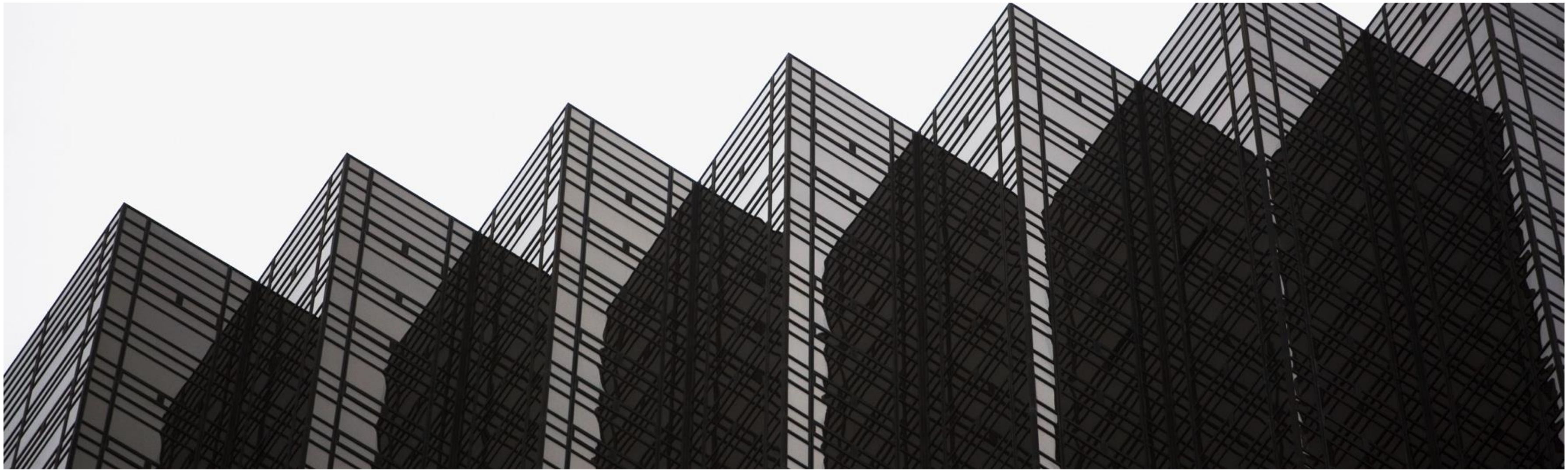
A New Dawn of A New And Less Forgiving Era For State Finances

Gabriel Petek, CFA Managing Director

U.S. States Group/ U.S. Public Finance

March 30, 2018



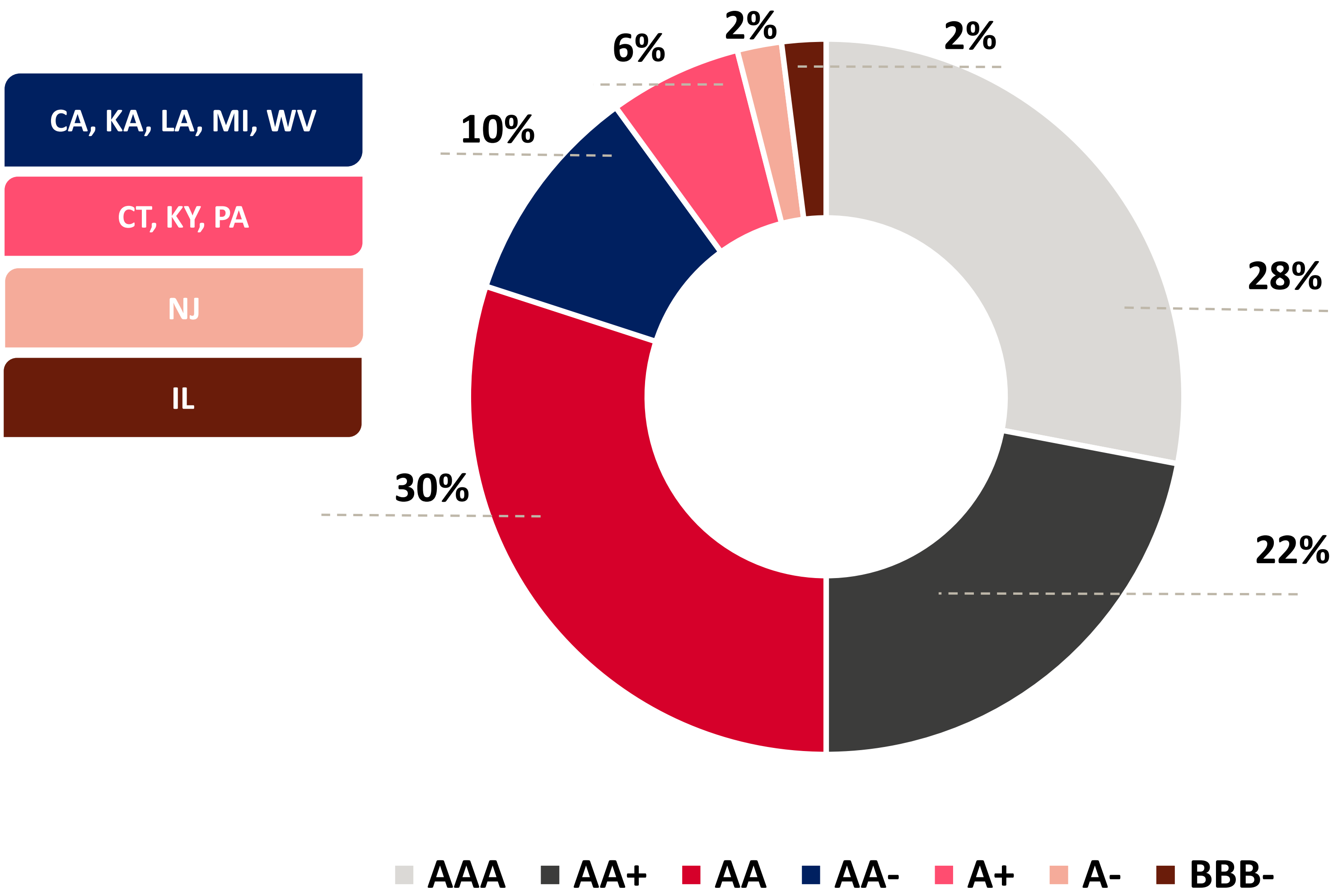
S&P Global
Ratings

Overview

- Snapshot of state rating performance
- Macro setting and slow growth environment
- Large and relatively inflexible expenditures rising faster than both revenues and broad measures of inflation (Medicaid, Pension, OPEB)
- Transportation funding gap
- Other challenges ahead

S&P Global Ratings

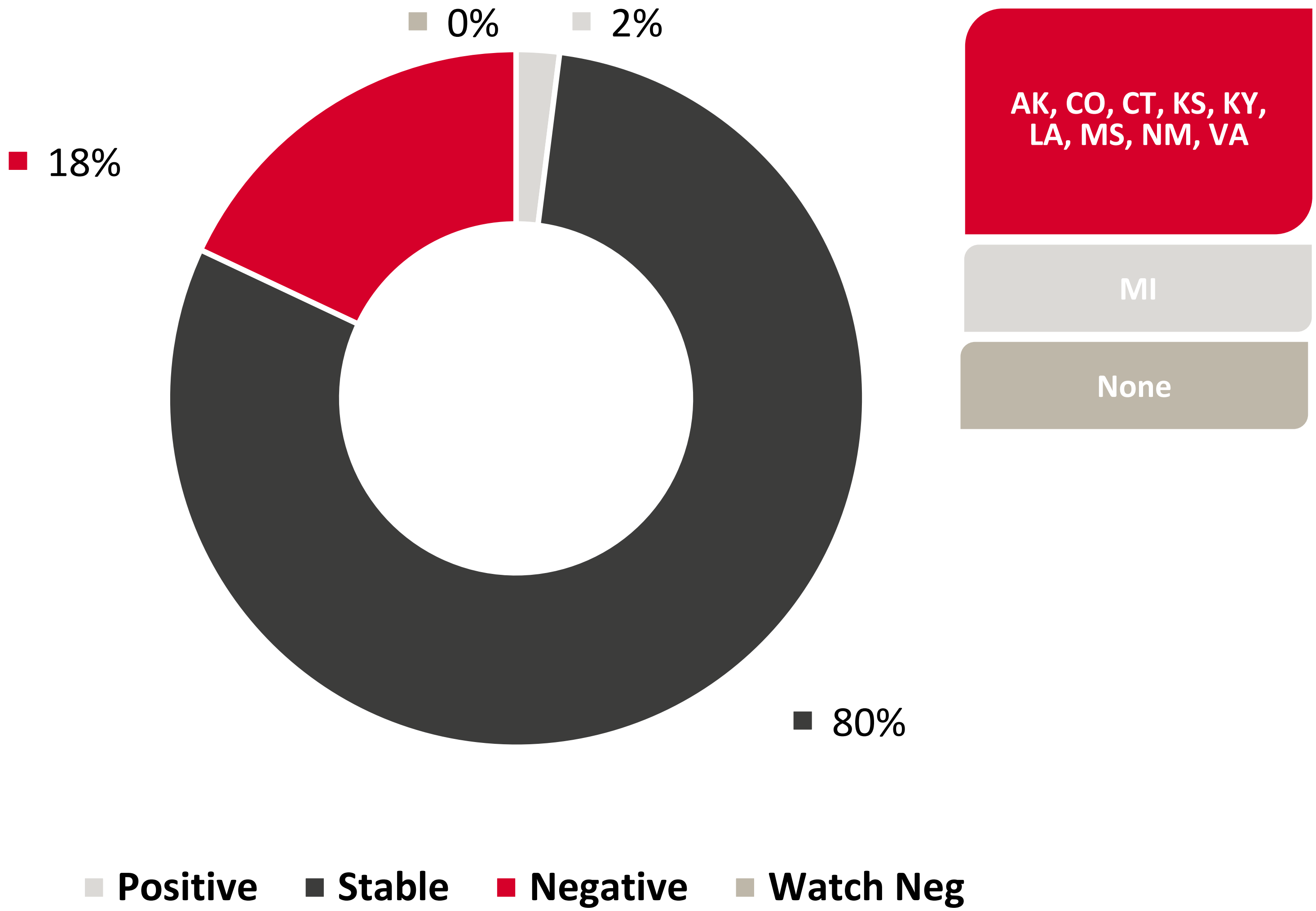
U.S. States Ratings Distribution



Source: S&P Global Ratings U.S. State Ratings And Outlooks: **Current List 11/16/17**

S&P Global Ratings

U.S. States Outlook Distribution



Source: S&P Global Ratings U.S. State Ratings And Outlooks: **Current List 11/16/17**

S&P Global Ratings

Overall Analytical Framework

Chart 1

S&P Global Ratings’ Framework For Rating U.S. States

Government Framework
- Fiscal policy framework
- System support
- Intergovernmental funding

Financial Management
- FMA
- Budget management

Economy
- Demographic profile
- Economic structure
- Wealth and income
- Economic development

Budgetary Performance
- Budget reserves
- Liquidity
- Tax/revenue structure
- Revenue forecasting
- Service levels
- Structural Performance

Debt and Liability Profile
- Debt burden
- Pension liabilities
- OPEB risk assessment

Indicative credit level

Holistic analysis
(one-notch adjustment, subject to any applicable rating cap)

