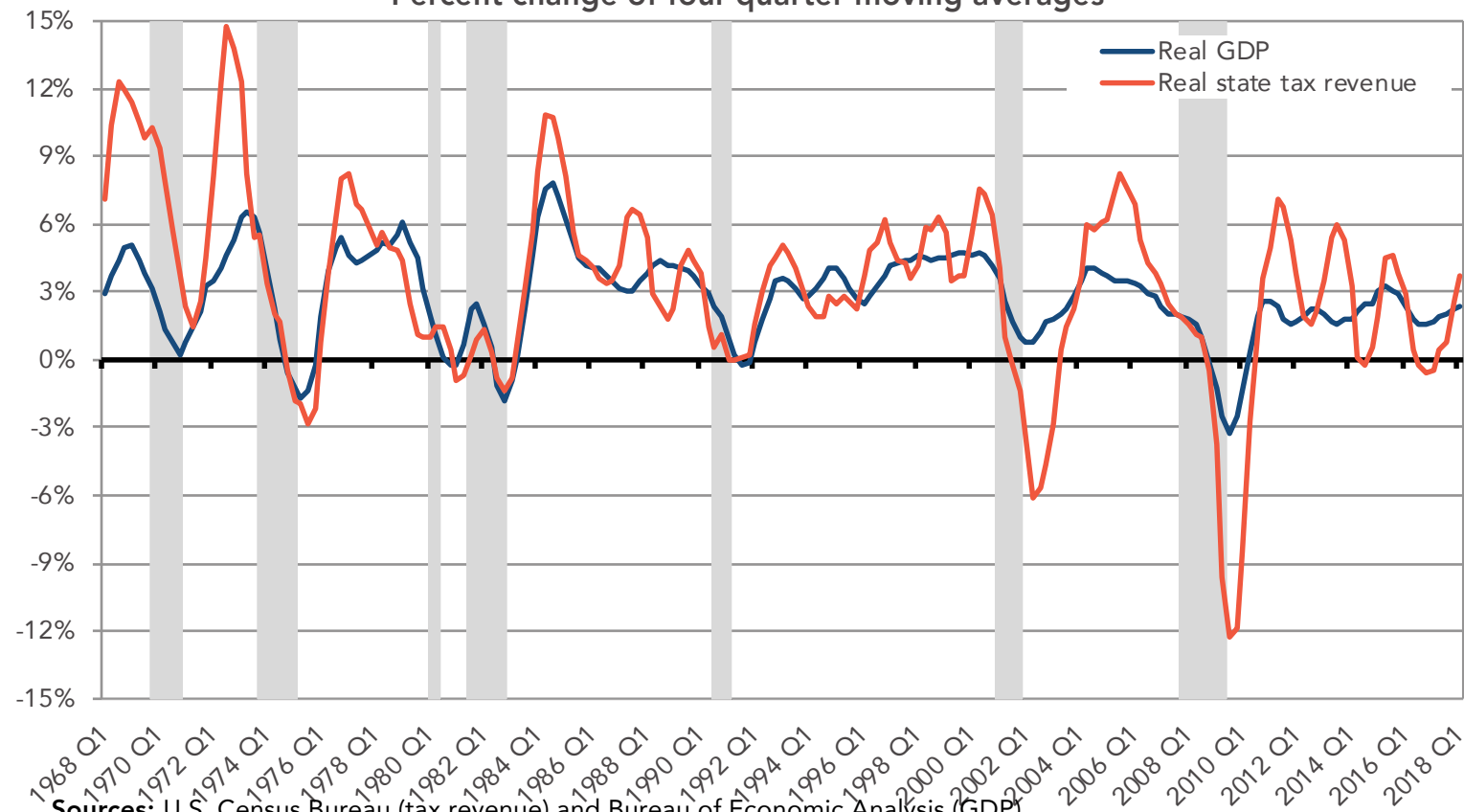


# Overview: State fiscal and economic challenges

- 10+ years later states still feeling the pain of the Great Recession
  - State-local taxes only 13.4% above prior peak
- Variables that drive revenue hit harder than broader economy, harder than before
- State government tax recovery is weak and slow
  - **Sales taxes:** above pre-recession level, but stagnant
  - **Personal income taxes:** stronger recovery, but quite volatile
  - **Corporate income taxes:** **NO** recovery
  - **Local property taxes:** continued but soft growth
- Oil & coal-dependent states hit hard
  - Declines in taxes & employment
- Growing uncertainty due to TCJA and other federal policies

# State taxes & the economy: States taxes are far more volatile

Year-over-year change in inflation-adjusted state taxes and real GDP  
Percent change of four-quarter moving averages



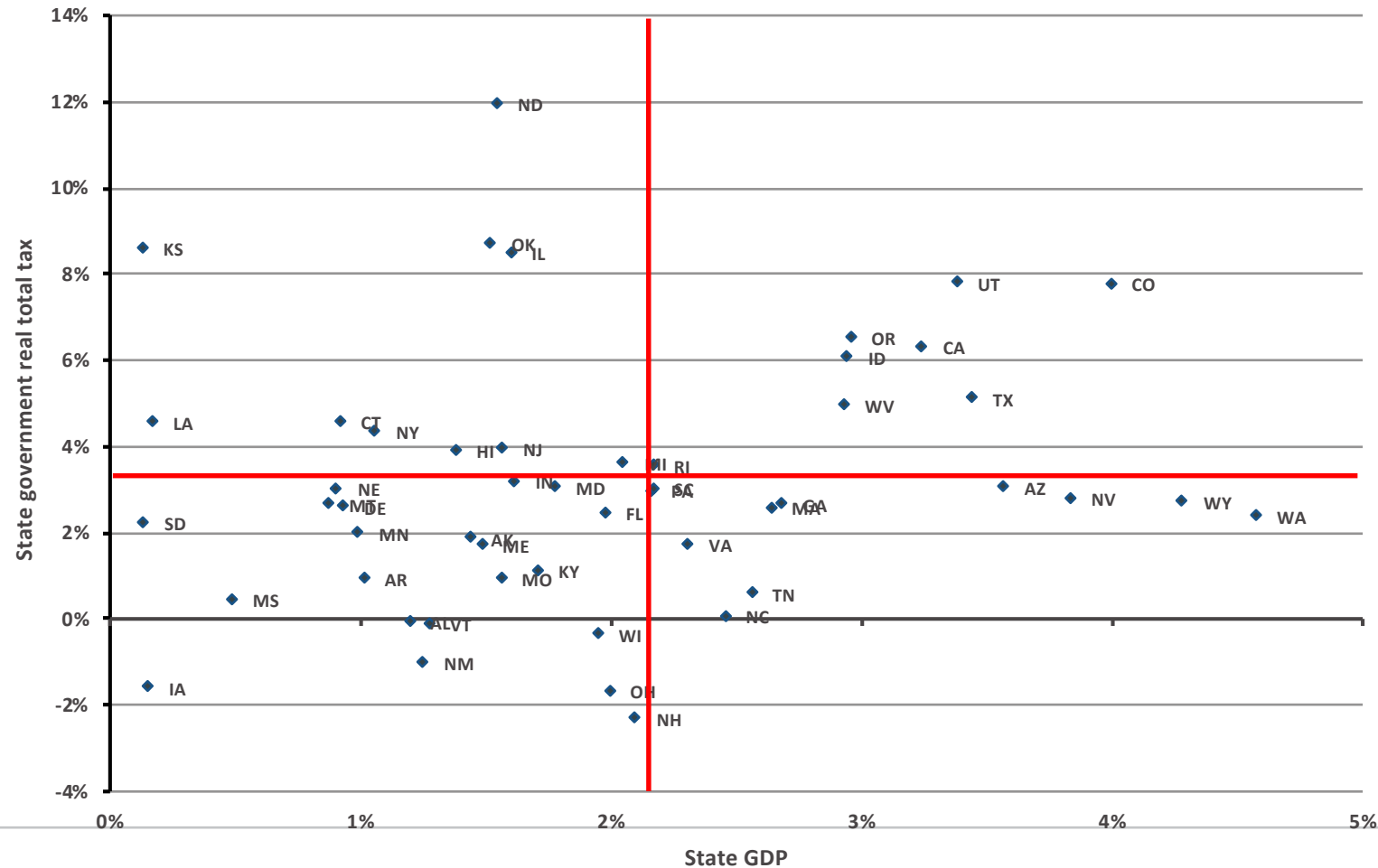
Sources: U.S. Census Bureau (tax revenue) and Bureau of Economic Analysis (GDP).

Notes: (1) Percentage change of 2-quarter moving averages; (2) No legislative adjustments; (3) Recession periods are

# State Tax Revenues vs. State GDP: Growth disparity & large disparities among the states

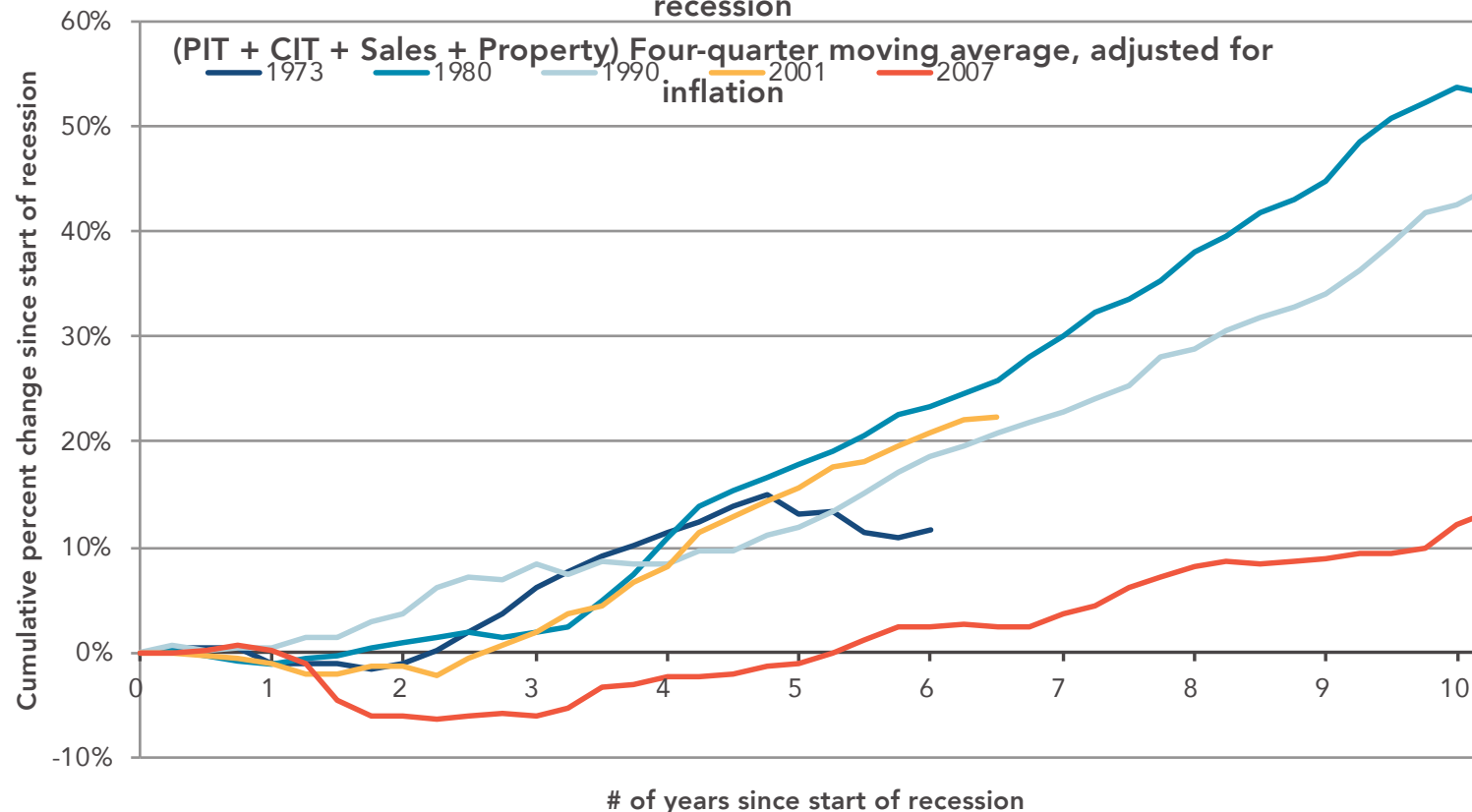


Year-over-year percent change in inflation-adjusted state taxes and real GDP  
Percent change of 4-quarter moving averages, 2018Q1 vs 2017Q1 (red lines are for U.S. average)



# State & local government tax revenues: Only 13.4% above prior peak

Percent change in state & local government major tax revenue since start of recession



Sources: U.S. Census Bureau (taxes) and Bureau of Economic Analysis (GDP).

