Municipal Bond Credit Perspectives

State of the States

October 2018

ASSET MANAGEMENT | WHITE PAPER

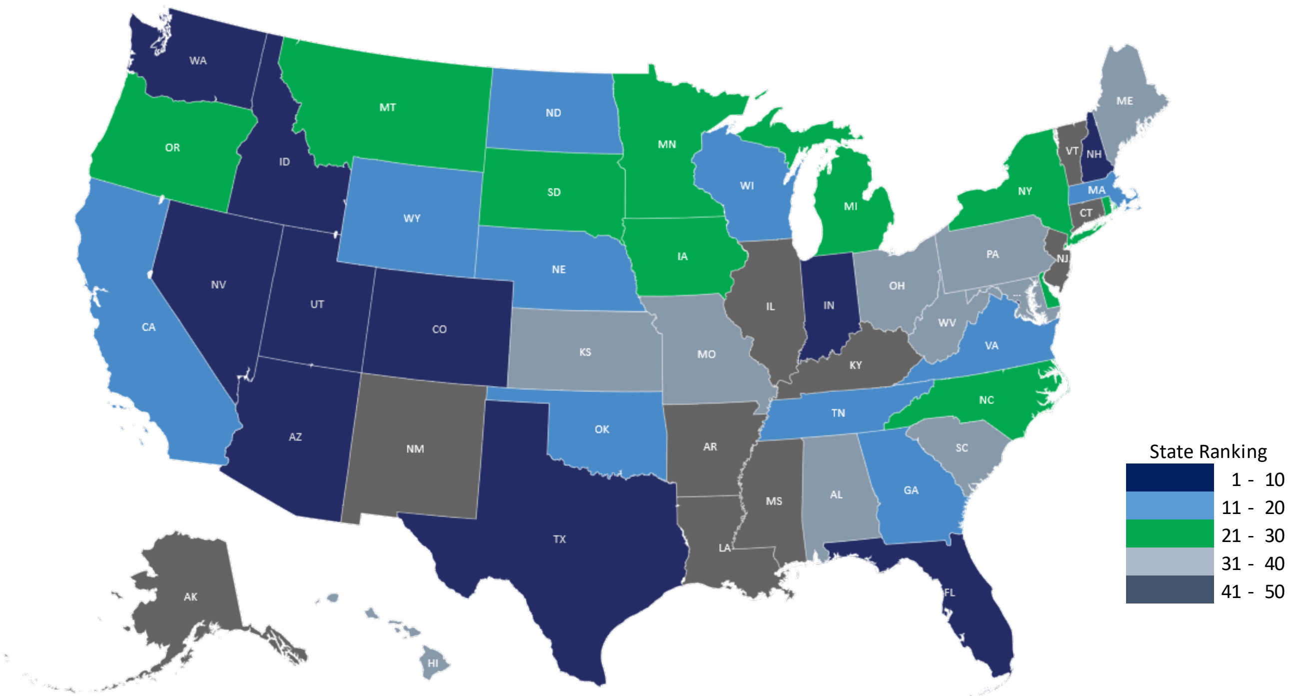
U.S. State Credit Quality: Outlook Improves to Stable

U.S. economic growth drives tax revenues while states show spending discipline

Key Findings

- Conning upgrades outlook on state credit quality to stable from declining.
- State tax-revenue conditions have improved.
- State credit quality is benefiting from U.S. economic growth.
- States are exhibiting expenditure discipline.
- Western and Southeastern regions contain our top-ranked states.
- Texas and California have strong and improving credit profiles.

State Rankings by Credit Quality



Preprared by Conning, Inc.

Executive Summary

Since our State of the States Spring 2018 report, rising General Fund revenues and moderating state spending have led to improved credit metrics. State revenue growth now trends above both state expenditure growth and national GDP growth in current dollars. Tax revenue growth was particularly strong during the second quarter of 2018, rising 7.8%[1] from the second quarter of 2017. The rate of state expenditure growth has slowed in part due to the slowdown in Medicaid enrollment[2] and because there has been no material increase in debt issuance.[3] In fact, 2018 is the fifth consecutive year of net tax-supported debt growing 2% or less.[4]

Many states have strengthened their rainy-day funds from these revenue surges, notably California and Connecticut. Pension funding levels have also moderately improved due to strong equity markets, and further improvement is expected when FY 2018 results are released.

Economic growth continues, as measured by employment, personal income and home prices, although it's uneven among states. Most Western and Southeastern states are experiencing economic growth above the national average. Although economic growth has been slower in several Midwestern and Northeastern states, they too have seen credit improvement. Among large states, Texas stands out for its economic and credit metrics. In addition, all states this year passed budgets with little or no delay, unlike prior years—another credit positive.