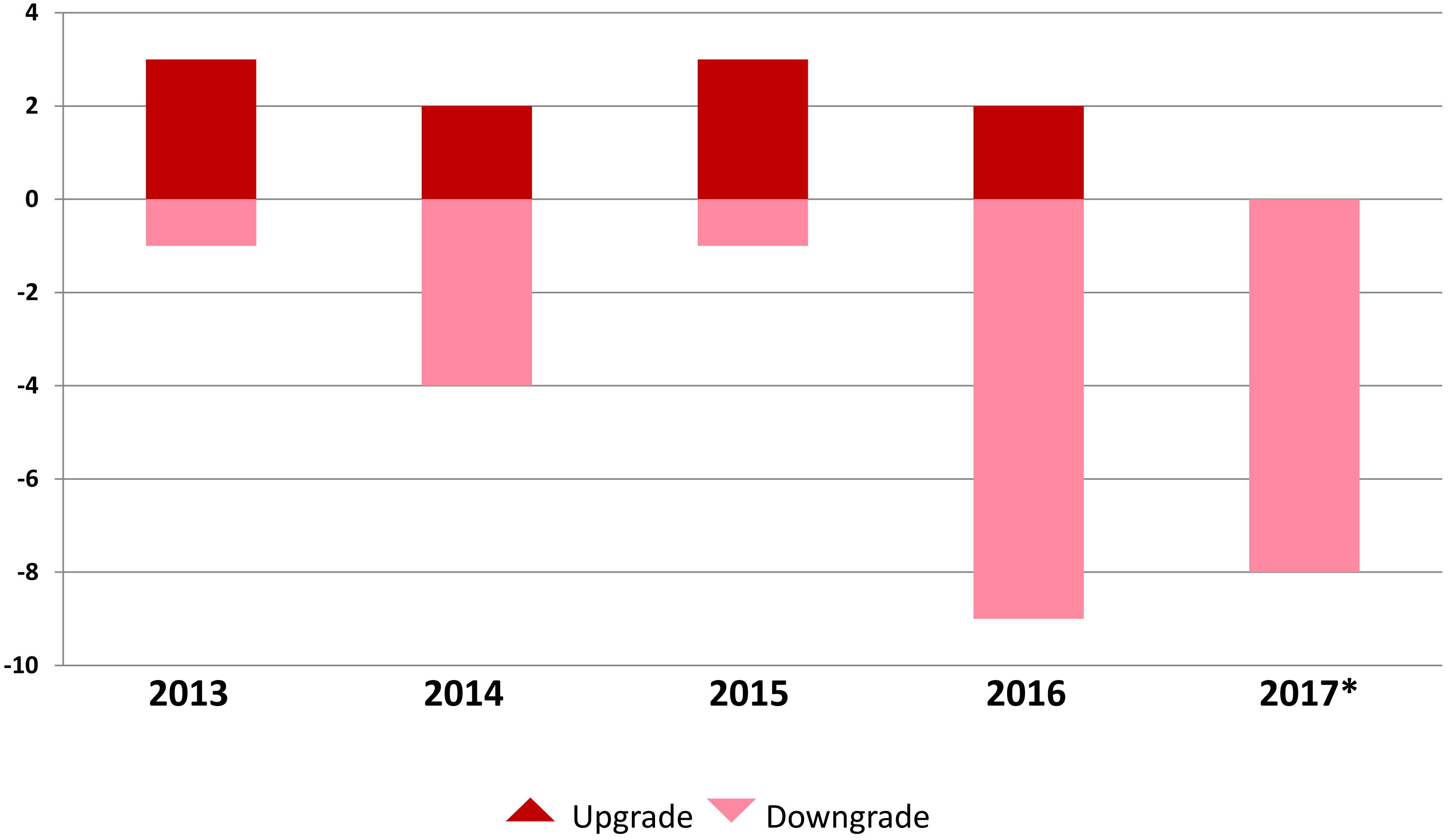
Overriding factors:
- System support
- Willingness to support debt
- Liquidity and capital market access
- High level of expected future debt/liabilities
- Weak structural budget performance
- High level of contingent liquidity risk

State Rating

Boiled Down: U.S. States Enjoy Inherent Advantages

- Co-sovereign status with the federal government
- Fiscal integration with federal government that delivers countercyclical aid

Ratings Movements For U.S. States

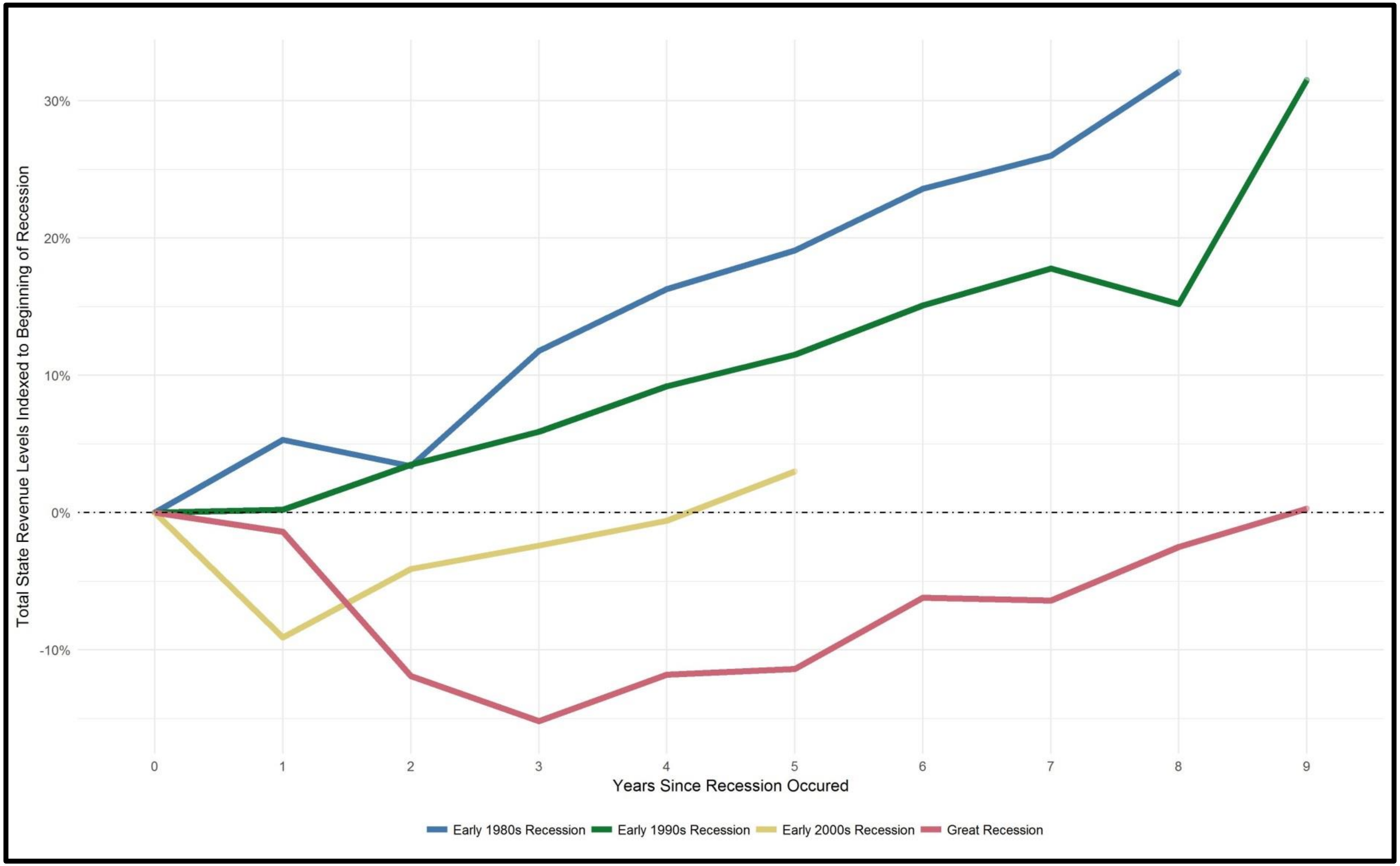


Source: S&P Global Ratings History of U.S. State Ratings 11/16/17. *As of 11/16/17. Includes multiple rating changes for same state within a year

Slow State Revenue Growth

S&P Global Ratings

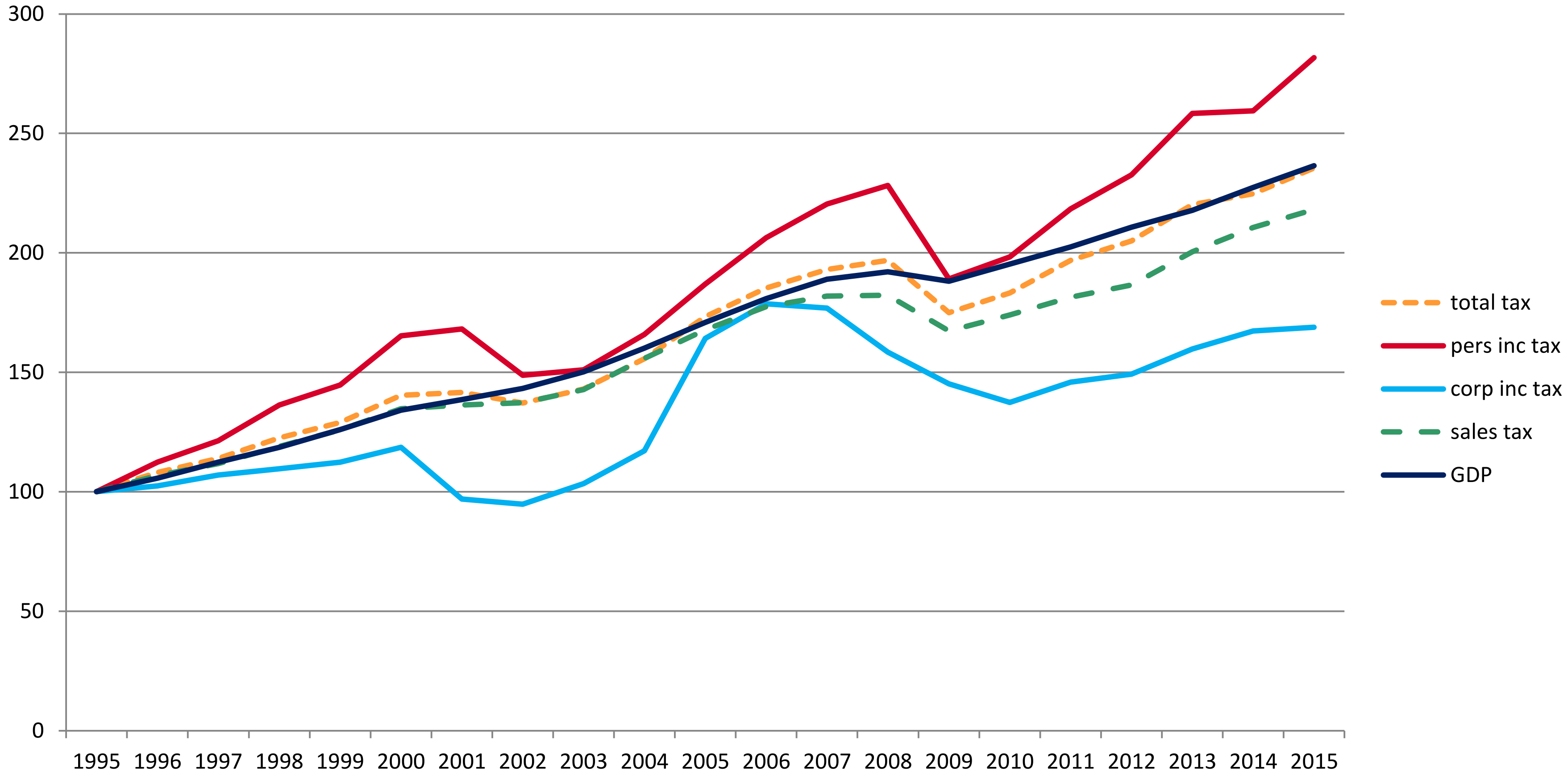
Revenue Recovery Has Lagged Prior Economic Expansions



Source: National Association of State Budget Officers (Fiscal Survey of the States)

S&P Global
Ratings

Major State Tax Revenues and Nominal GDP Indexed to 1995



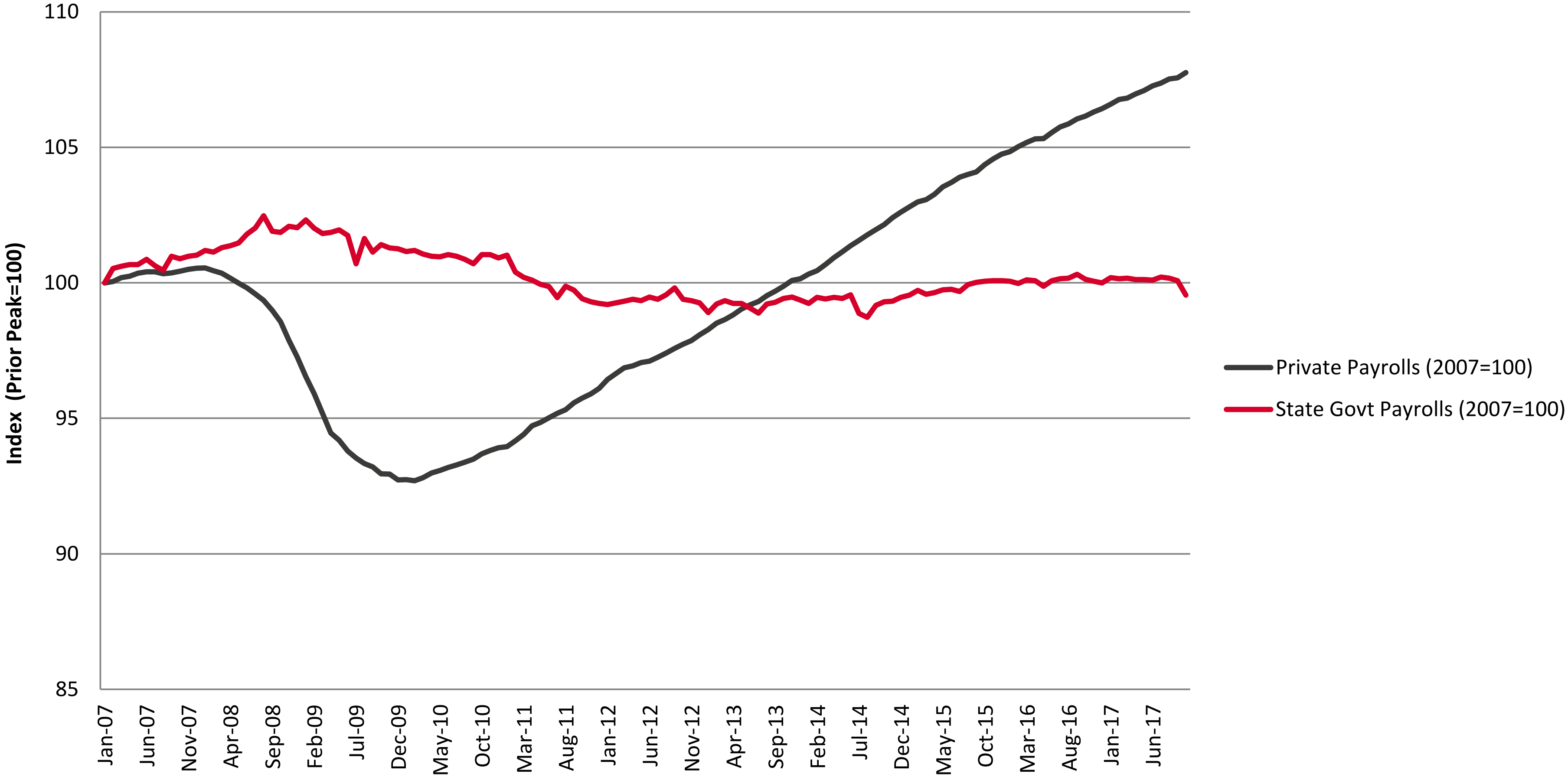
Source: Rockefeller Institute of Government

S&P Global Ratings

Traditional State Fiscal Institutions

- Balanced budget requirements
- Legal limitations on debt
- Restrictions on the use of debt—more for capital than operations
- Recognition of expenses as they are incurred--mostly
- And, in an attempt to maintain access to the capital markets, generally good transparency, from a global perspective.