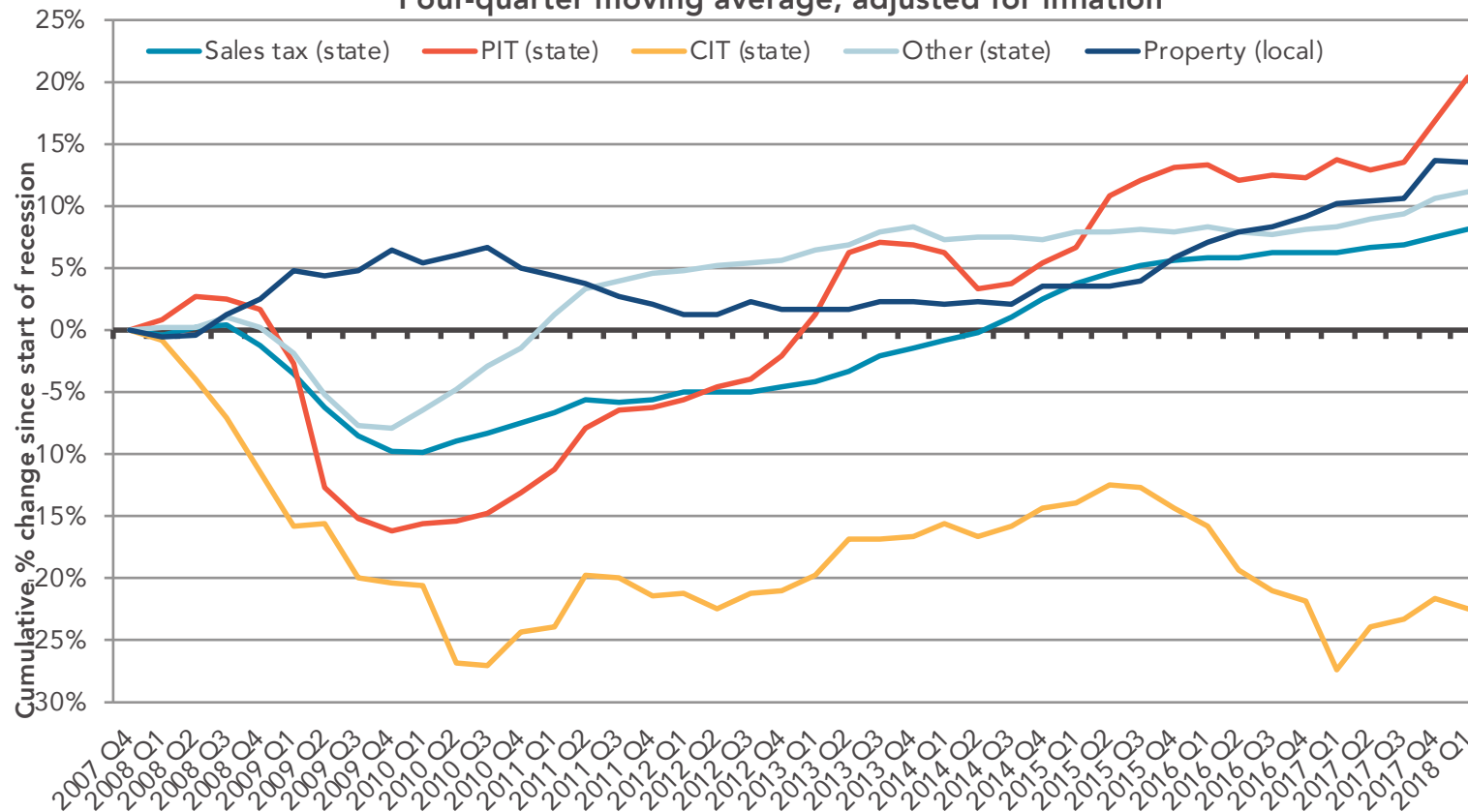
Notes: Data are shown only until the start of the next recession; 1980 & 1981 recessions are treated as single recession

# "other"

## taxes; corporate incomes taxes still below prior peak



Major tax revenues since the start of the 2007 recession  
Four-quarter moving average, adjusted for inflation



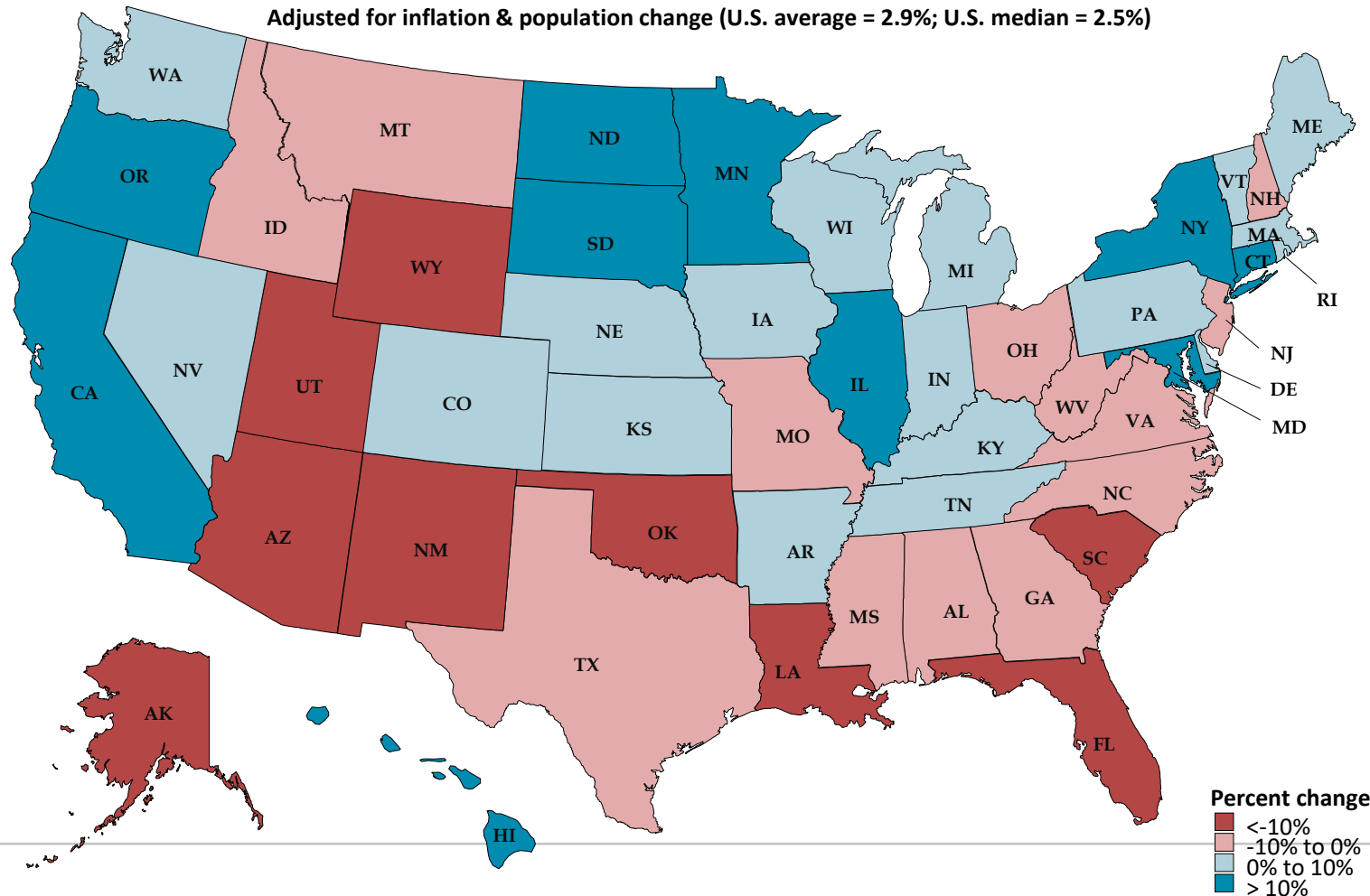
Sources: U.S. Census Bureau (taxes) and Bureau of Economic Analysis (GDP).

Notes: (1) 4-quarter moving average of inflation-adjusted tax revenue; (2) No adjustments for legislative changes.

# State taxes, adjusted for inflation & population growth, still below pre-recession in 22 states



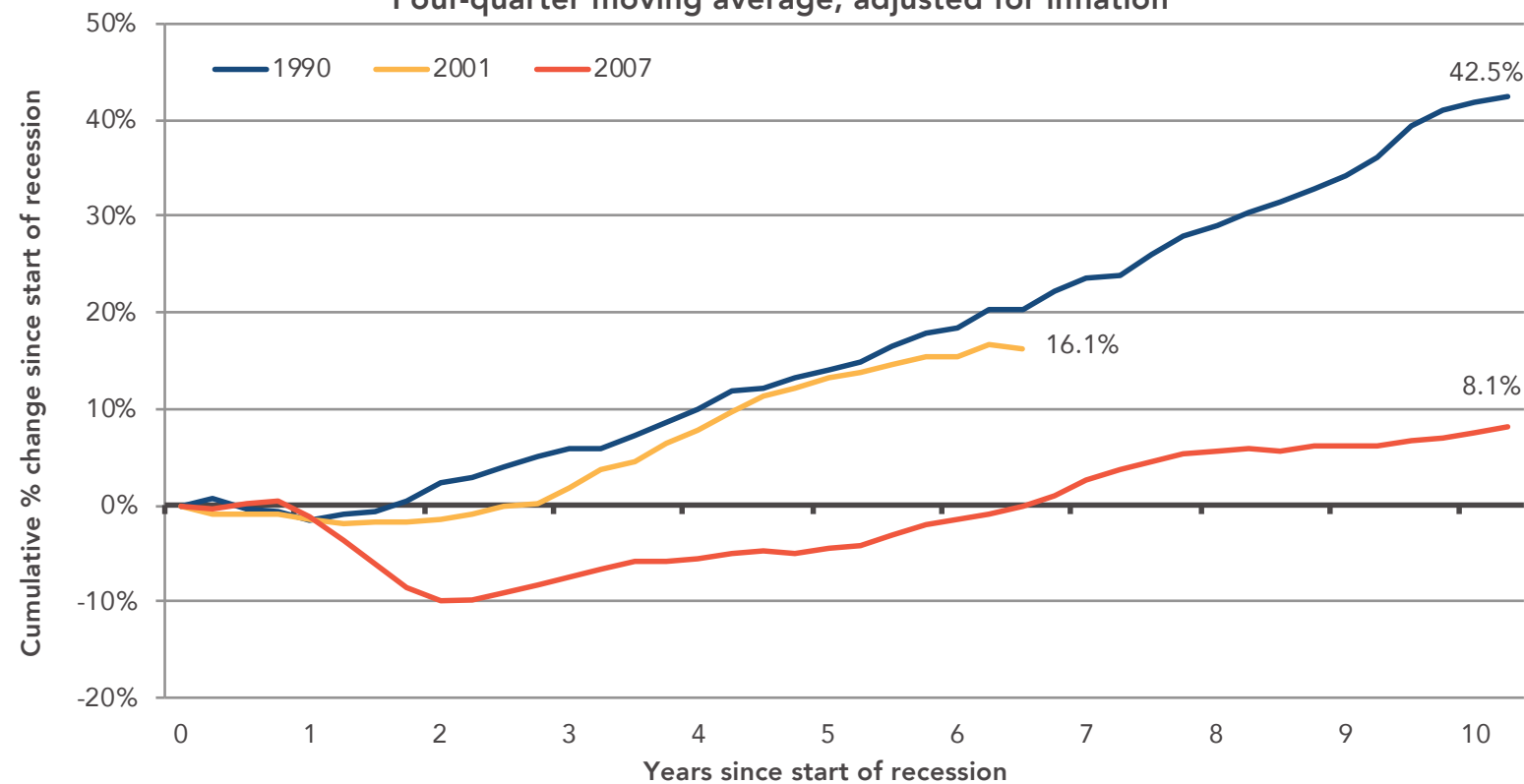
Percent change in 4-quarter moving average of state tax revenues, 2018q1 vs 2007q4  
Adjusted for inflation & population change (U.S. average = 2.9%; U.S. median = 2.5%)





# State government sales taxes: Recovery is extremely weak

State sales tax revenue since the start of the recession  
Four-quarter moving average, adjusted for inflation



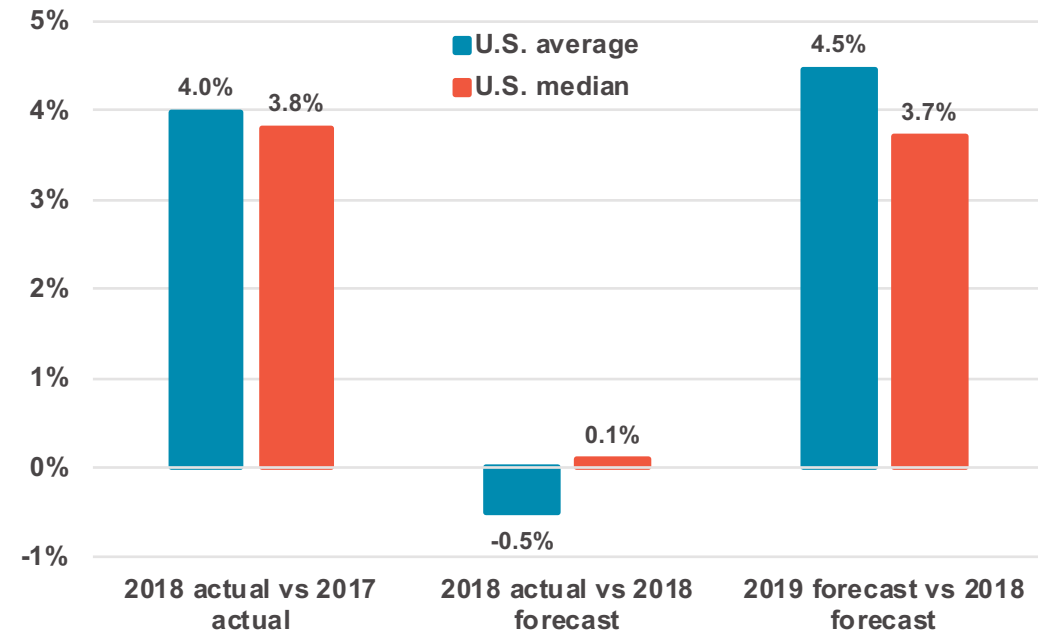
**Sources:** U.S. Census Bureau (taxes) and Bureau of Economic Analysis (GDP).