The Tax Cuts and Jobs Act of 2017 created new challenges for some states in the form of a $10,000 per-family cap in state and local tax deductions. The cap potentially would make living in states with higher tax rates more expensive for middle- to high-income taxpayers, possibly spurring an exodus from these states and driving home prices lower. This fear has not materialized, as home prices nationwide rose 6.5% from the second quarter of 2017 to the second quarter of 2018 and prices rose in all states during the past 12 months.[5] In California and New York, two of the highest tax states, home prices rose at or above the median level.

Concerns persist for states with low rainy-day balances, stubbornly high economic debt and unrelenting cost pressures, especially given the length of the current economic expansion. Not all states are as prepared as they should be at this point in the recovery, and the level of federal assistance available during the last downturn will unlikely be available should another one occur in the near future, given widening federal budget deficits and the nation's polarized political environment. Kentucky, Illinois, Pennsylvania, Connecticut and New Jersey are among the states bearing close watch.

Recent U.S. Supreme Court decisions also offer potential upsides for state and municipal budgets due to rulings that open the door for states to collect taxes on sales to residents from out-of-state e-commerce firms and from in-state sports gambling service providers. A ruling easing union-fee requirements may also provide states and municipalities with greater leverage over the longer term in negotiations with public-sector unions.

In Conning's opinion, overall state fiscal and credit conditions have materially improved in recent months, meriting a stable outlook for the states.

[1] Census Bureau, U.S. Department of Commerce (2017-2018), https://www.census.gov/data/tables/2018/econ/qtax/historical/q2.html
[2] The National Association of State Budget Officers, "Fiscal Survey of the States" (Spring 2018), https://www.nasbo.org/reports-data/fiscal-survey-of-states
[3] ©2018 Moody's Investors Services, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates – used with limited permission "Medians – State debt continues slow growth trend" April 24, 2018
[4] ibid
[5] Federal Housing Finance Agency (FHFA) (2018), "U.S. House Prices Rise 1.1 Percent in Second Quarter," August 23, 2018, https://www.fhfa.gov/Media/PublicAffairs/Pages/US-House-Prices-Rise-1pt1-Percent-in-Second-Quarter.aspx

State Revenues: Growth Accelerates in 2018

State tax revenues increased 7.4% during the 12 months ending June 30, 2018, as Exhibit 1 illustrates. Growth was particularly strong in the second quarter, as revenues rose 7.8% from the second quarter of 2017. Taxes on realized capital gains and additional revenue from newly enacted measures contributed to the robust growth in individual income-tax receipts.

Exhibit 1: State Tax Revenues, State Expenditure and GDP Growth

Year	State General Fund Revenues ($ in Billions)[1]	Growth in State Revenues (%)	Growth in State Expenditures (%)	Change in National GDP in Current Dollars (%)
12 months as of 6/30/18*	$1,027.6	7.4	3.4	5.4
2017	$985.9	5.5	4.0	4.1
2016	$939.6	1.0	3.2	3.4
2015	$930.7	5.0	4.2	3.1
2014	$884.3	2.0	4.8	4.3
2013	$866.7	8.0	4.1	4.3
2012	$802.7	4.0	3.4	3.2

*Compares to 12-month data as of 6/30/17. Prepared by Conning, Inc. Sources: Bureau of Economic Analysis, U.S. Department of Commerce (2009-2018), Census Bureau, U.S. Department of Commerce (2009-2018), https://www.census.gov/data/tables/2018/econ/qtax/historical/q2.html and ©2018 The National Association of State Budget Officers, "Fiscal Survey of the States (Spring 2018)," https://www.nasbo.org/ reports-data/fiscal-survey-of-states

[1] State General Fund revenues include individual and corporate income taxes, sales, property taxes, licenses and fees plus other revenue.