Total Private Payrolls Vs. State Government Payrolls



Source: Bureau of Labor Statistics

Rising Medicaid Costs

How Medicaid Funding Works

- The Medicaid program is jointly funded by states and the federal government
- The federal government pays states a percentage of Medicaid program expenditures which is called the Federal Medical Assistance Percentage (FMAP).
- FMAP varies state to state and is based on criteria such as per capita income.
- The average FMAP per state is 57% although this ranges from 50% in wealthier states to 75% in states with lower per capita income.
- The maximum allowable FMAP is 83%

Source: Medicaid.gov

How ACA Impacted Medicaid Funding for States

In all states: You can qualify for Medicaid based on income, household size, disability, family status, and other factors.

In states that have expanded Medicaid coverage: You can qualify based on your income alone. If your household income is below 133% of the federal poverty level, you qualify.

Beginning in 2014 coverage for the newly eligible adults was fully funded by the federal government for three years. It will phase down to 90% by 2020.

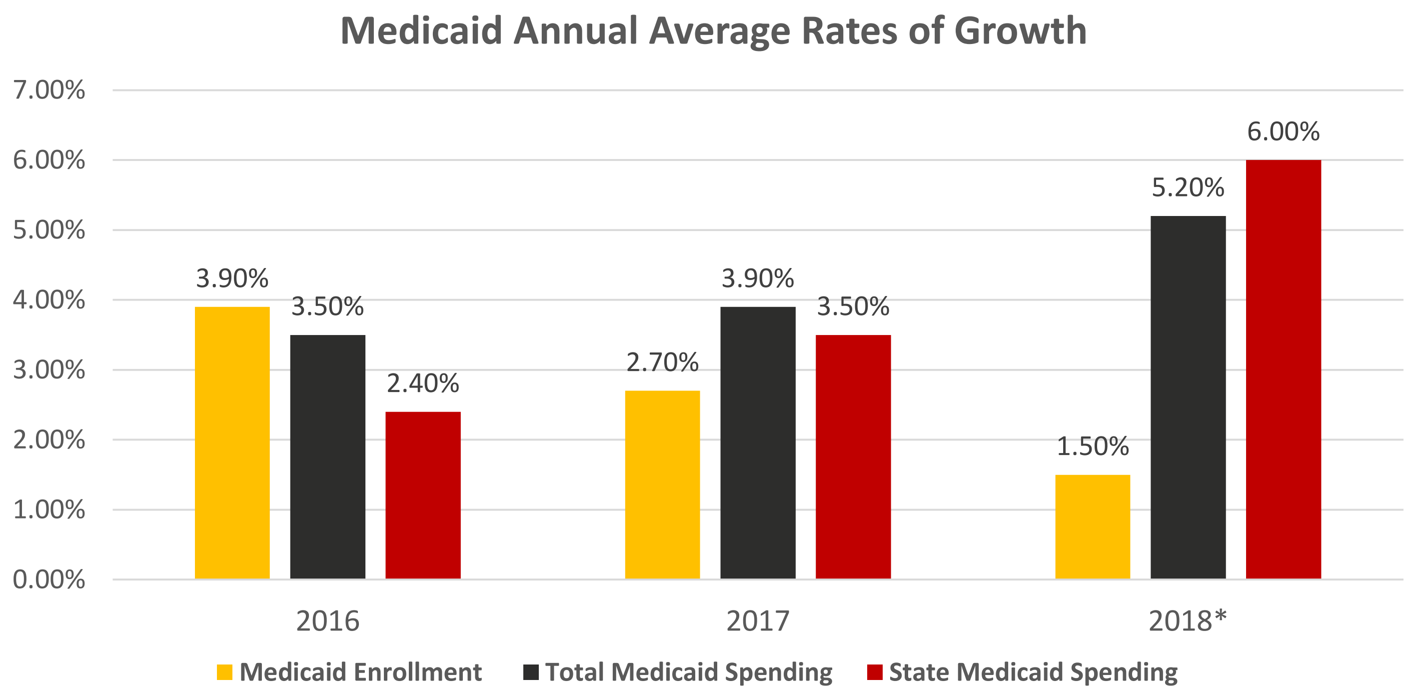
Source: Medicaid.gov

S&P Global
Ratings

Rising Medicaid Costs

Factors driving higher spending growth include:

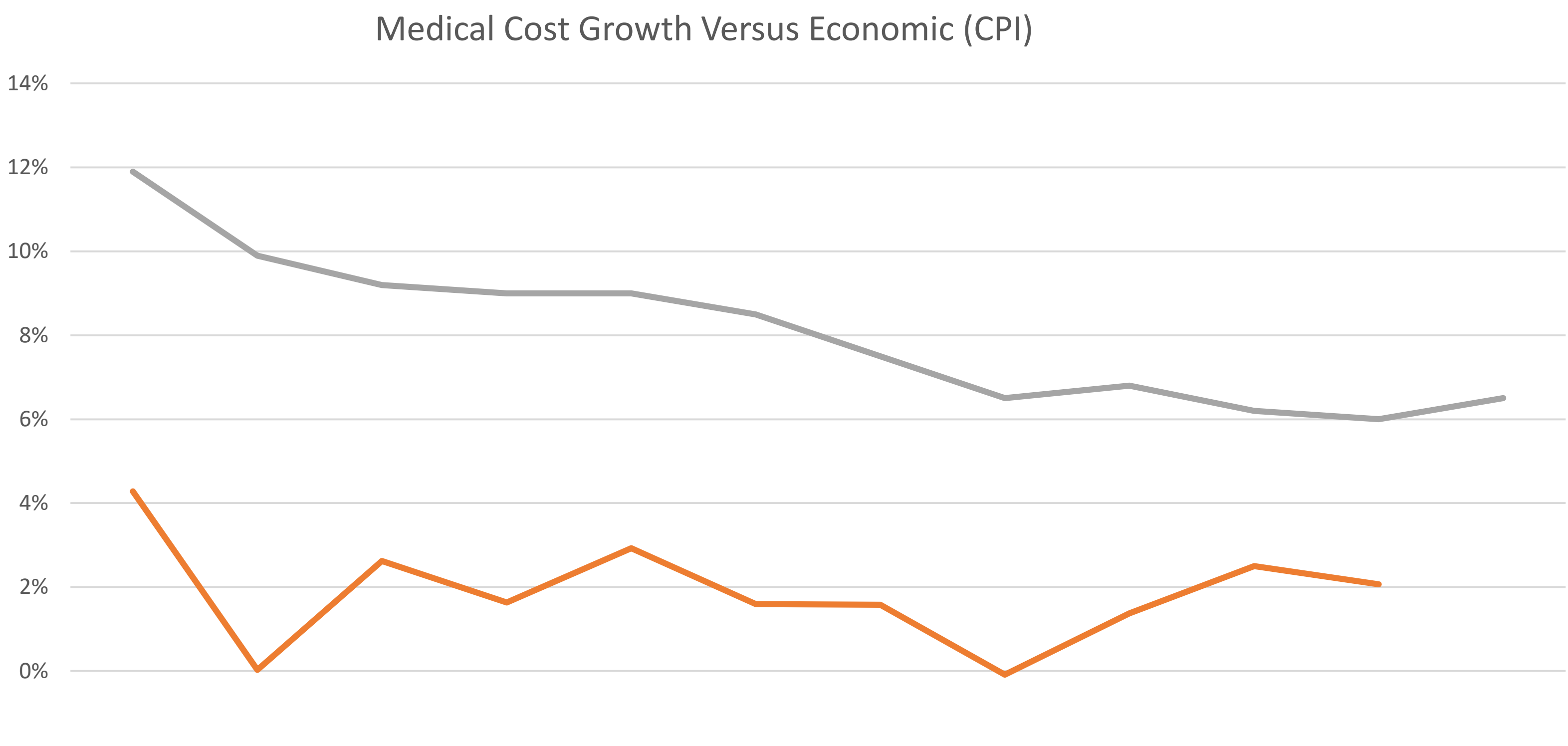
- **Faster growth in the aged and disabled enrollment groups that account for large share of program spending**
- **Increasing cost of prescription drugs**
- **Provider rate increases**



S&P Global Ratings

Source: “Medicaid Enrollment & Spending Growth: FY 2017 & 2018”- Kaiser Family Foundation

State Revenues Vs. Medicaid Expenditures

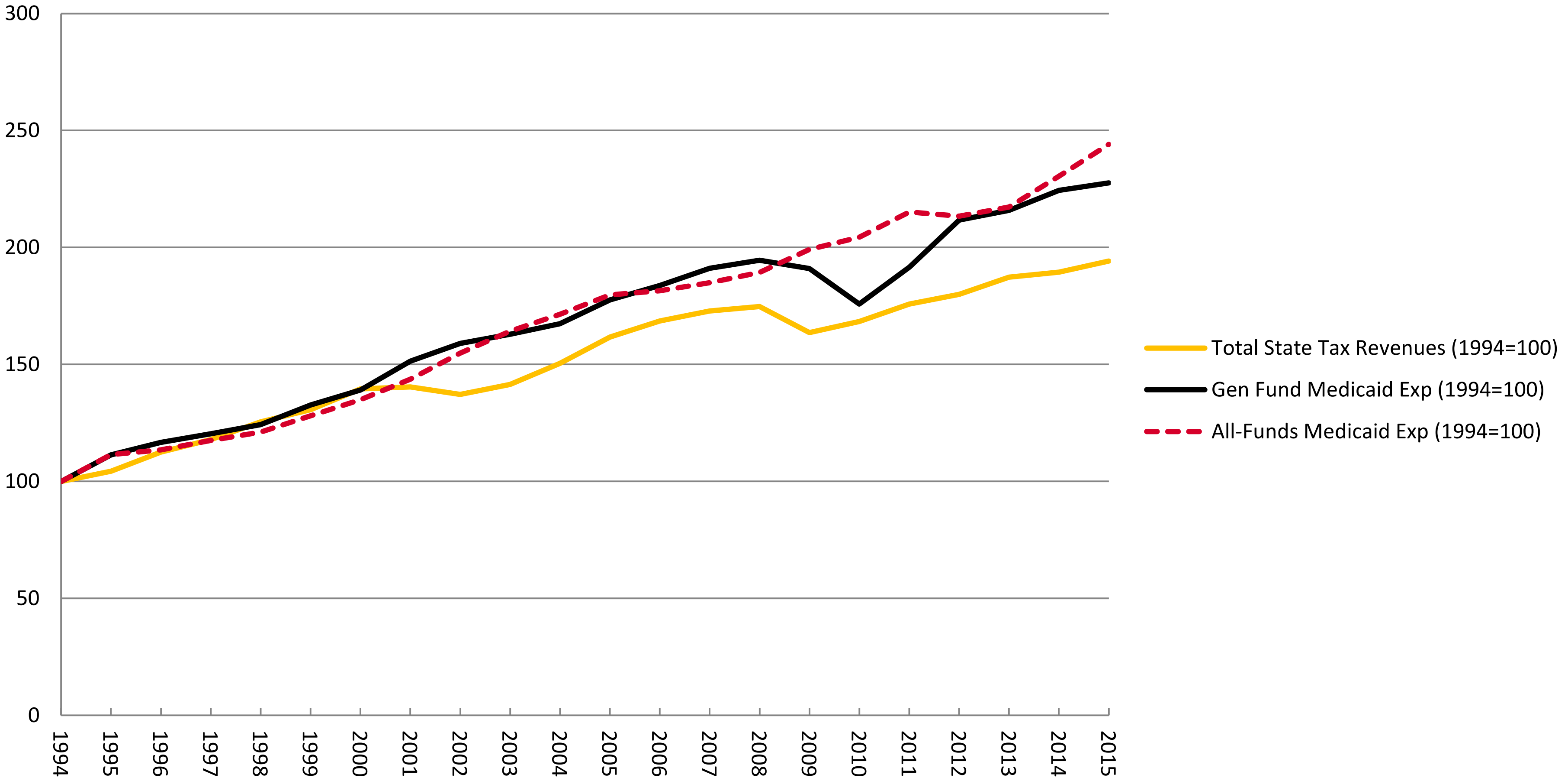


	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
cpi	4.3%	0.0%	2.6%	1.6%	2.9%	1.6%	1.6%	-0.1%	1.4%	2.5%	2.1%	
Medical Trend	11.9%	9.9%	9.2%	9.0%	9.0%	8.5%	7.5%	6.5%	6.8%	6.2%	6.0%	6.5%