**Notes:** 4-quarter moving average of inflation-adjusted tax revenue. Data are shown only until the start of the next recession.

# State sales taxes: Actual collections vs. forecasts

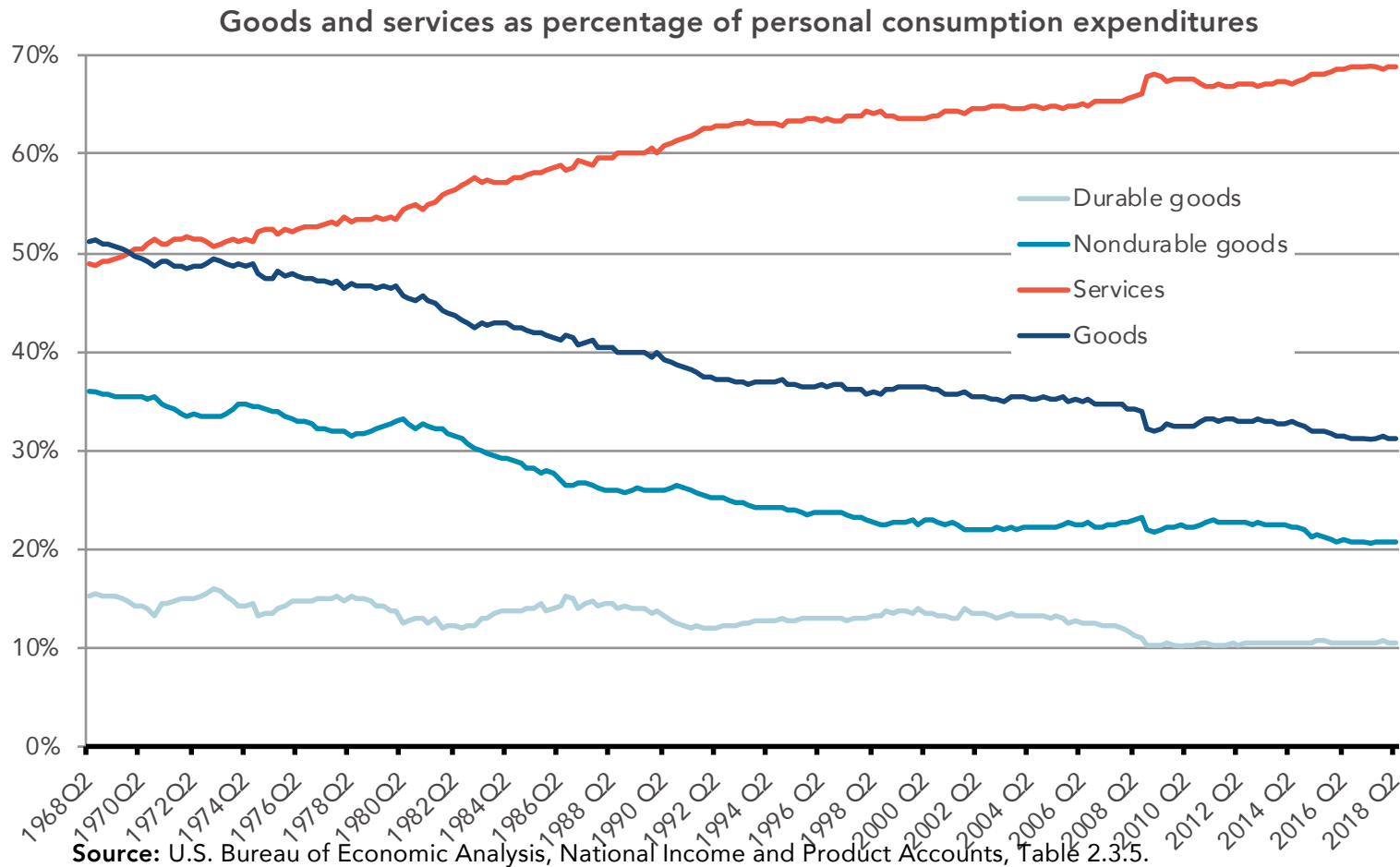
State	Sales tax (\$ millions)				Forecast date	Percent change		
	FY 2017 actual	FY 2018 actual	FY 2018 forecast	FY 2019 forecast		2018 actual vs 2017 actual	2018 actual vs 2018 forecast	2019 forecast vs 2018 forecast
TX	28,900.0	31,937.2	31,724.3	33,506.2	Jul-18	10.5	0.7	5.6
UT	1,871.9	2,038.4	1,989.8	2,101.6	Mar-18	8.9	2.4	5.6
CO	2,987.2	3,235.9	3,224.6	3,410.4	Mar-18	8.3	0.4	5.8
ID	1,382.4	1,490.0	1,471.5	1,546.1	Jan-18	7.8	1.3	5.1
WA	10,197.7	10,953.3	10,854.5	11,417.6	Feb-18	7.4	0.9	5.2
ME	1,336.9	1,423.6	1,409.5	1,466.0	Mar-18	6.5	1.0	4.0
AZ	4,506.2	4,787.6	4,733.6	4,915.7	Apr-18	6.2	1.1	3.8
RI	998.2	1,057.2	1,051.5	1,082.0	May-18	5.9	0.5	2.9
VT	376.7	397.8	391.2	400.9	Jan-18	5.6	1.7	2.5
FL	22,987.4	24,138.7	24,136.8	25,187.6	Feb-18	5.0	0.0	4.4
HI	3,239.2	3,395.6	3,432.4	3,562.3	May-18	4.8	(1.1)	3.8
SC	2,896.3	3,034.4	3,041.2	3,147.7	Apr-18	4.8	(0.2)	3.5
NC	7,004.0	7,337.4	7,261.8	7,624.9	May-18	4.8	1.0	5.0
IA	2,812.3	2,941.5	2,938.5	3,039.3	Mar-18	4.6	0.1	3.4
WI	5,223.9	5,447.8	5,465.0	5,650.0	Jan-18	4.3	(0.3)	3.4
SD	951.2	988.8	992.1	1,030.4	Feb-18	4.0	(0.3)	3.9
MA	6,211.0	6,454.0	6,512.0	6,650.0	Dec-17	3.9	(0.9)	2.1
GA	5,715.9	5,938.5	5,874.5	6,092.0	Jan-18	3.9	1.1	3.7
TN	8,556.8	8,887.6	8,714.2	9,023.8	Jan-18	3.9	2.0	3.6
PA	10,005.2	10,381.4	10,303.0	10,687.0	May-18	3.8	0.8	3.7
CT	4,193.9	4,342.7	4,150.9	4,182.6	Apr-18	3.5	4.6	0.8
NE	1,548.4	1,602.7	1,620.0	1,685.0	Feb-18	3.5	(1.1)	4.0
KY	3,485.2	3,605.7	3,611.9	3,699.4	Dec-17	3.5	(0.2)	2.4
AR	2,337.9	2,417.5	2,418.9	2,487.7	May-18	3.4	(0.1)	2.8
VA	3,357.1	3,461.8	3,458.2	3,547.1	Dec-17	3.1	0.1	2.6
NY	16,212.0	16,711.0	16,754.0	17,664.0	Feb-18	3.1	(0.3)	5.4
KS	2,670.5	2,748.2	2,727.0	2,766.4	May-18	2.9	0.8	1.4
IL	8,043.0	8,256.0	8,304.0	8,491.0	Mar-18	2.6	(0.6)	2.3
MD	4,539.3	4,645.8	4,611.7	4,750.9	Mar-18	2.3	0.7	3.0
IN	7,489.5	7,662.6	7,584.1	7,837.9	Dec-17	2.3	1.0	3.3
MO	2,147.1	2,196.7	2,195.4	2,240.9	Jan-18	2.3	0.1	2.1
MS	2,289.3	2,340.4	2,303.1	2,333.6	Nov-17	2.2	1.6	1.3
WV	1,222.3	1,247.0	1,259.0	1,288.5	Nov-17	2.0	(1.0)	2.3
NJ	9,439.1	9,610.4	10,334.0	11,180.0	Feb-18	1.8	(7.0)	8.2
CA	24,712.4	24,859.9	25,384.0	26,674.0	May-18	0.6	(2.1)	5.1
MN	5,405.1	5,433.0	5,489.0	5,775.0	Feb-18	0.5	(1.0)	5.2
OH	10,614.6	10,148.2	10,853.8	11,549.3	Jan-17	(4.4)	(6.5)	6.4
NV	1,090.7	939.5	1,154.7	1,214.5	Nov-17	(13.9)	(18.6)	5.2

Source: Individual state data, analysis by the author. Data are missing for nine states: AL, AK, LA, MI, NH, NM, ND, OK, WY.



Sales tax	2018 actual vs 2017 actual	2018 actual vs 2018 forecast	2019 forecast vs 2018 forecast
# states with <0% growth	2	16	-
# states with >5% growth	10	-	12

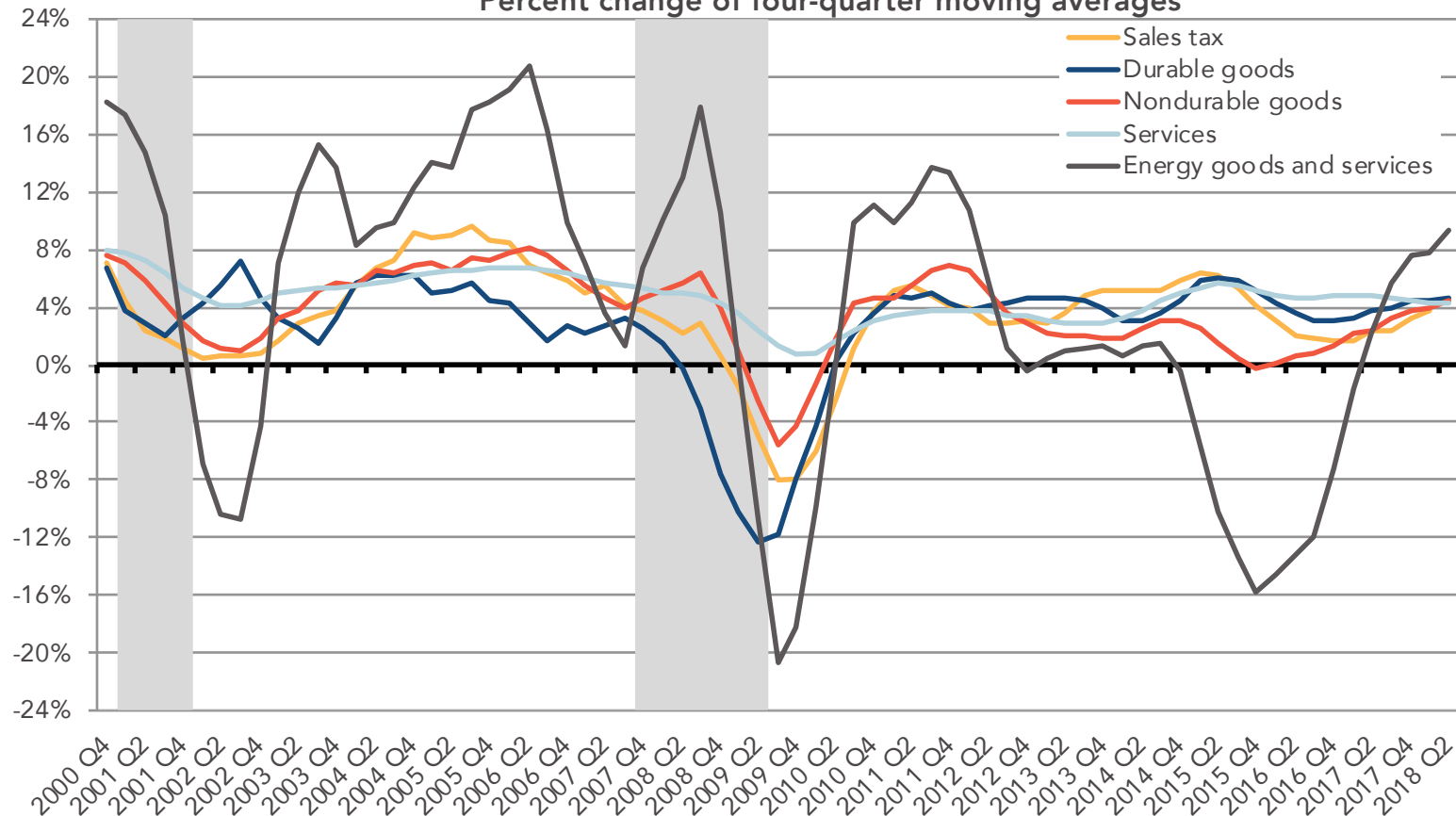
# Sales tax base & collections: Shift to services