Recession Preparedness: Varies by State

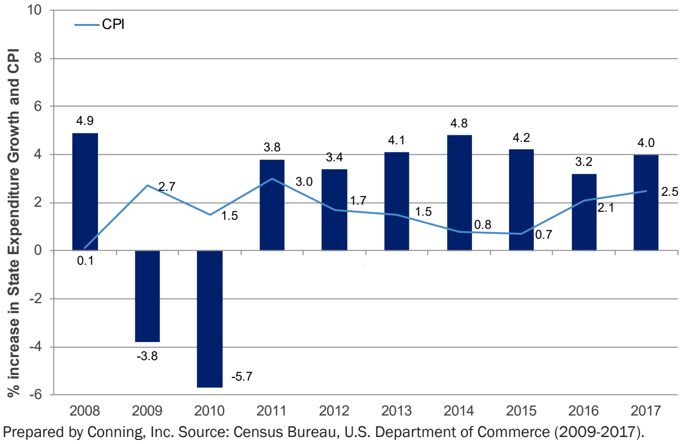
Personal income-tax revenues have proved to be the most volatile state revenue source, and states with a high reliance on them are the most vulnerable during a recessionary period. Personal income taxes accounted for 46%[6] of 2018 second-quarter revenues, per the U.S. Census Bureau, but the differences among states are quite wide. Personal income taxes are less than 10%[7] of revenue for Alaska, Washington, Wyoming, Texas, Nevada, South Dakota, North Dakota, Florida, Tennessee and New Hampshire; they are more than 55%[8] of revenue for Oregon, California, New York, Connecticut and Massachusetts. The latter states should have higher reserves to counter their increased revenue volatility, but only California has steadily built its reserves (a noted credit positive).

States Exercise Spending Discipline

State expenditure growth has slowed: it rose an estimated 3.4% in 2018, less than the 4% increase of 2017, and is projected to increase just 3.2% in FY 2019.[9] A key factor is slowing Medicaid costs, which are expected to grow just 1.9% in FY 2019[10] due to the tapering of Medicaid expansion under the Affordable Care Act, according to the National Association of State Budget Officers (NASBO).

As Exhibit 2 illustrates, state expenditure growth during the past decade exceeded CPI growth, but the gap is shrinking.

Exhibit 2: State General Fund Expenditure Growth % Compared to Annual CPI



Prepared by Conning, Inc. Source: Census Bureau, U.S. Department of Commerce (2009-2017).

Low Reserve Balances Equal Greater Recession Risks

General Fund reserve balances (defined as General Fund balances + rainy-day fund balances) as a percentage of General Fund expenditures are a key measure of a state's fiscal health. States rely on reserves to protect against revenue volatility caused by recessions, and Conning views a healthy state reserve balance to be equal to 10% of its annual General Fund expenditures. The average aggregate state General Fund reserve for 2018 is 9.4%, as estimated by NASBO.[11]

[6] Census Bureau, U.S. Department of Commerce (2018), https://www.census.gov/data/tables/2018/econ/qtax/historical/q2.html

[7] ibid

[8] ibid

[9] Census Bureau, U.S. Department of Commerce (2018), https://www.census.gov/data/tables/2018/econ/qtax/historical/q2.html; The National Association of State Budget Officers, "Fiscal Survey of the States" (Spring 2018), https://www.nasbo.org/reports-data/fiscal-survey-of-states

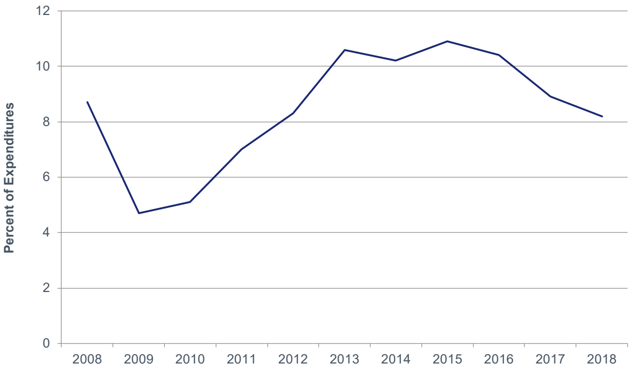
[10] The National Association of State Budget Officers, "Fiscal Survey of the States" (Spring 2018), https://www.nasbo.org/reports-data/fiscal-survey-of-states

[11] ibid

As shown in Exhibit 3, aggregate fund-reserve balances continue to hover around 10% but vary dramatically by state: 12 states have less than 5%, as shown in column 2 of Exhibit 4, including Illinois, New Jersey and Pennsylvania.

It is imperative to understand the heightened recession risk for states with dangerously low reserve balances today versus 10 years ago.

Exhibit 3: Year-End Balance as a Percentage of Expenditures[1]



Prepared by Conning, Inc. Source: © 2000-2018 The National Association of State Budget Officers, "Fiscal Survey of the States (Spring 2018)," https://www.nasbo.org/reports-data/fiscal- survey-of-states

[1] Includes the ending GF balance plus rainy-day fund balance

State General Fund revenues fell 11.2% in 2009 and were followed by several years of slow growth, according to U.S. Census Bureau data, and reserve balances did not provide enough cushion to make up the difference. The dramatic post-crisis policies of expenditure reductions, tax increases, increases in federal transfer payments and deferring capital expenditures were critical to state coffers, and even then it took many years for state revenues to recover to pre-recession levels on an inflation-adjusted basis.