CPI: Bureau of Labor Statistics - All items in U.S. city avg, all urban consumers, not seasonally adjusted

Medical Trend: PwC Health Research Institute - Estimated Medical Cost Trend

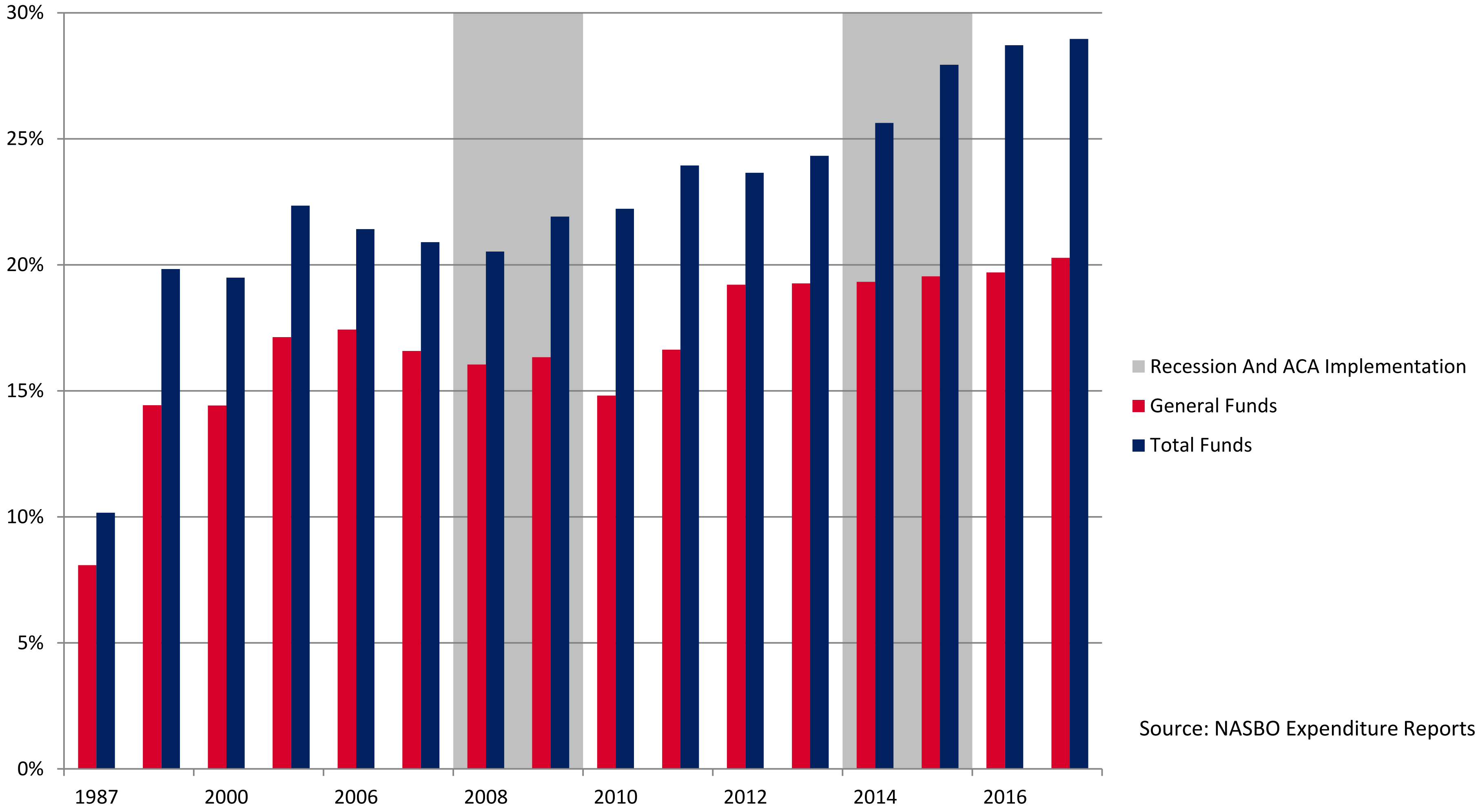
State Revenues Vs. Medicaid Expenditures



Source: Rockefeller Institute of Government
Source: NASBO Expenditure Reports

S&P Global Ratings

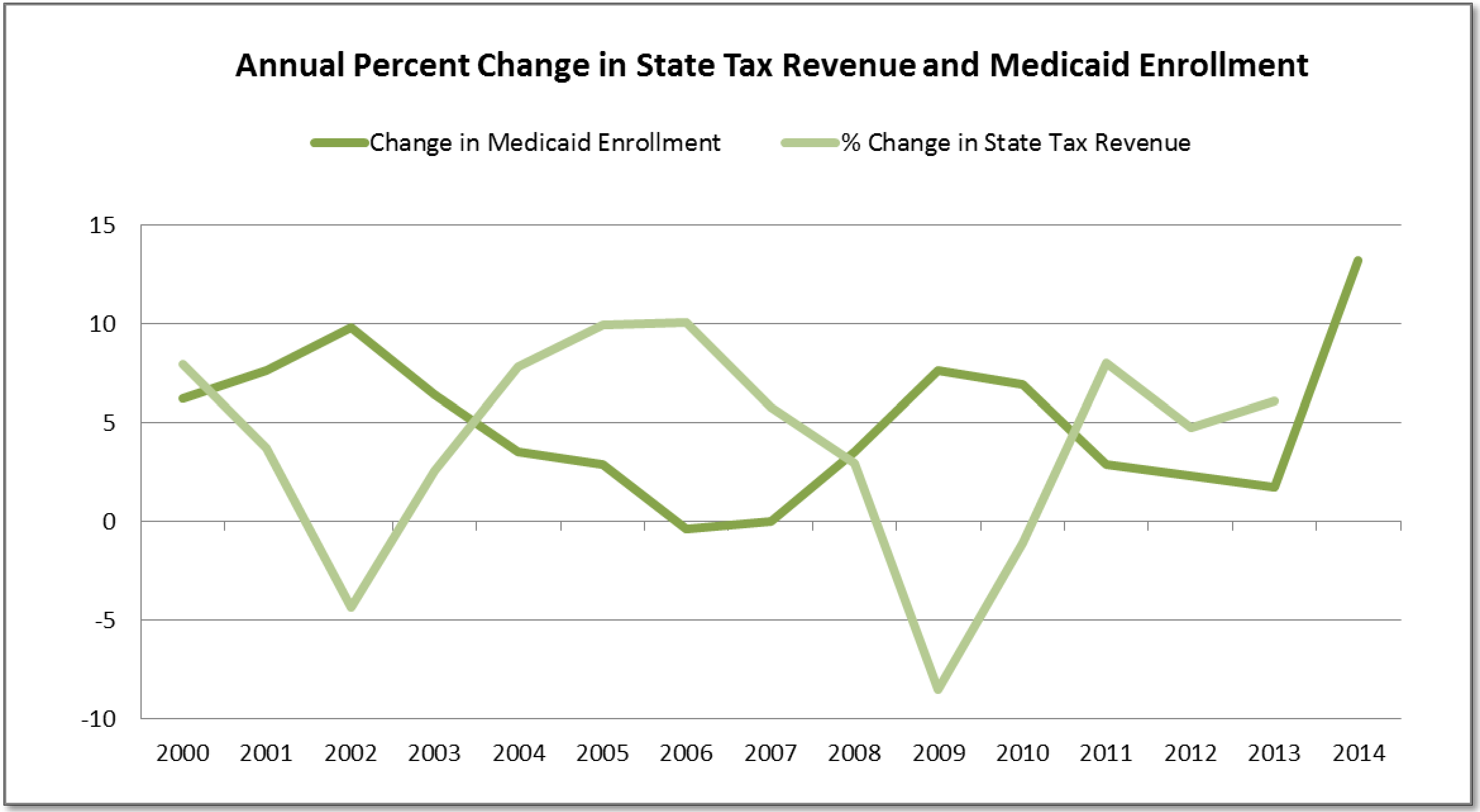
Medicaid Spending from 1987 to 2017



Source: NASBO Expenditure Reports

S&P Global Ratings

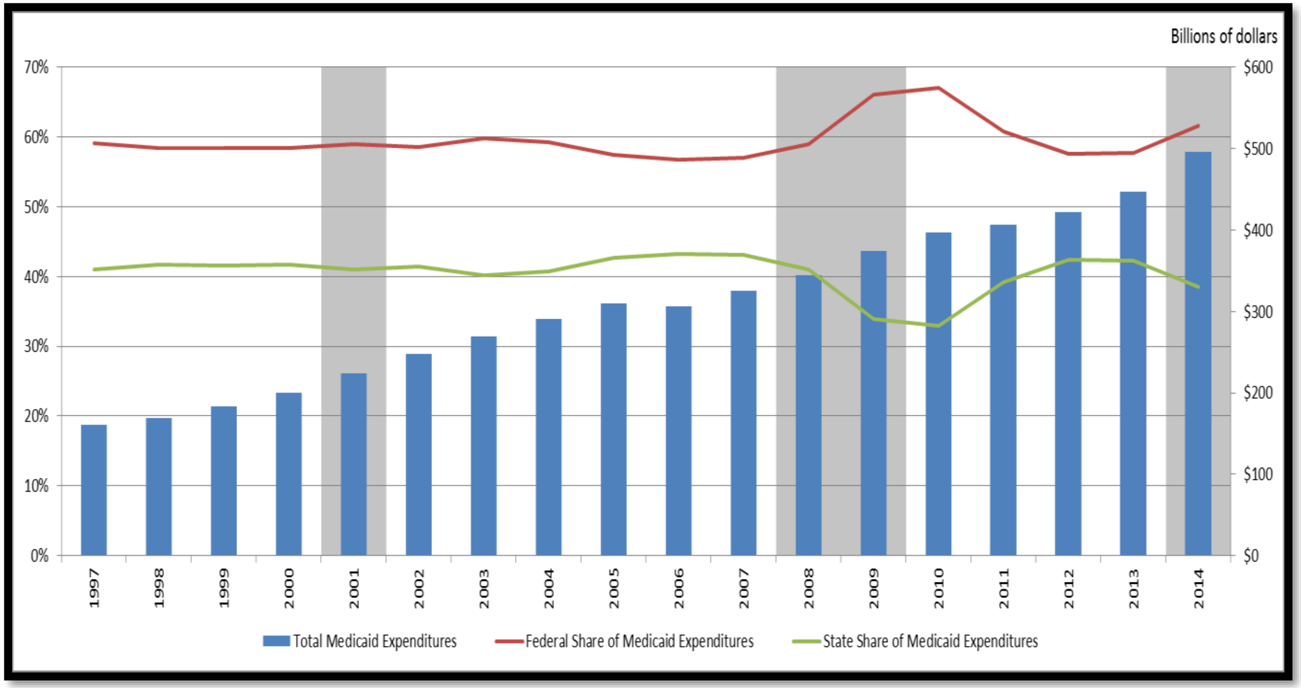
States Are Institutionally Ill-Suited To Fund Entitlements



Source: U.S. Census Bureau, Center for Medicare and Medicaid Services

S&P Global Ratings

Medicaid Is Jointly Financed By Federal And State Governments



SOURCE: Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group.
Shaded areas reflect periods of economic recession (2001, 2008-2009) and the ACA implementation (2014)

Rising OPEB and Pension Costs

S&P State Ratings Pension Approach

3-Year Average Pension Funded Ratio

+

Pension Funding Discipline

→ **Initial Pension Assessment** →

Positive Adjustments

- Unfunded pension liability per capita at or below $500, or
- Unfunded pension liability as % of income at or below 2%.

Negative Adjustments

- Unfunded pension liability per capita at or above $3500, or
- Unfunded pension liability as % of income at or above 7%.

→ **Final Pension Liabilities Assessment**

S&P State Ratings Pension Approach

Funding History

Actuarial Basis

FUNDING DISCIPLINE

Plan Contributions

Funding Progress

- Assumed rate of return vs. actual performance
- Amortization method
- Ratio of actives to beneficiaries
- Frequency of updates to experience studies
- Cash flow assumptions underlying GASB plan asset depletion projections

S&P Local Ratings Pension Approach

Direct Assessment

Large Obligation

- Funded Ratio
- Assumptions

Accelerating Payments

- Contribution practice
- ADC strength (amortization, etc.)