# Substantial recovery in energy goods; modest growth in sales tax

Year-Over-Year Percent Change in Sales Tax and Personal Consumption

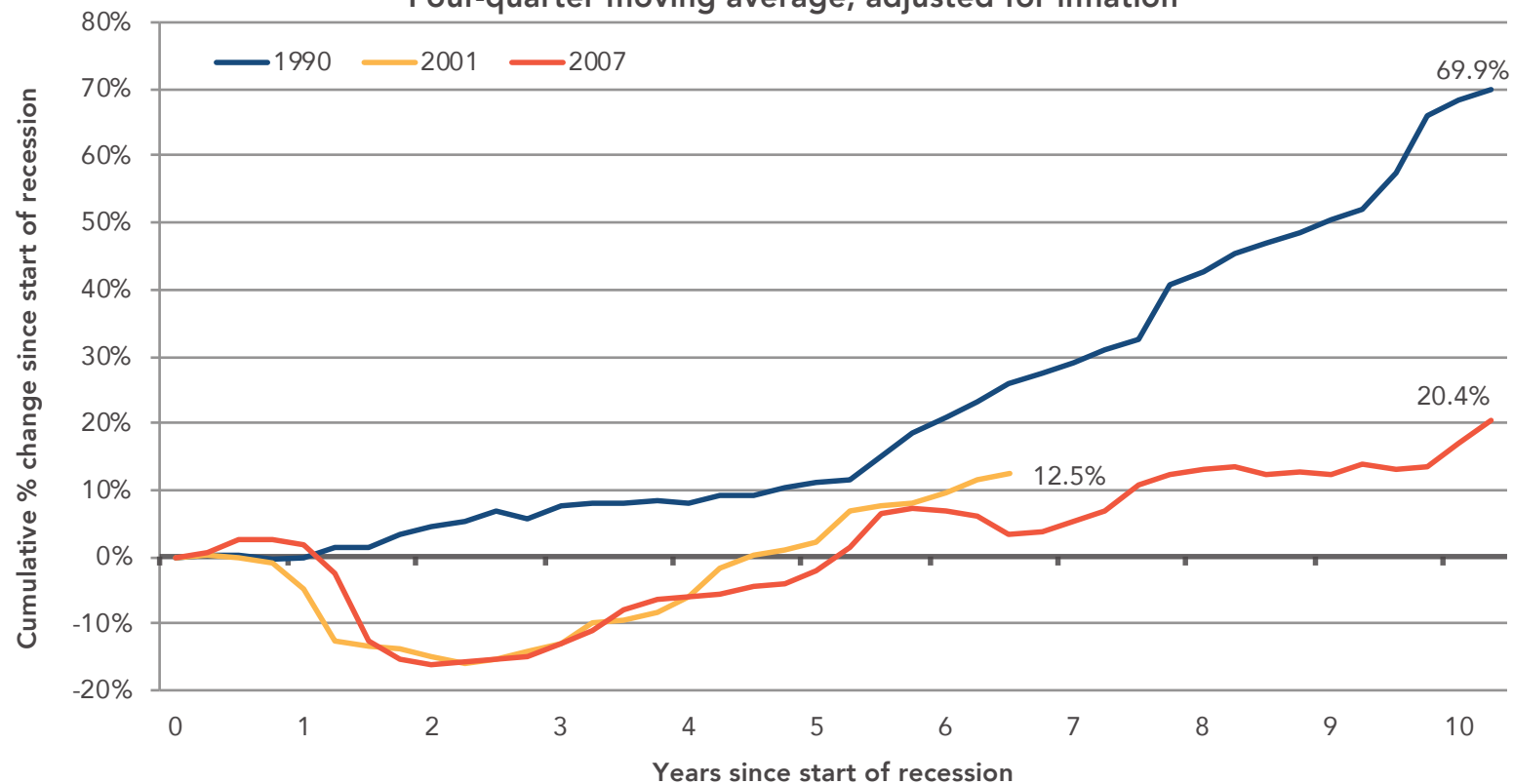
Percent change of four-quarter moving averages



Sources: U.S. Census Bureau (tax revenue) and Bureau of Economic Analysis, National Income and Product Accounts,

# State government **personal income taxes:** Stronger recovery, but volatile

State personal income tax revenue since the start of the recession  
Four-quarter moving average, adjusted for inflation



Sources: U.S. Census Bureau (taxes) and Bureau of Economic Analysis (GDP).

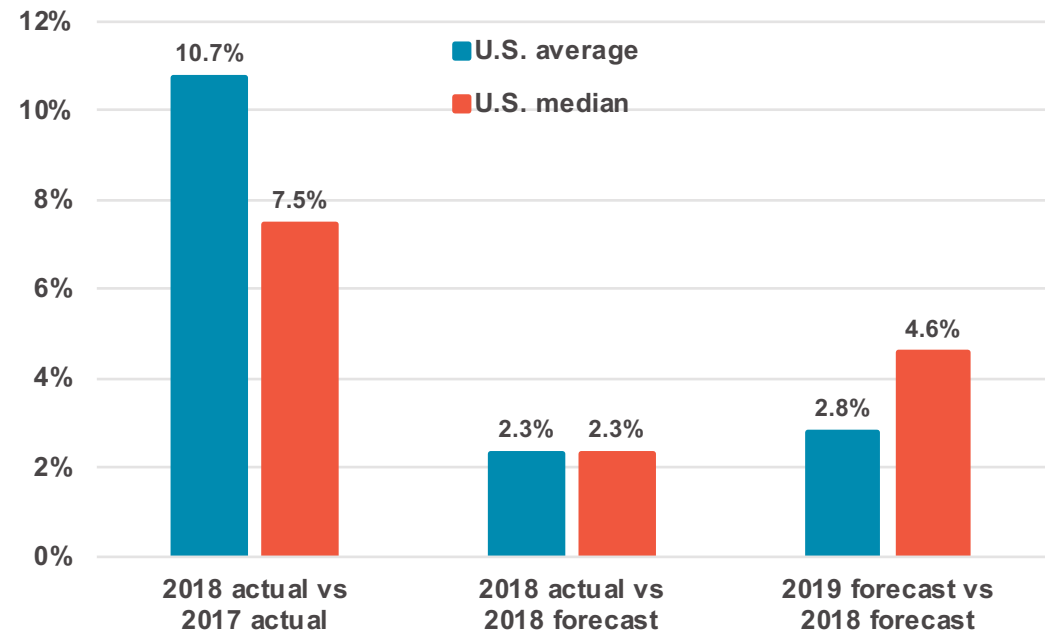
Notes: 4-quarter moving average of inflation-adjusted tax revenue. Data are shown only until the start of the next recession.

# State personal income taxes: Actual collections vs. forecasts



State	Personal income tax (\$ millions)				Forecast date	Percent change		
	FY 2017 actual	FY 2018 actual	FY 2018 forecast	FY 2019 forecast		2018 actual vs 2017 actual	2018 actual vs 2018 forecast	2019 forecast vs 2018 forecast
KS	2,304.0	3,374.4	3,145.0	3,334.2	May-18	46.5	7.3	6.0
IL	13,661.0	18,747.0	18,551.0	19,027.0	Mar-18	37.2	1.1	2.6
CT	8,988.7	10,769.8	10,525.8	9,707.6	Apr-18	19.8	2.3	(7.8)
HI	2,192.3	2,491.9	2,392.4	2,537.4	May-18	13.7	4.2	6.1
CA	82,718.0	93,478.2	91,971.0	95,009.0	May-18	13.0	1.6	3.3
CO	6,760.9	7,577.2	7,484.3	8,075.0	Mar-18	12.1	1.2	7.9
ID	1,651.2	1,837.5	1,759.7	1,853.2	Jan-18	11.3	4.4	5.3
MT	1,168.2	1,297.8	1,320.8	1,404.4	Apr-17	11.1	(1.7)	6.3
UT	3,605.9	3,991.4	3,891.4	4,128.4	Mar-18	10.7	2.6	6.1
MA	14,684.0	16,240.0	15,294.0	16,102.0	Dec-17	10.6	6.2	5.3
OH	7,606.5	8,411.0	7,027.1	6,755.8	Jan-17	10.6	19.7	(3.9)
VT	756.5	832.0	793.7	846.9	Jan-18	10.0	4.8	6.7
AZ	4,130.9	4,543.2	4,418.8	4,577.9	Apr-18	10.0	2.8	3.6
NJ	14,074.3	15,366.7	14,980.0	16,232.0	Feb-18	9.2	2.6	8.4
NY	47,565.0	51,501.0	50,935.0	49,244.0	Feb-18	8.3	1.1	(3.3)
RI	1,243.8	1,345.3	1,357.2	1,381.2	May-18	8.2	(0.9)	1.8
VA	13,052.9	14,105.8	13,491.9	14,110.4	Dec-17	8.1	4.6	4.6
MN	10,931.2	11,781.0	11,451.0	12,263.0	Feb-18	7.8	2.9	7.1
DE	1,333.2	1,428.2	1,406.7	1,500.1	May-18	7.1	1.5	6.6
SC	4,107.6	4,398.4	4,295.4	4,425.4	Apr-18	7.1	2.4	3.0
IN	5,435.3	5,816.1	5,687.1	5,922.9	Dec-17	7.0	2.3	4.1
IA	4,469.0	4,746.7	4,737.0	4,985.4	Mar-18	6.2	0.2	5.2
NE	2,224.8	2,360.6	2,330.0	2,470.0	Feb-18	6.1	1.3	6.0
GA	10,977.7	11,643.8	11,415.9	12,025.9	Jan-18	6.1	2.0	5.3
WV	1,813.9	1,919.6	1,860.0	1,961.0	Nov-17	5.8	3.2	5.4
PA	12,664.4	13,399.0	13,391.0	14,001.0	May-18	5.8	0.1	4.6
OR	8,341.3	8,815.7	8,495.6	8,679.2	Mar-18	5.7	3.8	2.2
MO	7,320.6	7,728.5	7,552.5	7,789.2	Jan-18	5.6	2.3	3.1
WI	8,039.5	8,479.2	8,380.0	8,720.0	Jan-18	5.5	1.2	4.1
MD	9,019.3	9,507.8	9,289.1	10,156.9	Mar-18	5.4	2.4	9.3
KY	4,393.9	4,603.6	4,509.0	4,649.5	Dec-17	4.8	2.1	3.1
ME	1,523.9	1,595.2	1,554.8	1,663.1	Mar-18	4.7	2.6	7.0
NC	11,969.7	12,517.5	12,537.6	12,799.6	May-18	4.6	(0.2)	2.1
AR	2,767.8	2,866.2	2,838.0	2,924.2	May-18	3.6	1.0	3.0
MS	1,781.7	1,826.6	1,835.0	1,807.3	Nov-17	2.5	(0.5)	(1.5)
TN	250.1	246.5	205.4	157.9	Jan-18	(1.4)	20.0	(23.1)

Source: Individual state data, analysis by the author. Data are missing for nine states: AL, AK, LA, MI, NH, NM, ND, OK, WY.



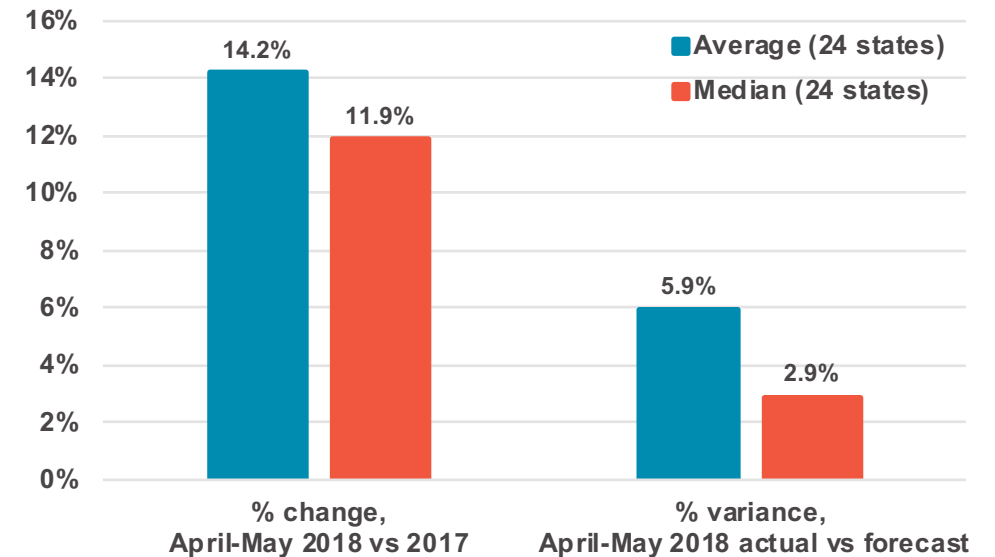
Personal income tax	2018 actual vs 2017 actual	2018 actual vs 2018 forecast	2019 forecast vs 2018 forecast
# states with <0% growth	1	4	5
# states with >5% growth	30	4	17