Exhibit 4: Total Fund Balances as a Percentage of Expenditures

GF Balance Percentage of GFE	FY 2017 Actual	FY 2018 Preliminary	FY 2019 (Recommended)
	Number of States		
Less than 1%	1	2	2
>1% and <5%	13	10	9
>5%<10%	15	17	18
10% or more	21	20	19

Prepared by Conning, Inc. Source: © 2000-2018 The National Association of State Budget Officers, "Fiscal Survey of the States (Spring 2017)," https://www. nasbo.org/reports-data/fiscal-survey-of-states

Today, we face a larger federal government budget deficit and greater state fixed-cost burdens due to pension underfunding and growth in Medicaid. Thus, we think it unwise to assume the same level of support for states should we experience another market downturn. Conning thinks that states with fund balances of 5% or less of annual General Fund spending have a heightened risk during a recession. If you sharpen the focus on states with a high percentage of revenues coming from personal income taxes, which would be most vulnerable during a recession, then you understand our concerns regarding the states of Kentucky, New Jersey, Pennsylvania, Connecticut and Illinois.

State Debt Levels Hold Steady

Conning's analysis of a key debt measure finds that states have had only modest growth in fixed costs, which means that states with high levels of debt versus personal income remain in a precarious position.

We think our metric of economic debt, which measures all debt, not just direct or stated debt issued, is a more comprehensive measure of a state's total fixed-cost obligations. Economic debt combines stated debt plus a state's net pension liability (NPL) and its unfunded other post-retirement benefits (OPEB) liabilities.

States have had no material increase in aggregate state or direct debt in the past 12 months. Unfunded pension and OPEB liabilities have grown more slowly this year primarily due to strong equity markets. In fact, the 2017 median state pension plan funded ratio was 73.7%, up from 70.5% the year prior according to the most recent state financial reports.[12] Additional improvement is expected once strong investment results for FY 2018 (which ended in June) are reported. The modest growth in economic debt was largely offset by growth in personal income.

We calculate aggregate economic debt to personal income at 11%, but states vary considerably in this important comparison. States with the highest percentage of debt to income (28% or greater) are New Jersey, Illinois, Alaska, Connecticut, Hawaii and Kentucky; the lowest ratios (less than 2%) are found in Nebraska, Oklahoma, South Dakota, Iowa, Tennessee and North Dakota.[13]

Personal Income: Growth in All States

State personal income - the sum of net earnings by place of residence, property income, and personal current-transfer receipts - grew 4.2% on average during the second quarter of 2018.[14] That was down from the 5.0% increase during the first quarter, but year over year—the measure Conning uses—all states showed growth in personal income, ranging from 6.7% for Utah to 1.9% for Nebraska.[15]

Exhibits 5 and 6 illustrate state leaders and laggards in personal income growth during the 12-month period ending June 30, 2018.

[12] Pension data, OPEB liabilities and funded status as reported in each state's Comprehensive Annual Financial Report (CAFR) and gathered via ©2018 Bloomberg L.P.
[13] Findings calculated by Conning, Inc. per data from Census Bureau, U.S. Department of Commerce (2018), https://www.census.gov/data/tables/2018/econ/qtax/historical/q2.html
[14] Bureau of Economic Analysis, U.S. Department of Commerce (2009-2018)
[15] ibid

Exhibit 5:
2018 State Personal Income Growth Leaders*

State	Personal Income Growth
Utah	6.67%
Washington	6.15%
Nevada	5.78%
Colorado	5.68%
Texas	5.63%
Arizona	5.57%
Florida	5.52%

Prepared by Conning, Inc. Sources: Bureau of Economic Analysis, U.S. Department of Commerce (2009-2018), Census Bureau, U.S. Department of Commerce (2009-2018)

* As of 12 months ending June 30, 2018.

Exhibit 6:
2018 State Personal Income Growth Laggards*

State	Personal Income Growth
Nebraska	1.93%
Iowa	2.52%
South Dakota	2.66%
Kansas	2.92%
North Dakota	3.06%
Vermont	3.15%
Hawaii	3.22%

Prepared by Conning, Inc. Sources: Bureau of Economic Analysis, U.S. Department of Commerce (2009-2018), Census Bureau, U.S. Department of Commerce (2009-2018)

Employment: Growth Continues

Employment growth is an insightful economic indicator, as it drives state tax revenue and personal income. From August 2017 to August 2018, the U.S. economy added 1.6 million jobs per the U.S. Department of Labor, down slightly from the more than 2 million jobs added during the February 2017-February 2018 period.