Impact on Budget Stress

- Carrying charge
- Influence from assumptions and methods

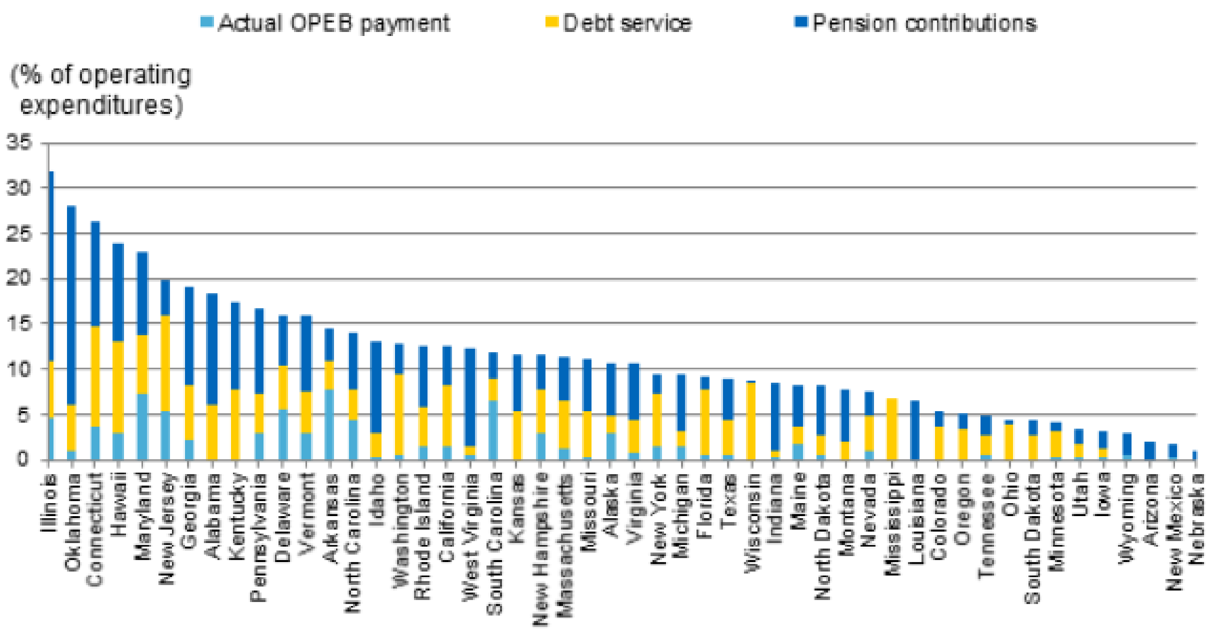
S&P Local Ratings Pension Approach

Further Implications

Management	• Credible Plan to Address • Financial Management Assessment
Flexibility	• Revenues and Expenditures
Performance	• Spending Deferrals
Institutional Framework	• Predictability • State support and restrictions

State Debt and Liability Budgetary Costs

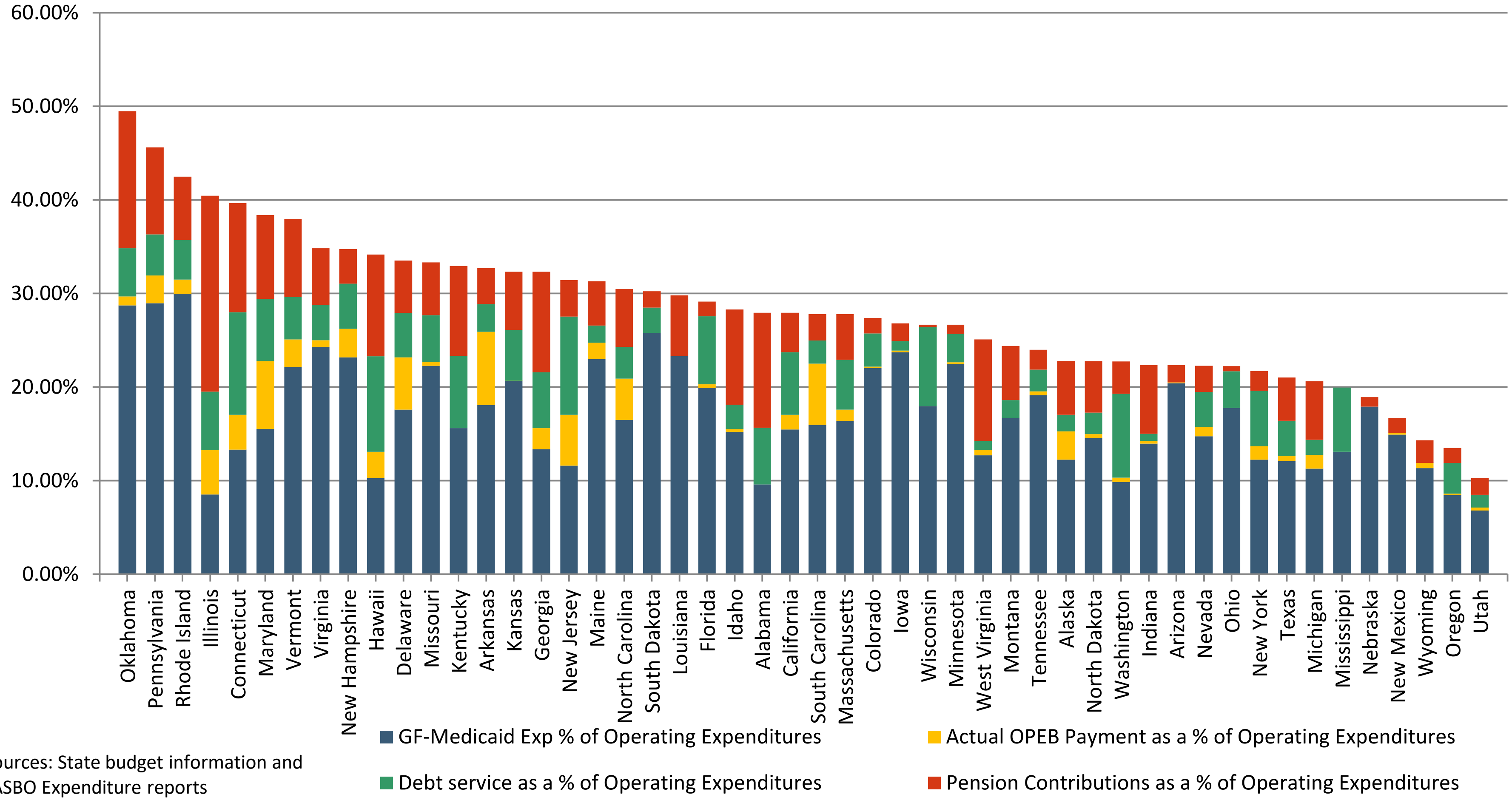
Annual Cost As A Share Of General Spending



Note: Contribution and expenditure data is on a budgetary basis as of fiscal 2016. Illinois operated in fiscal 2016 without a comprehensive budget and its Group Health Insurance payment, which includes its paygo for OPEB benefits, was not funded and contributed to the state's backlog of unpaid bills. Kentucky's pension contributions above include OPEB benefits. Montana does not make cash contributions for its implicit subidy OPEB plan. Nebraska and South Dakota do not report its OPEB. Ohio's pension contributions above are the amounts made to the retirement system. Each system's board annual determines the portion of the employer contribution, if any, that is directed to fund health care benefits. Oklahoma does not report implicit subsidy of its retirement plan death and disability benefits as a separate unfunded OPEB. Some information unavailable for Alabama, Arizona, Kentucky, Louisiana, Mississippi, Nebraska and New Mexico. OPEB–Other post employment benefits.

Source: S&P Global Ratings U.S. State Retiree Medical And OPEB Liabilities Keep Rising As States Prioritize Other Obligations, October 18, 2017

Combined Medicaid, Debt Service, And Pension And OPEB Contributions Share Of General Fund Expenditures



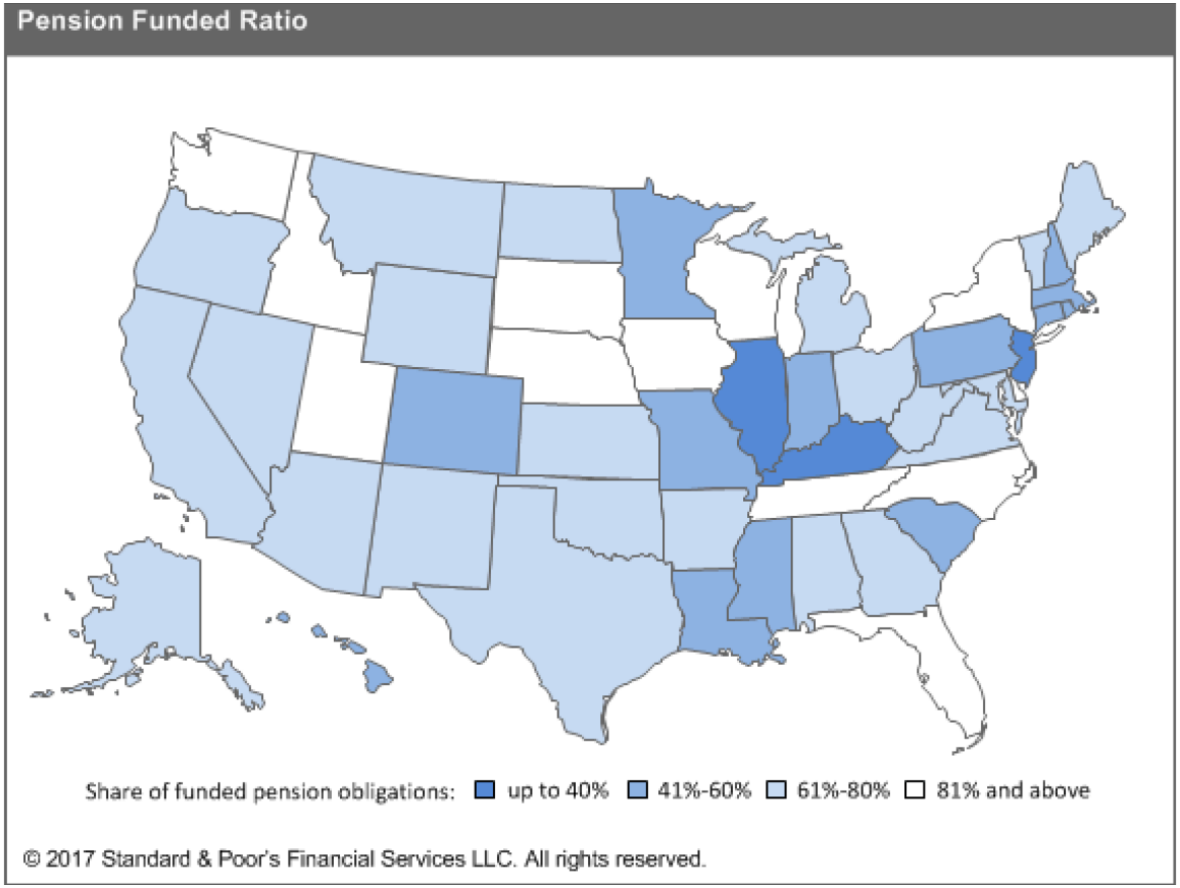
Sources: State budget information and NASBO Expenditure reports