# April-May income tax revenues: Actual collections vs. forecasts



State	April-May 2017 actual (\$ millions)	April-May 2018 actual (\$ millions)	% change, April-May 2018 vs 2017	April-May 2018 forecast (\$ millions)	April-May 2018 actual (\$ millions)	% variance, April-May 2018 actual vs forecast	Forecast date
NY	7,103.1	8,040.0	13.2%	6,378.0	8,040.0	26.1%	Feb-18
KS	477.4	829.8	73.8%	687.3	829.8	20.7%	Apr-18
ME	323.3	355.9	10.1%	304.7	355.9	16.8%	Mar-18
VT	173.8	209.8	20.7%	182.6	209.8	14.9%	Jan-18
OH	1,338.4	1,624.6	21.4%	1,433.6	1,624.6	13.3%	
NM	334.2	390.2	16.8%	344.4	390.2	13.3%	Jan-18
OK	439.5	514.5	17.1%	459.2	514.5	12.0%	
ND	94.6	119.8	26.7%	109.9	119.8	9.0%	May-17
CA	16,876.1	18,992.9	12.5%	17,949.6	18,992.9	5.8%	Jan-18
WV	392.4	424.7	8.2%	403.2	424.7	5.3%	Nov-17
RI	234.0	270.0	15.4%	261.9	270.0	3.1%	Nov-17
AZ	838.8	932.7	11.2%	905.0	932.7	3.1%	Jan-18
SC	591.5	676.0	14.3%	658.0	676.0	2.7%	Apr-18
MA	3,219.0	3,453.0	7.3%	3,399.0	3,453.0	1.6%	Jan-18
PA	2,758.8	3,008.5	9.0%	2,992.1	3,008.5	0.5%	Jun-17
IN	1,303.1	1,389.7	6.6%	1,387.8	1,389.7	0.1%	Dec-17
IL	3,139.3	4,579.1	45.9%	4,698.6	4,579.1	-2.5%	Feb-18
AR	569.6	563.1	-1.1%	578.7	563.1	-2.7%	Nov-17
WI	1,485.7	1,523.4	2.5%	1,567.1	1,523.4	-2.8%	Jan-18
NE	494.4	515.8	4.3%	541.7	515.8	-4.8%	Nov-17
MS	414.7	435.8	5.1%	462.3	435.8	-5.7%	
MT	254.2	286.4	12.7%	312.6	286.4	-8.4%	Apr-17
ID	442.7	441.5	-0.3%	482.1	441.5	-8.4%	Jan-18
CO	1,527.7	1,601.6	4.8%	1,810.4	1,601.6	-11.5%	Mar-18

Source: Individual state data, analysis by the author. In AR and RI, forecast date for May is different.

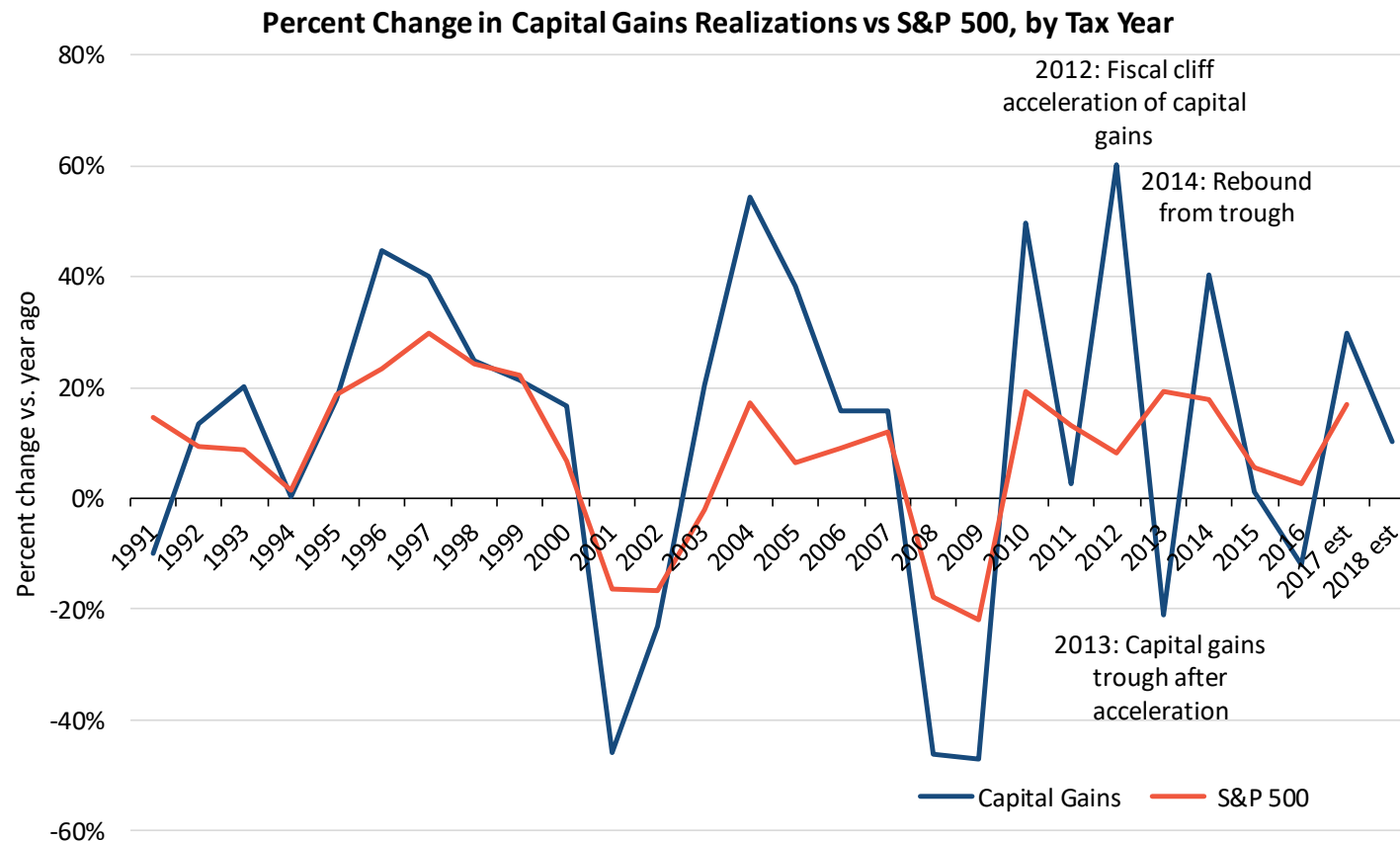


# Income shifting & capital gains

- In concept, taxpayers can shift many kinds of income, but...:
  - “Regular” wages – not so easy - work less now, more later
  - Bonus wages – easier – firms could shift out of Q4 into Q1 or vice versa
  - 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



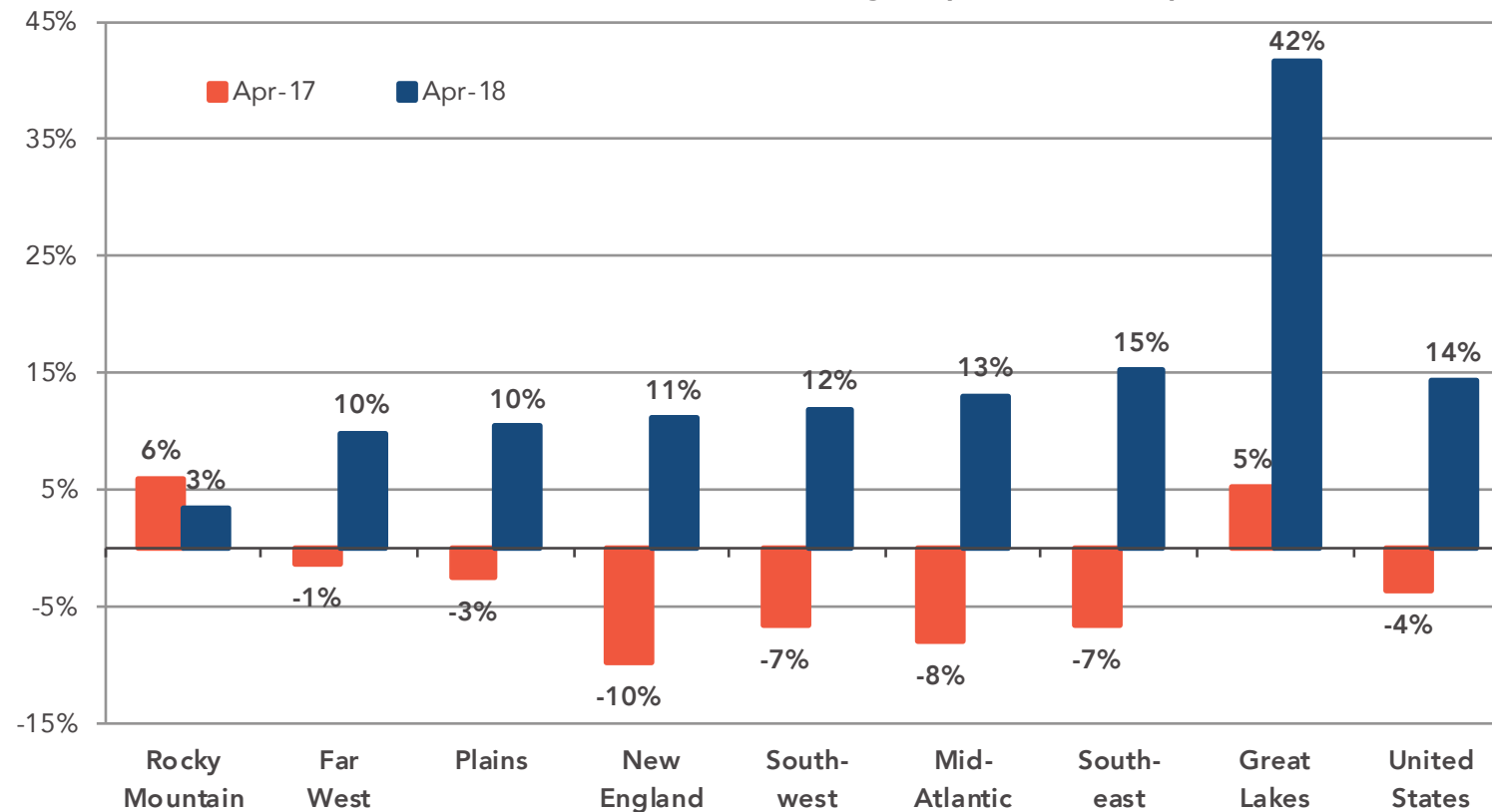
# Capital gains are loosely related to the stock market



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

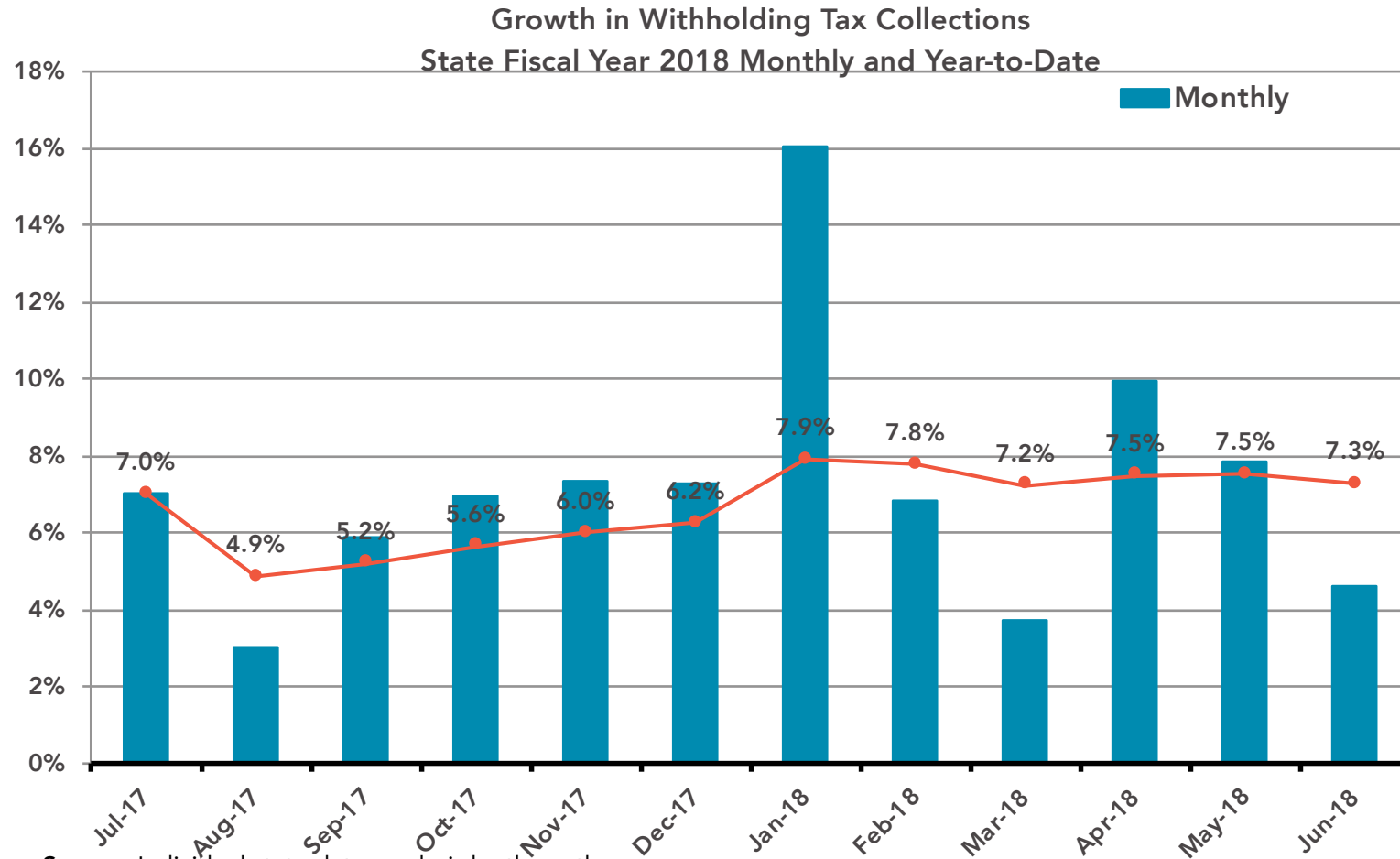
# State personal income taxes: Shortfalls last April; windfalls (?) this April