S&P Global Ratings

Rising Pension Costs Challenge State Budgets

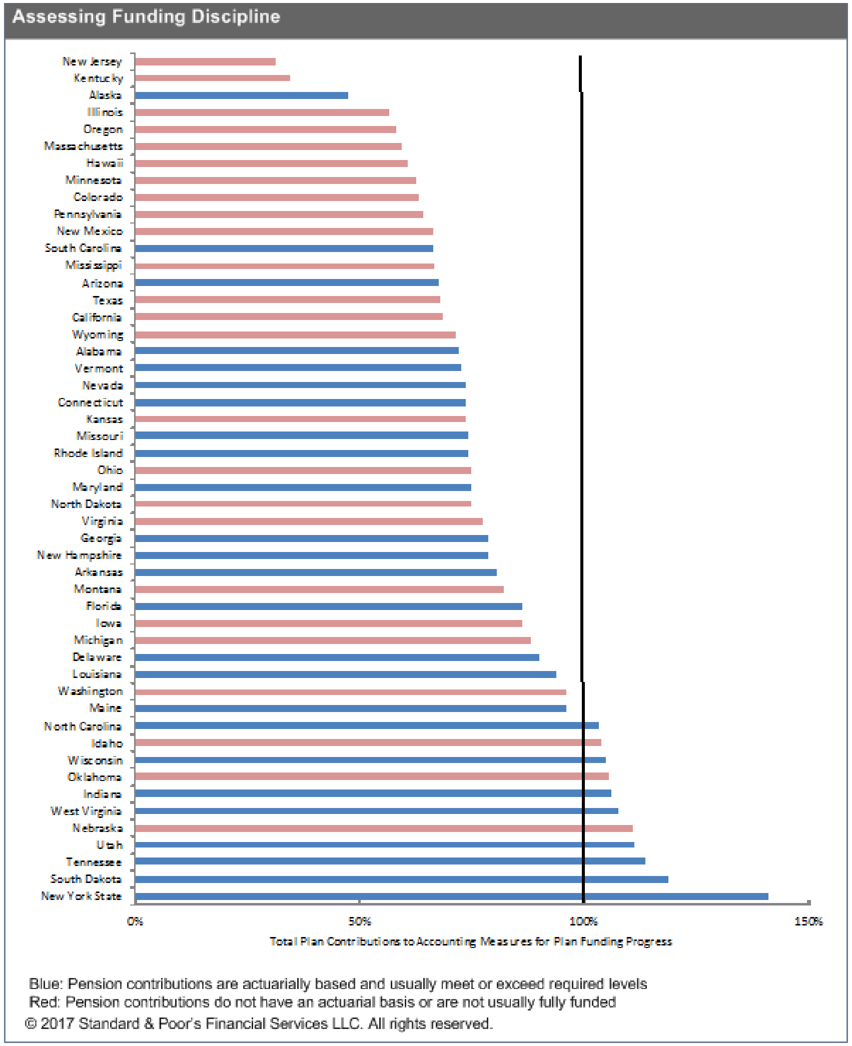
- Lethargic economic recovery, inconsistent investment returns, and assumption changes have put pressure on states' required pension contributions.
- For the weakest pension funds, relatively high pension burdens stem from years of underfunding or deferring payments and poor assumptions, combined with weak investment returns, risky asset allocations, or substantial benefits.
- Demographic trends can also strain systems that are mature and poorly funded because benefit distributions exceed active employee contributions, requiring employers to pick up the slack.
- Even for states that enjoy relatively healthy pension plans, recent reform initiatives reflect ongoing sensible management of long-term pension liabilities.
- Successful pension reform often hinges on state law and court interpretations, which introduces implementation risk.

State Pension Survey Funded Ratios



Source: S&P Global Ratings U.S. State Pensions: Funded Ratios Declined Again in 2016, October 18, 2017

U.S. State Pension Funding Discipline



In our view, states that consistently fund full required contributions on an actuarial basis and use conservative assumptions and methods are more likely to effectively manage their pension liabilities and the associated long-term budgetary costs than states that do not.

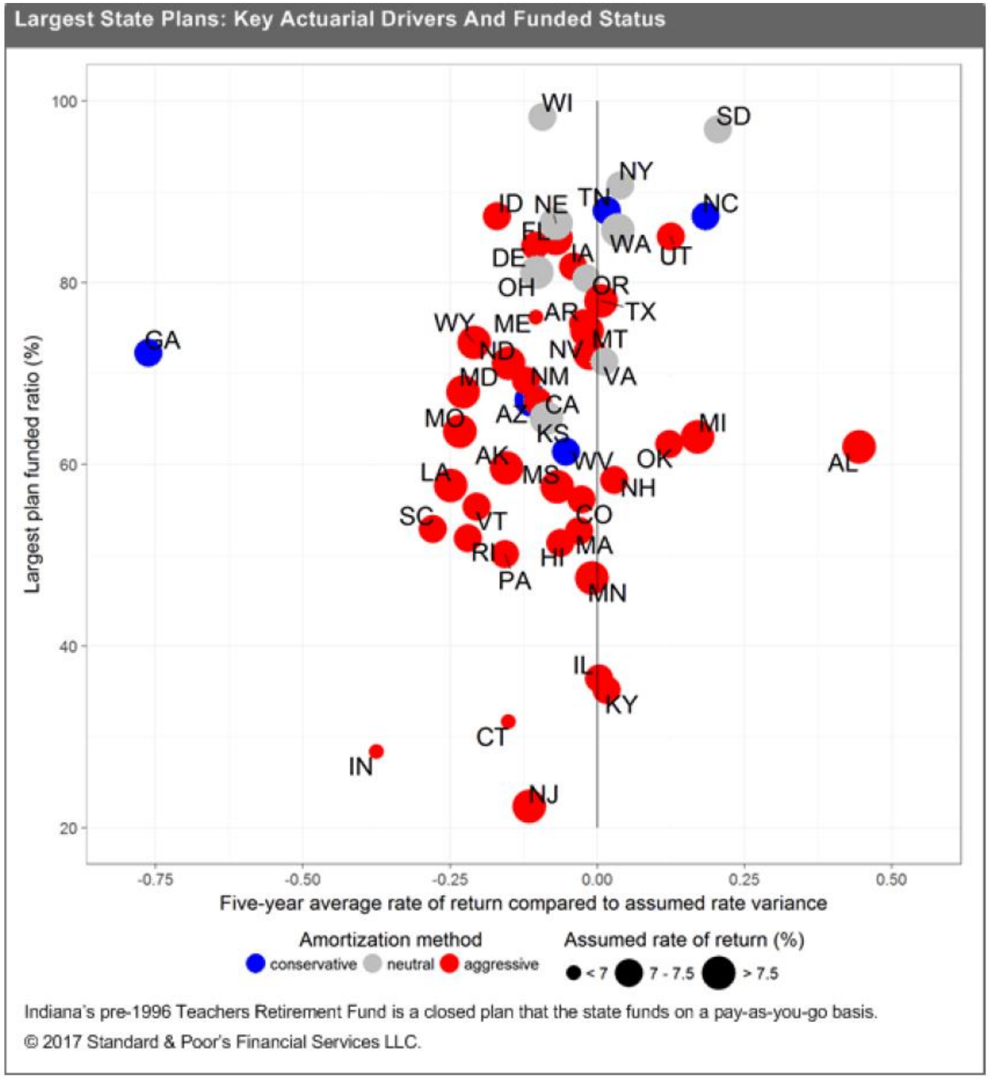
Source: S&P Global Ratings U.S. State Pensions: Funded Ratios Declined Again in 2016, October 18, 2017

Weak Market Returns And Lower Assumed Return Targets Suggest Contributions Will Rise

More plans are moving to gradually lower assumed rates of return, although many remain around 7.5%.

California PERS	7.50%	→	7.0%
California STRS	7.50%	→	7.0%
Connecticut SERS	8.0%	→	6.9%
Hawaii ERS	7.65%	→	7.0%
Oregon's PERS	7.75%	→	7.2%
Illinois TRS	7.50%	→	7.0%
New York ERS	7.50%	→	7.0%
New Jersey TPAF	7.90%	→	7.65%

U.S. State Pension Funding Discipline



Rate of return assumptions and amortization methods are among the key actuarial drivers that, if currently misaligned with experience could result in significant growth in future reported pension liabilities and annual costs.

Source: S&P Global Ratings U.S. State Pensions: Funded Ratios Declined Again in 2016, October 18, 2017

S&P Global
Ratings

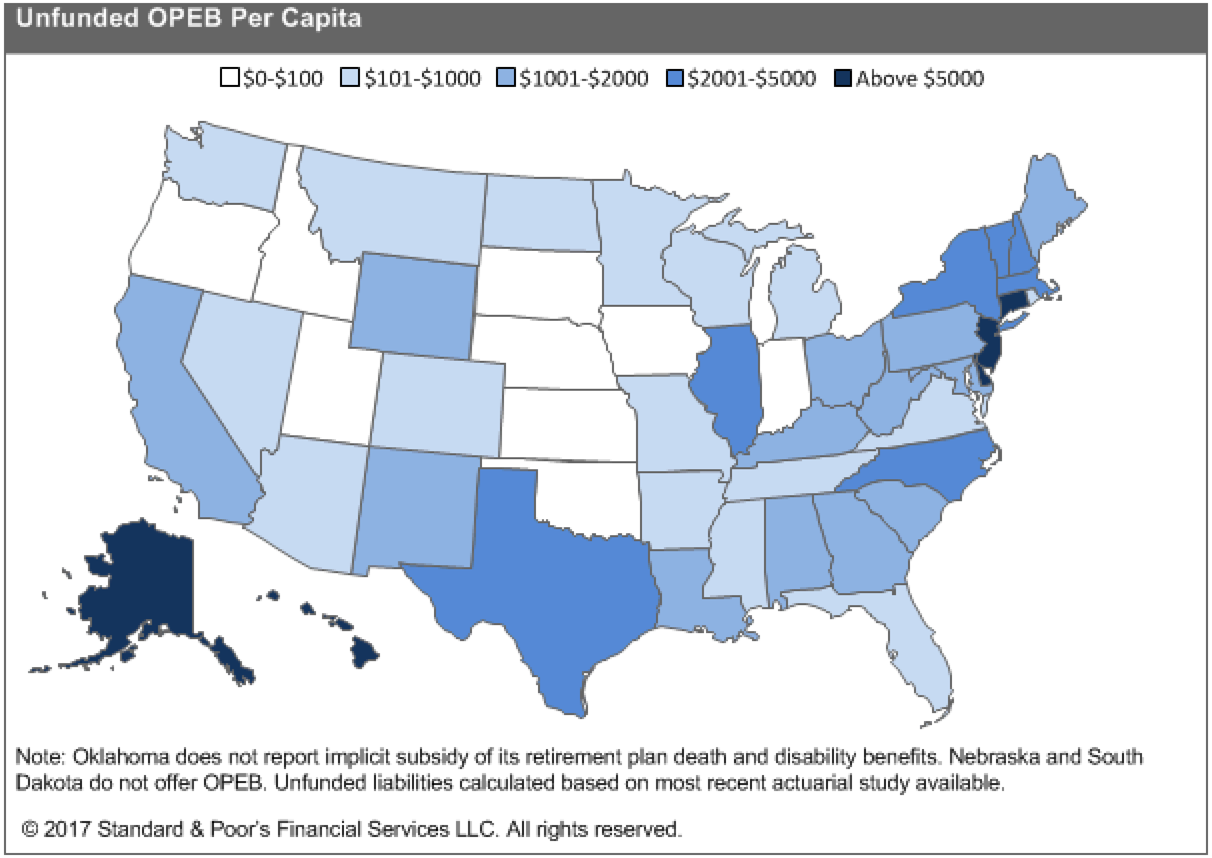
U.S. State Pension Reform

- What is pension reform?
  - Changes in benefits, including cost-of-living (COLA) reductions
  - Modifications to plan design and structure
  - Adjusting retirement eligibility

- According to the National Association of State Retirement Administrators (NASRA), almost every state has passed some type of pension reform since 2009 ("Spotlight on Significant Reforms to State Retirement Systems," NASRA, June 2016).

- Some initiatives are helpful for long-term system health but do not necessarily solve near-term credit pressures

OPEB Survey Unfunded Liability Per Capita



Source: S&P Global Ratings U.S. State Retiree Medical And OPEB Liabilities Keep Rising As States Prioritize Other Obligations, October 18, 2017

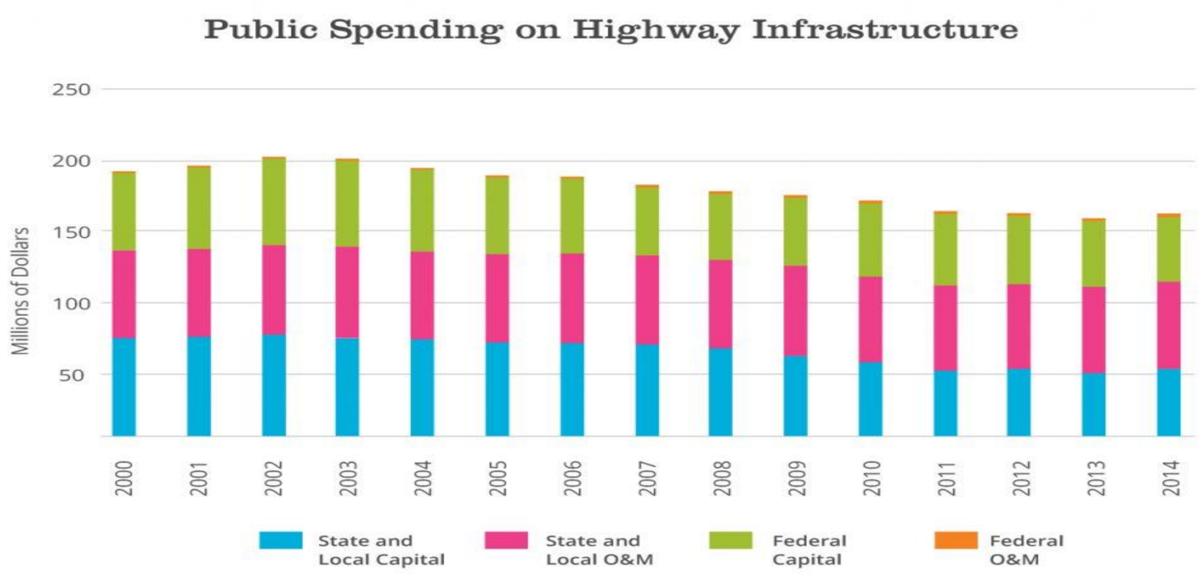
S&P Global Ratings State OPEB Approach

Liability	• Relative level of unfunded OPEB liability compared to other states
Flexibility	• The legal and practical flexibility that a state has to adjust these liabilities
Funding	• The overall strategy to manage the cost of these benefits, which will affect future contribution rates and budgetary requirements

Transportation Funding

The Transportation Funding Gap

Public spending on highway infrastructure has declined despite large new capital and maintenance needs.