Year-Over-Year Nominal Percent Change; April 2017 vs. April 2018



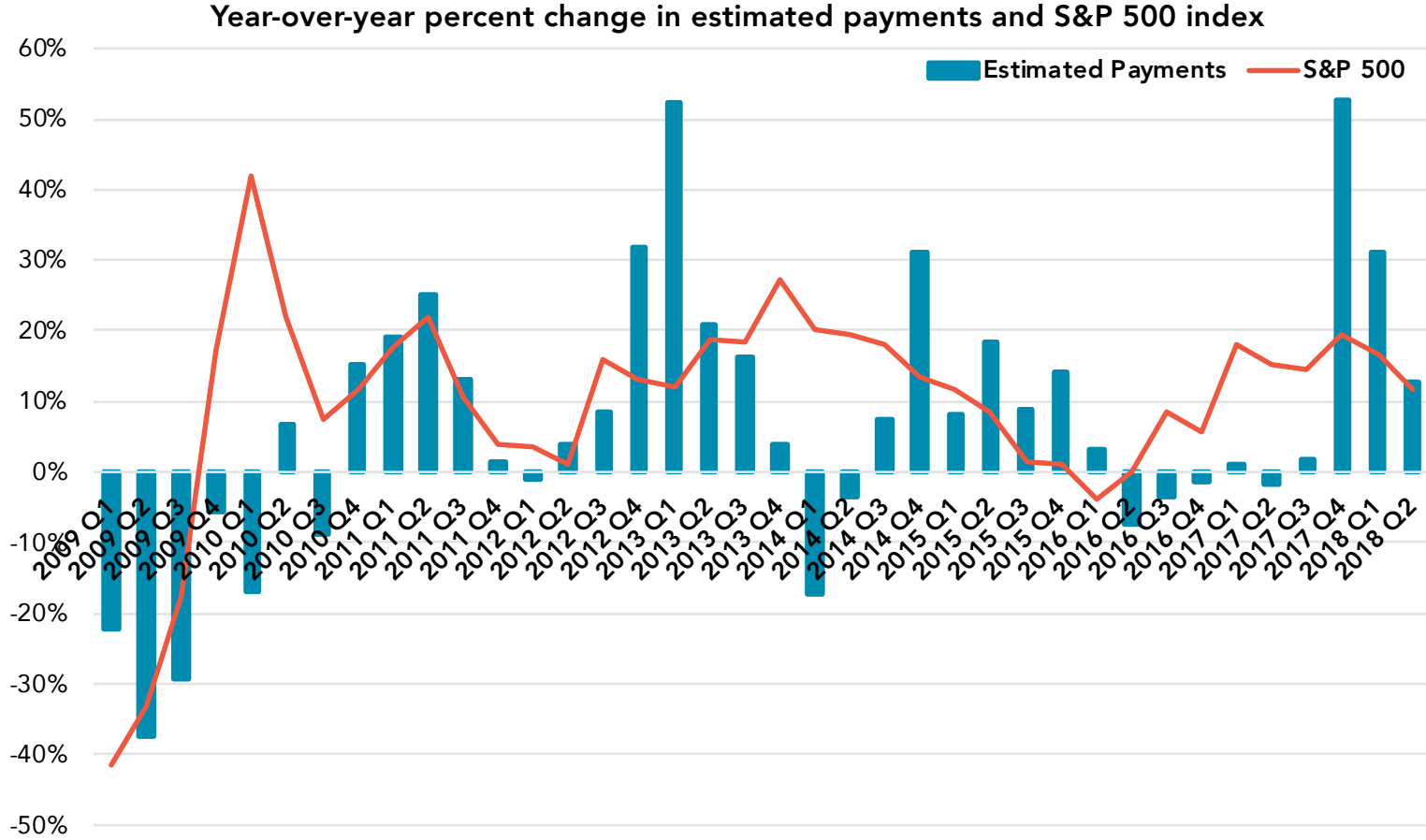
Source: Individual state data, analysis by the author.

# Withholding Was Substantially Stronger in January & April



Source: Individual state data, analysis by the author.

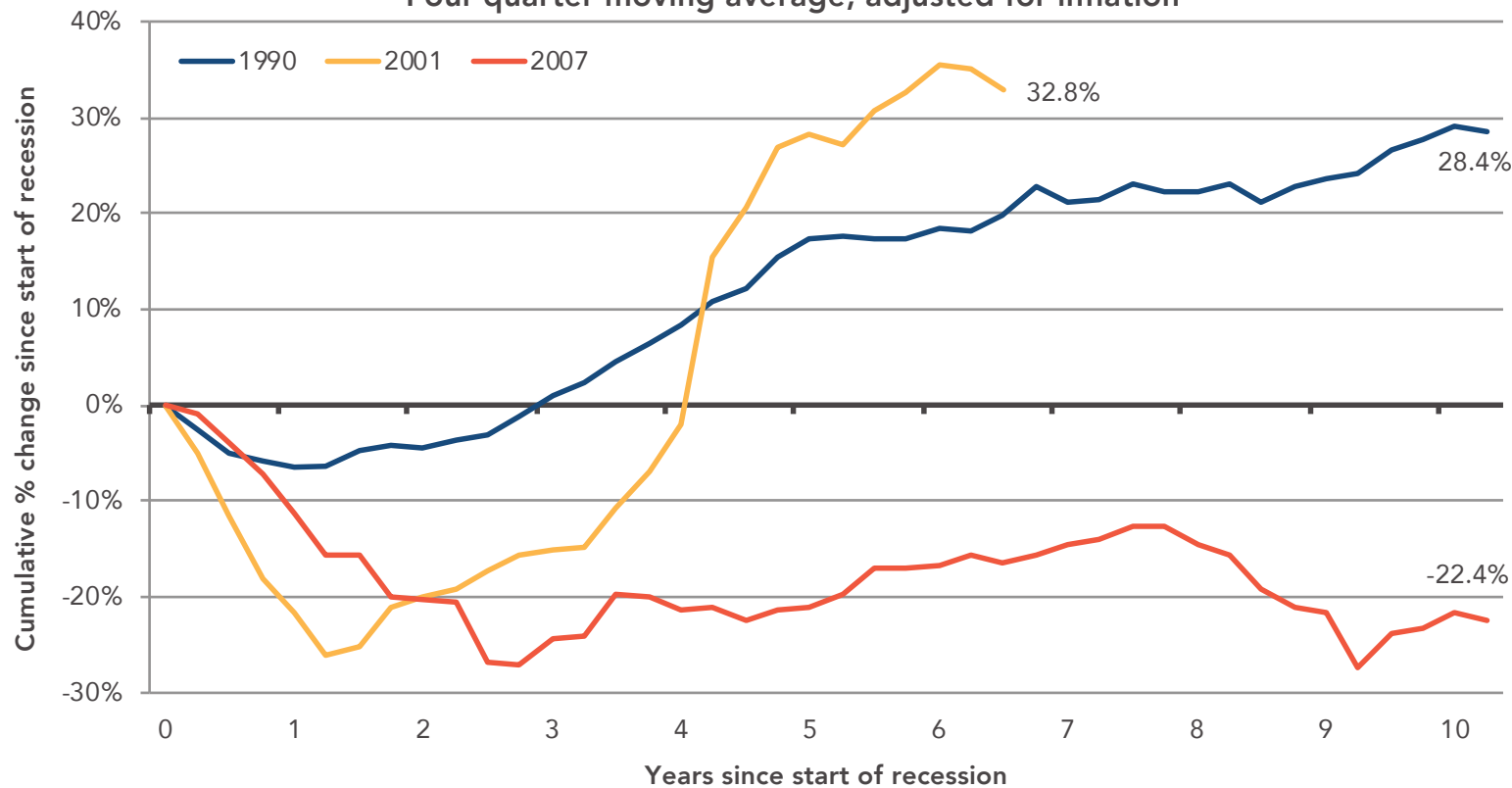
# Large volatility in estimated payments



Source: Individual state data (estimated payments) and Yahoo Finance (S&P500). Analysis by the author.

# State government corporate income taxes: There is **NO** recovery

State corporate income tax revenue since the start of the recession  
Four-quarter moving average, adjusted for inflation



**Sources:** U.S. Census Bureau (taxes) and Bureau of Economic Analysis (GDP).

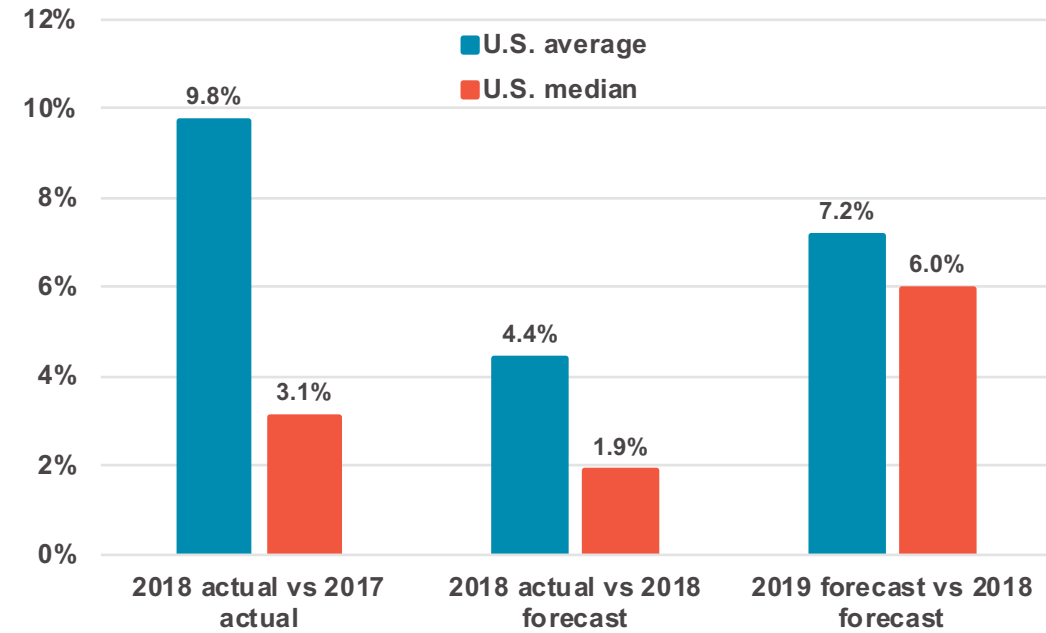
**Notes:** 4-quarter moving average of inflation-adjusted tax revenue. Data are shown only until the start of the next recession.