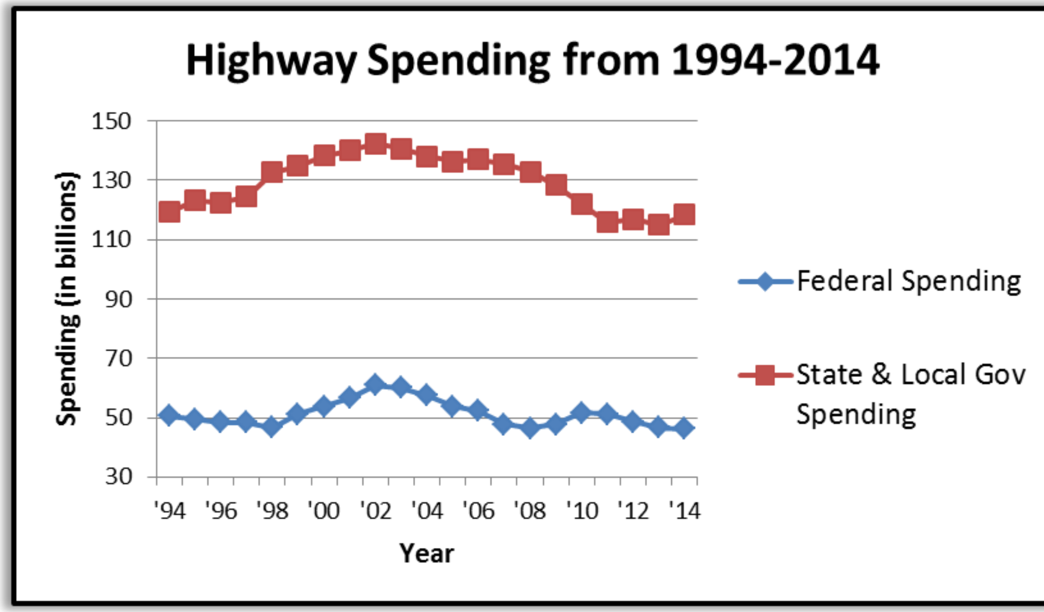


Source: American Society of Civil Engineers

The Transportation Funding Gap

Federal spending has remained relatively flat as transportation needs grow.

The federal Highway Trust Fund is expending more per year than its annual revenues, putting it on a path to insolvency.

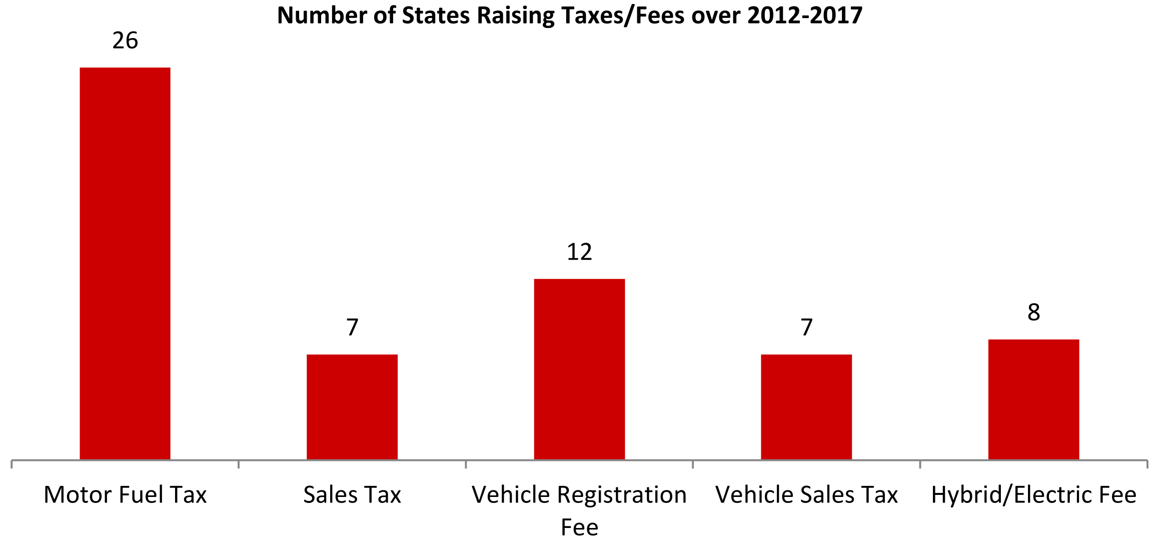


Source: Congressional Budget Office

State Efforts to Increase Transportation Funding

Although overall state spending on transportation has decreased, states recognize transportation funding needs, and many have taken action to raise revenues.

According to our survey, 29 states have raised taxes or fees to fund transportation over the past five years.



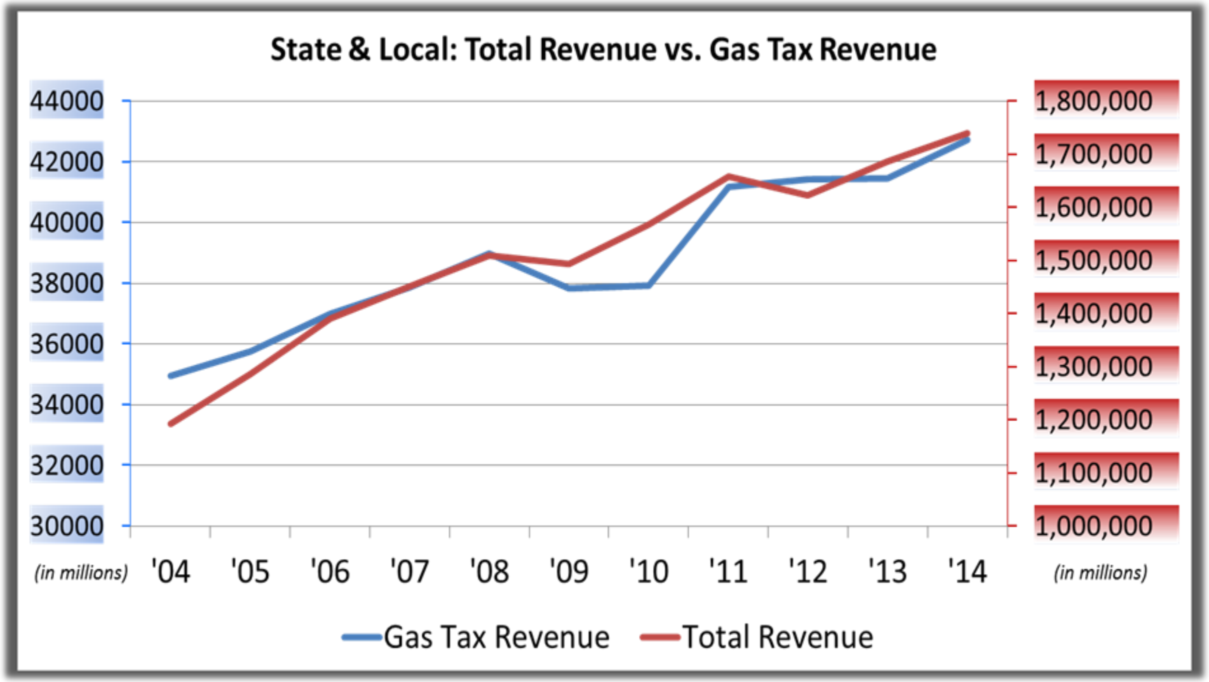
Source: S&P Global Transportation Funding Survey 2012-2017

S&P Global Ratings

The Transportation Funding Gap

In the absence of growth in federal funding, states bear the burden of increased transportation costs.

However, in many cases, motor fuel taxes, the traditional source of transportation funding, have not kept pace with inflation.

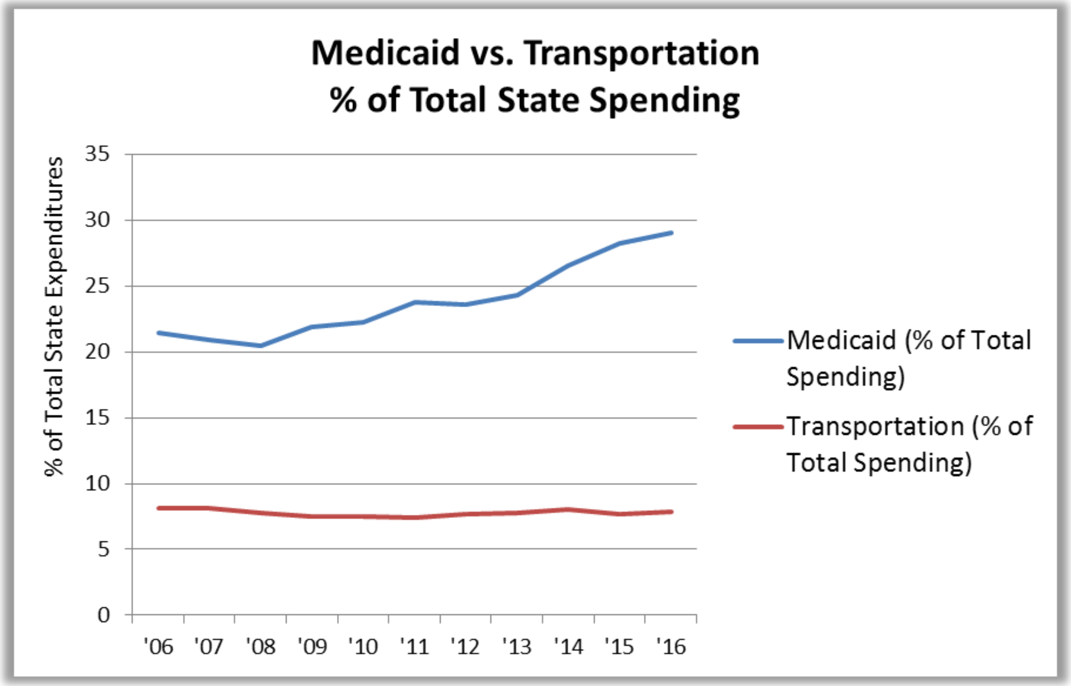


Source: Tax Policy Center

S&P Global Ratings

Medicaid's Crowding Out Effect

While many states recognize the importance of transportation funding, it competes with other growing spending priorities, such as Medicaid.



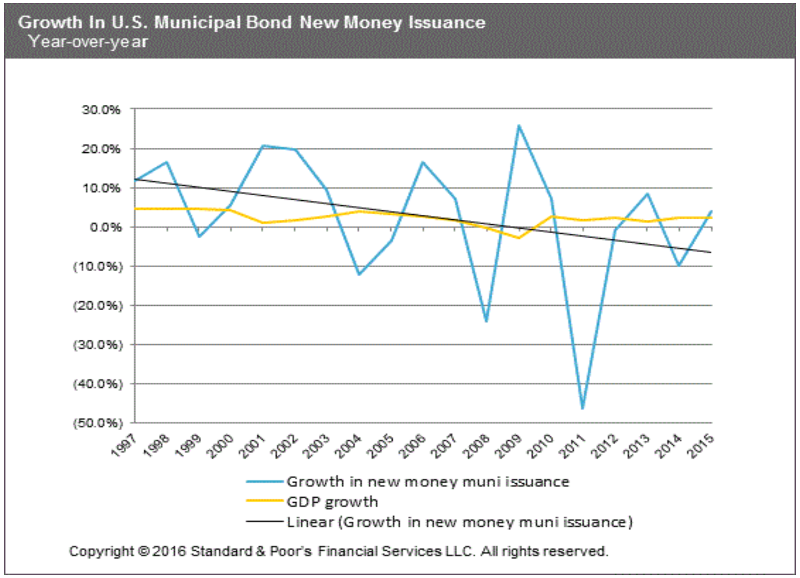
Source: NASBO State Expenditure Report

President Trump's Infrastructure Plan: A Substantive Shift To Private-Sector Funding

- President Trump's plan is aimed at shaking up the role of the federal government in infrastructure investment.
- The plan's broad objective is to push state and local governments to innovate and explore new funding approaches to not only maximize limited federal funding but also to attract private investment.
- The problem for U.S. infrastructure has never been a shortage of private capital, but rather how to pay for it. The question is, will Americans accept paying more to use the nation's infrastructure?

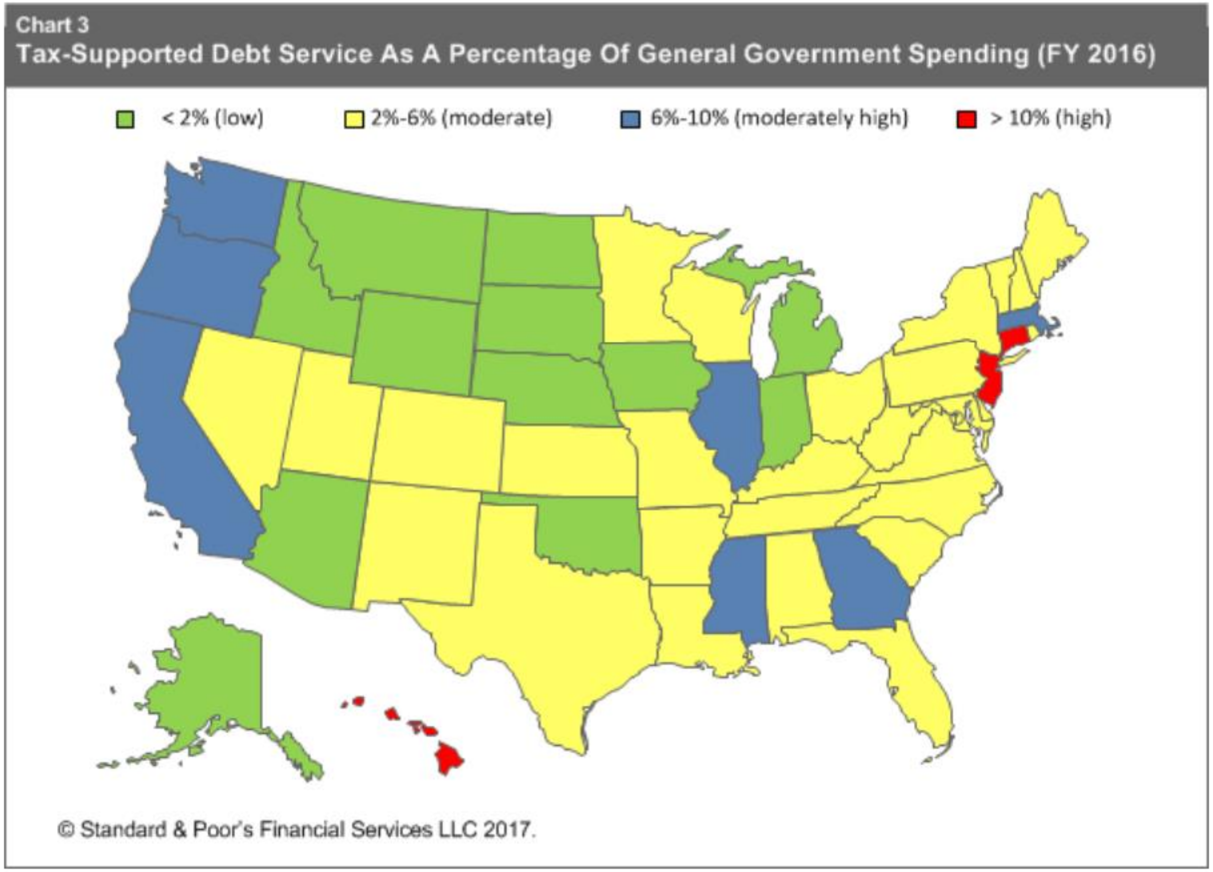
State Efforts to Increase Transportation Funding

- Despite low interest rates, many states have been reluctant to issue additional debt.
- Overall debt balances in recent years have been flat.
- Debt affordability models are typically tied to revenue or economic benchmarks, and the sluggish nature of economic growth could constrain debt issuance.



S&P Global Ratings

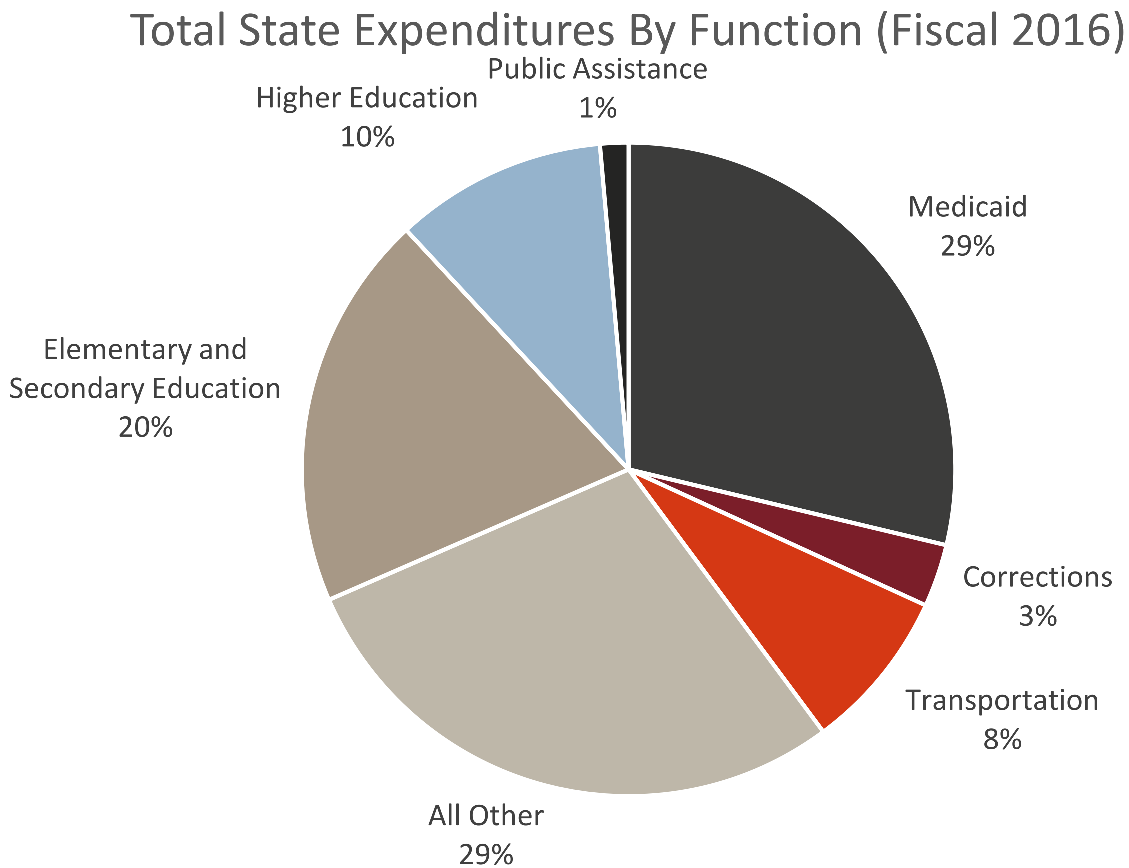
U.S. State Debt Levels Remain Sustainable



Other Challenges Ahead

S&P Global
Ratings

States Have Many Spending Priorities to Balance



Source: NASBO State Expenditure Report

S&P Global Ratings

Political Risk

- The inadequacy of revenues to cover rising fixed costs, discretionary spending and necessary infrastructure investments has strained the ability of state political leaders to deliver on campaign promises.
- Greater ideological polarization is increasingly coming into conflict with states' balanced budget requirements and is interfering with their ability to accumulate prudent budget reserves.
- Funding fixed costs amid lackluster revenue growth has necessitated that governors—willingly or at the behest of state legislatures—sideline certain non-mandatory proposals to invest in education or infrastructure.
- For certain states, inability to resolve lawmakers' differences, intransigent budget politics in these states has corresponded with weaker budgetary performance, depleted reserves, and deteriorating liability profiles.

State Fiscal 2017 Rainy Day Balances Below Pre-Recession Levels

States' total balances equaled around $71.9 billion in fiscal 2017, and held enough funds to cover operating expenditures for a median of 29.3 days or 8% of spending. This is less than the fiscal 2007 median of 41.3 days, or 11.3%

Just 14 states' total balances provided a larger financial cushion than before the recession.

Due to anticipated budget pressures, 11 states indicated the possibility of withdrawing from rainy day funds in FY 2018.

Source: Pew Charitable Trusts "State Rainy Day Funds Grow Even as Total Balances Lag" Jan. 25, 2018

Internet Sales tax

U.S. Retail Sales (Non-Food)

($ billion)							
Year	E-commerce as a % of total sales*	E-commerce sales	% change	Retail sales without e-commerce	% change	Total retail sales	% change
2005	2.5	91.5		3597.8		3689.3	
2006	2.9	113.6	24.1	3758	4.5	3871.6	4.9
2007	3.4	136.9	20.5	3858.3	2.7	3995.2	3.2
2008	3.6	142	3.7	3794.3	-1.7	3936.3	-1.5
2009	4	145.8	2.7	3468.7	-8.6	3614.5	-8.2
2010	4.5	170.2	16.7	3650.7	5.2	3820.9	5.7
2011	4.9	199.7	17.3	3906.3	7	4106	7.5
2012	5.3	229.4	14.9	4076.8	4.4	4306.2	4.9
2013	5.9	261.2	13.8	4197.8	3	4459	3.5
2014	6.4	298.6	14.3	4337.8	3.3	4636.3	4
2015	7.3	342.8	14.8	4358	0.5	4700.8	1.4
2016p	8.1	394.9	15.2	4451	2.1	4845.9	3.1
Q42016p (seasonally adjusted)	8.3	102.7	14.3*			1235.5	4.1*

*-Compared to same quarter year earlier. Source: U.S. Census Bureau. Online travel services, financial brokers and dealers, and ticket sales agencies are not classified by the Department of Commerce as retail sales and are not included in either total or E-commerce retail sales estimates.

S&P Global Ratings: U.S. States May Have Solved The Riddle Of Lost Online Sales Tax

Oil Price Collapse Has Undermined Some State Economies, Revenues

Real Gross State Product Data for Major Oil-Producing States						
	Year-Over-Year Real State GDP					
	2015-2016		2016-2017est		2017-2018(p)	
	Growth rate	Rank	Growth rate	Rank	Growth rate	Rank
Alaska	-5.39	50	-0.83	48	1.68	49
Louisiana	0.16	40	0.9	40	2.42	24
Montana	1.11	28	0.81	42	1.92	42
New Mexico	0.15	41	2.18	23	1.88	43
North Dakota	-5.03	49	0.49	44	2.78	15
Oklahoma	-4.11	48	1.72	30	2.88	13
Texas	-0.31	44	2.92	7	3.95	2
Wyoming	-1.77	47	2.63	13	3.17	49
Source: IHS Connect.						

Oil Revenues and State Budgets

- Reliance on direct oil-related tax revenue varies by state
- Accumulation of reserves during period of high oil prices varies by state

Key Data for Major Oil-Producing States (As of Jan. 24, 2017)

	Fiscal 2017		Fiscal 2018	
	Oil-related revs as % of operating revs	Reserves as % of expenditures	Oil-related revs as % of operating revs	Reserves as % of expenditures
Alaska	67	322	68	310
Louisiana	3	4	3	-3
Montana	2	3.9	2.2	6.9
New Mexico	13	4.2	13	5
North Dakota	5	91	22	N/A
Oklahoma	2	4.5	3	N/A
Texas	3.6	26	4.3	24
Wyoming	23	N/A	24.1	67.7

S&P Global Ratings: Oil-Producing States See Deepening Economic Weakness, Jan. 24, 2017

Economic Outlook

2016 Actual vs Forecast Scenarios

2017-2018 Industry Economic Outlook for U.S. State and Local Governments

		Forecast/Scenarios						Actual
		Downside		Baseline		Upside		
Macroeconomic Indicators	**Comment**	**2017**	**2018**	**2017**	**2018**	**2017**	**2018**	**2016**
Real GDP (% change)	Economic growth poised to accelerate, could reach 3.0% in real terms for first time since 2005.	2.1	1.6	2.2	2.6	2.2	3.0	1.6
Federal government purchases	Federal purchases are virtually flat in all scenarios.	(0.2)	(0.8)	(0.1)	0.7	(0.2)	(0.8)	0.6
Unemployment rate (%)	As labor market glides toward full employment, monthly payroll job gains should slow to 140,000 in 2018 from 170,000 in 2017	4.4	4.5	4.4	4.0	4.4	3.9	4.8
Real consumer spending (% change)	Expected to grow at steady if unimpressive rates in 2018 and 2019	2.6	1.7	2.7	2.5	2.7	2.9	2.7
Housing Starts (mil)	Strong surge in October offset a decline in September and combine for slught upward path over three-months which should persist into 2018. Single family construction will continue to outpace multi-family units, similar to recent years.	1.2	1.2	1.2	1.3	1.2	1.3	1.2
Core CPI	Business and consumer inflation expectations are broadly anchored around the Fed's 2.0% target.	1.8	1.7	1.9	1.9	1.8	1.7	2.2
S&P 500 Common Stock Index	Recent market gains could throw off healthy capital gains related personal income tax revenue for states in 2018, but is also an area susceptible to downside correction.	2377.7	2338	2445.6	2654.3	2448.7	2810.8	2092.4
Crude oil ($/bbl, WTI)	We continue to view oil prices as somewhat range bound between $50/bbl and $60/bbl.	49.79	50	50.6	52.28	50.1	54.91	43.22

* See "Economic Research: Will It Be Jingle Bells Or Silent Night For 2018" (Nov. 3, 2017)

Questions?

S&P Global
Ratings