# State corporate income taxes: Actual collections vs. forecasts



State	Corporate income tax (\$ millions)				Forecast date	Percent change		
	FY 2017 actual	FY 2018 actual	FY 2018 forecast	FY 2019 forecast		2018 actual vs 2017 actual	2018 actual vs 2018 forecast	2019 forecast vs 2018 forecast
IL	1,332.0	2,150.0	2,110.0	2,212.0	Mar-18	61.4	1.9	4.8
CO	509.3	781.9	614.9	658.8	Mar-18	53.5	27.2	7.1
UT	333.1	449.4	342.7	359.2	Mar-18	34.9	31.1	4.8
OR	585.8	736.8	557.5	420.7	Mar-18	25.8	32.2	(24.5)
MT	134.0	167.1	168.8	171.7	Apr-17	24.7	(1.0)	1.8
CA	10,112.5	12,488.3	11,246.0	12,248.0	May-18	23.5	11.0	8.9
KS	366.1	438.0	372.0	394.0	May-18	19.6	17.7	5.9
NE	264.4	313.7	295.0	300.0	Feb-18	18.6	6.3	1.7
SC	320.4	375.2	344.5	358.9	Apr-18	17.1	8.9	4.2
ID	214.0	240.8	215.8	235.0	Jan-18	12.5	11.6	8.9
MA	2,497.0	2,772.0	2,562.0	2,596.0	Dec-17	11.0	8.2	1.3
RI	141.5	156.9	161.2	197.8	May-18	10.9	(2.7)	22.7
MN	1,205.4	1,321.0	1,301.0	1,295.0	Feb-18	9.6	1.5	(0.5)
MO	435.1	461.7	469.7	490.3	Jan-18	6.1	(1.7)	4.4
ME	175.2	185.7	171.9	183.6	Mar-18	6.0	8.0	6.8
PA	2,751.5	2,879.0	2,896.0	3,163.0	May-18	4.6	(0.6)	9.2
VA	827.0	861.9	874.0	912.0	Dec-17	4.2	(1.4)	4.3
GA	971.8	1,004.3	998.8	1,068.0	Jan-18	3.3	0.5	6.9
MD	795.6	820.4	815.1	929.9	Mar-18	3.1	0.7	14.1
KY	497.5	511.4	558.6	600.6	Dec-17	2.8	(8.4)	7.5
IA	549.7	565.0	564.8	649.0	Mar-18	2.8	0.0	14.9
NY	6,979.0	7,164.0	7,346.0	8,258.0	Feb-18	2.7	(2.5)	12.4
FL	2,366.4	2,413.0	2,320.4	2,394.8	Feb-18	2.0	4.0	3.2
MS	564.0	572.3	550.9	550.9	Nov-17	1.5	3.9	0.0
AZ	368.1	373.1	302.6	309.5	Apr-18	1.3	23.3	2.3
NJ	2,202.1	2,225.4	2,200.0	2,437.0	Feb-18	1.1	1.2	10.8
VT	95.8	96.4	79.4	89.6	Jan-18	0.6	21.4	12.8
AR	366.5	363.9	386.8	411.9	May-18	(0.7)	(5.9)	6.5
NC	752.2	739.0	733.7	720.9	May-18	(1.8)	0.7	(1.7)
TN	2,620.2	2,564.2	2,436.2	2,523.9	Jan-18	(2.1)	5.3	3.6
WI	920.9	893.9	950.0	960.0	Jan-18	(2.9)	(5.9)	1.1
WV	116.3	110.1	109.0	142.1	Nov-17	(5.4)	1.0	30.4
SD	14.7	13.5	9.1	11.9	Feb-18	(8.1)	48.3	30.5
HI	76.8	69.0	85.4	105.4	May-18	(10.1)	(19.2)	23.4
CT	1,037.6	920.6	868.2	920.2	Apr-18	(11.3)	6.0	6.0
DE	120.8	89.7	86.9	91.0	May-18	(25.7)	3.2	4.7
IN	978.7	660.4	774.8	870.7	Dec-17	(32.5)	(14.8)	12.4

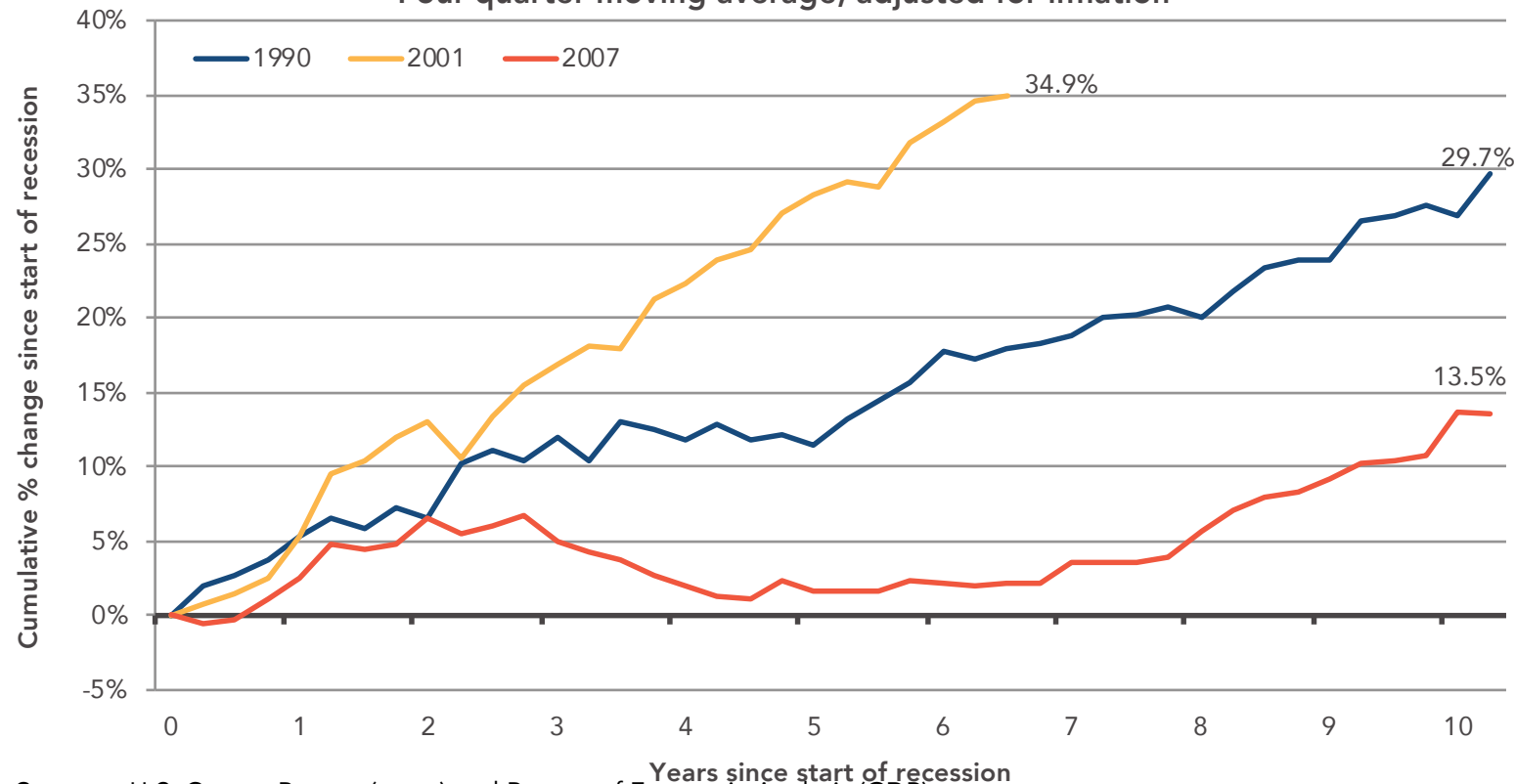
Source: Individual state data, analysis by the author.



Corporate income tax	2018 actual vs 2017 actual	2018 actual vs 2018 forecast	2019 forecast vs 2018 forecast
# states with <0% growth	10	11	3
# states with >5% growth	15	15	20

# Local government **property taxes:** Continued growth

Local government property tax revenue since the start of the recession  
Four-quarter moving average, adjusted for inflation



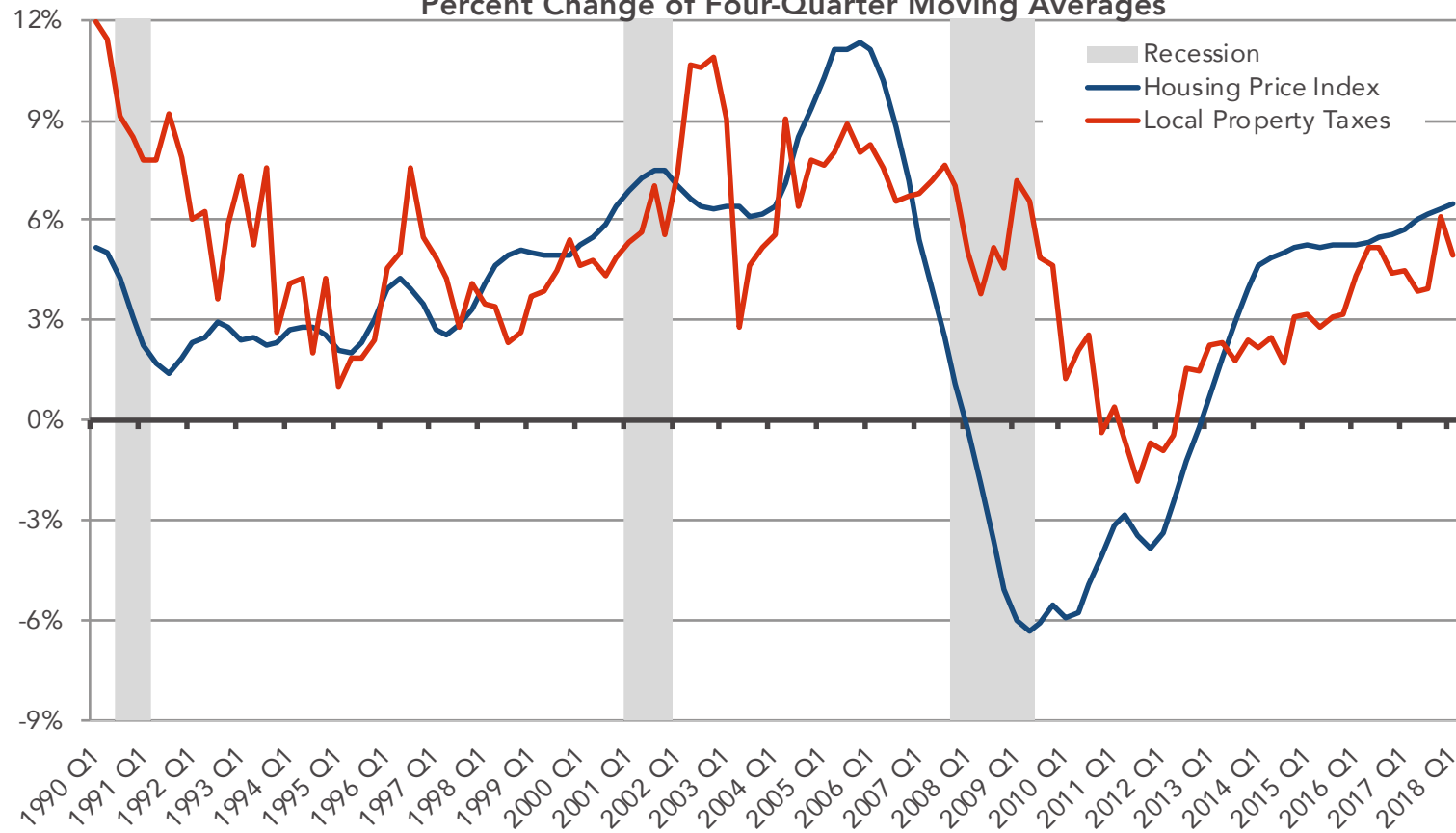
Sources: U.S. Census Bureau (taxes) and Bureau of Economic Analysis (GDP).

Notes: 4-quarter moving average of inflation-adjusted tax revenue. Data are shown only until the start of the next recession.

# Continued growth in housing prices & local property taxes



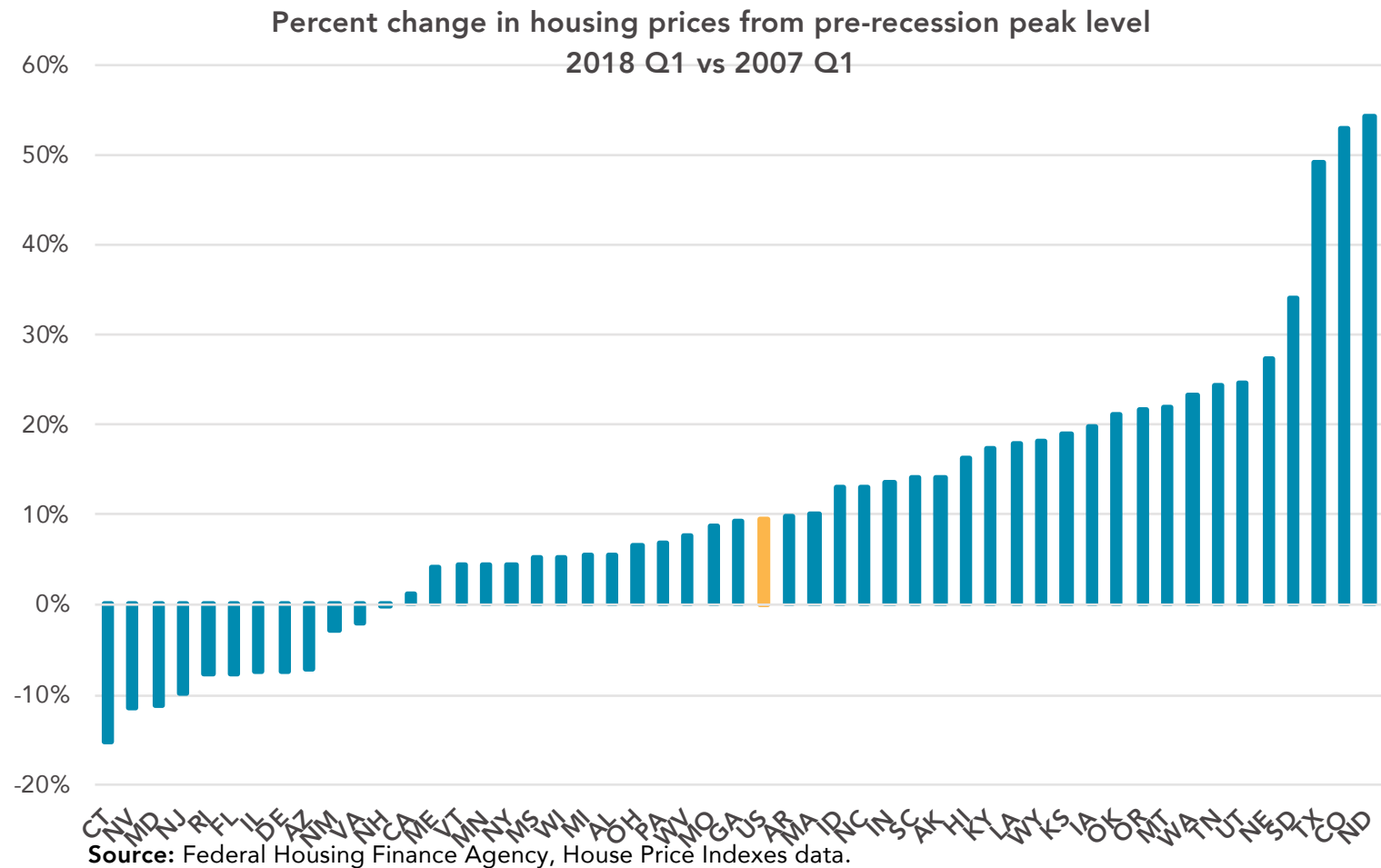
Year-Over-Year Change in Housing Prices vs. Local Property Taxes  
Percent Change of Four-Quarter Moving Averages



Sources: U.S. Census Bureau (tax revenue) and Federal Housing Finance Agency, House Price Indexes data.



# Growth in housing price indexes since the pre-recession peak: Large state disparities

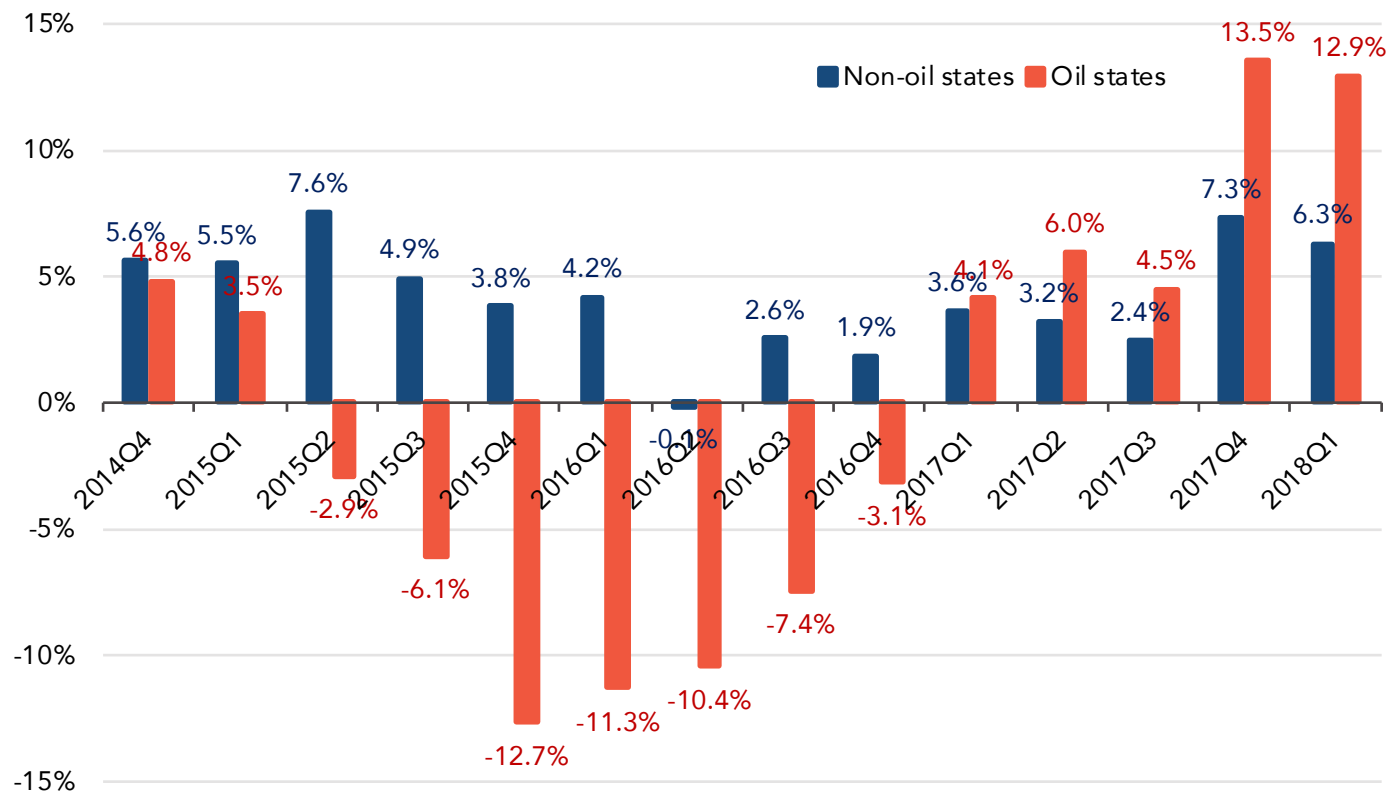


# Oil & trouble



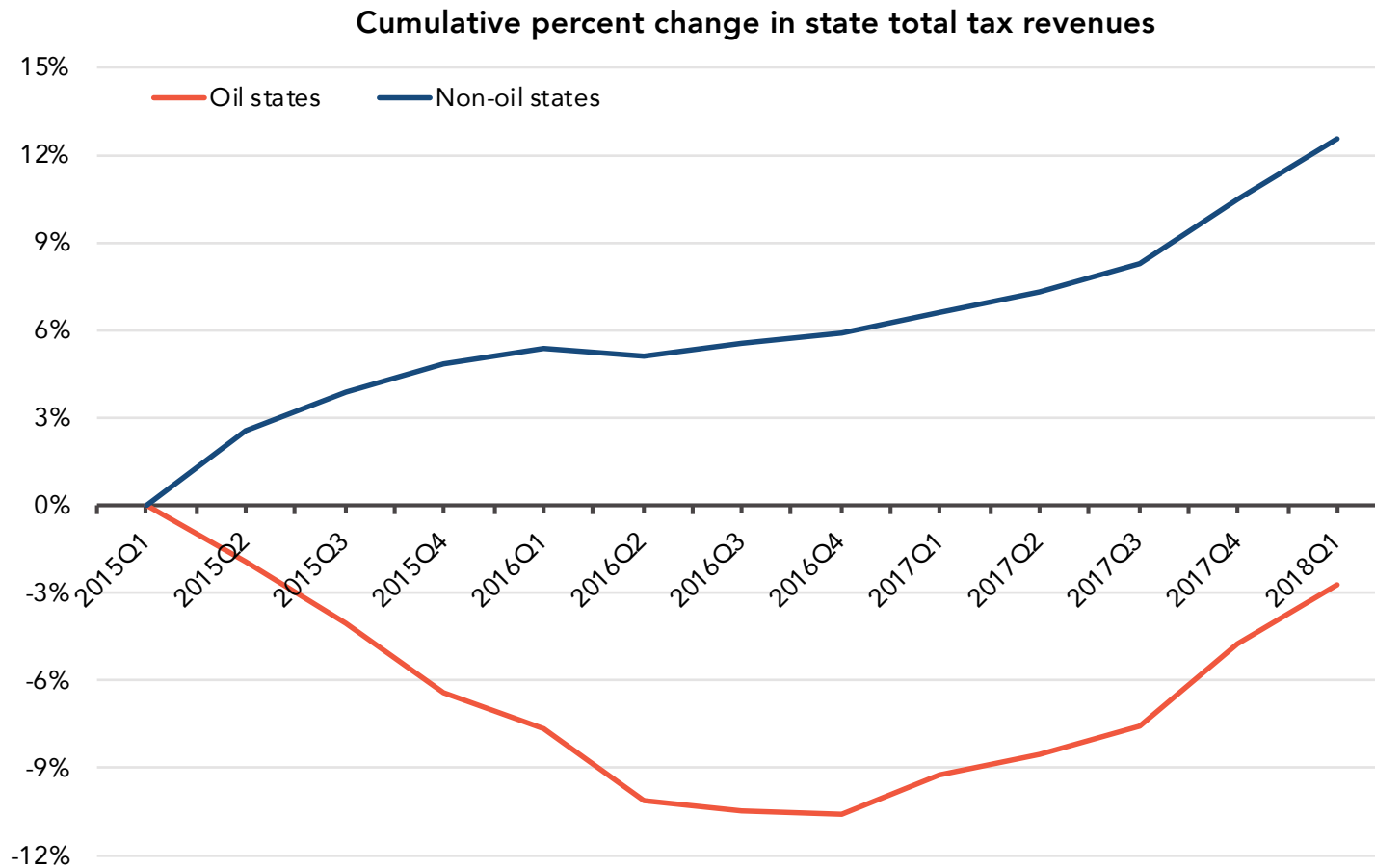
# Oil & coal states: State tax revenues rebounding after 7 consecutive quarterly declines

Year-Over-Year Percent Change in State Taxes

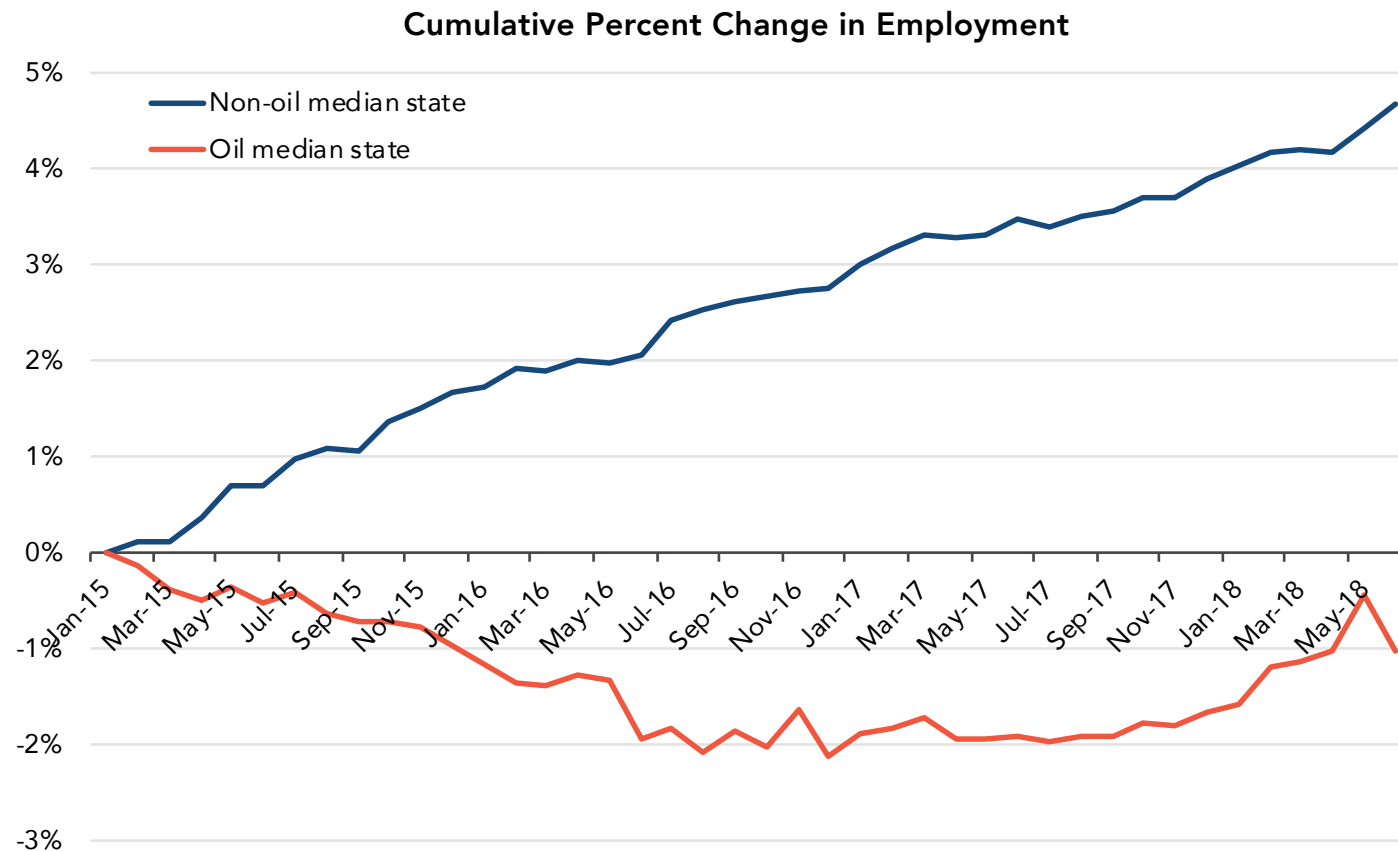


Source: Author's analysis of Census Bureau data.

# Oil & coal states: Despite recovery, state taxes still below 2015 Q1 levels



# Oil & coal states: Employment is also still below peak levels



Source: Author's analysis of Bureau of Labor Statistics data.

# Recap: Slow revenue recovery & growing revenue volatility

- The revenue recovery is weak & prolonged compared to previous recessions
- Differing fiscal, tax & economic structures play important roles
- State tax revenues increasingly more reliant on economically sensitive taxes
- Income taxes rely more heavily on volatile income – capital gains, bonuses
- Sales tax bases are eroding (taxation of goods & services sold over the Internet)
- Many services hard to tax: politically, legally, administratively
- Single-year cash balance is the goal (gimmicks, one-time solutions)
- Demographic changes and taxes
- No serious multi-year financial planning
- Higher reliance on more regressive taxes

# Thank you!

Lucy Dadayan  
ldadayan@urban.org

October 8, 2018