Unemployment rates have fallen since our Spring 2018 report, and now the U.S. Department of Labor reports that 11 states have unemployment rates at or below 3% (up from 10). Only Alaska reported an unemployment rate above 6% (6.7%, down from 7.3%). Employment growth by state is listed in Exhibits 7 and 8.

Exhibit 7: State Employment Growth Leaders

State	Percent Employment Growth August 2017 through August 2018
Massachusetts	4.02%
Nevada	2.72%
New Mexico	2.59%
Colorado	2.59%
Delaware	2.48%

Prepared by Conning, Inc. Source: Bureau of Labor Statistics, U.S. Department of Labor (2018)

Exhibit 8: State Employment Growth Laggards

State	Percent Employment Growth August 2017 through August 2018
Wyoming	-2.19%
North Dakota	-2.14%
Alaska	-0.69%
Arkansas	-0.66%
Connecticut	0.49%

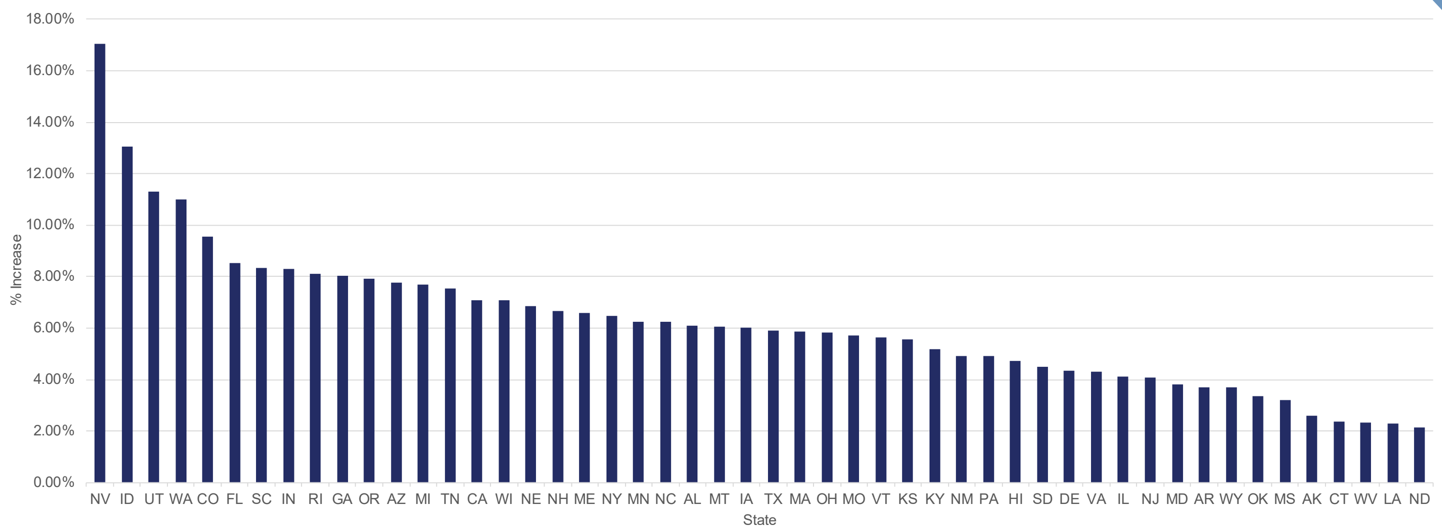
Prepared by Conning, Inc. Source: Bureau of Labor Statistics, U.S. Department of Labor (2018)

Home Price Appreciation: Another Year of 6%+ Growth

Home price appreciation reflects overall state economic conditions. The Home Price Index (HPI) is calculated by the Federal Housing Finance Agency (FHFA) using conventional, conforming mortgages backed by either Fannie Mae or Freddie Mac. The FHFA reports that house prices rose 6.5% from the second quarter of 2017 to the second quarter of 2018, and prices rose in all 50 states. The Mountain, Western and Southeastern regions led the way, as illustrated in Exhibit 9.

Home price appreciation is an important indicator of state credit quality as it is largely driven by local economic conditions. It is an even more important credit factor for local governments, which derive 75% of their revenues from property taxes, according to the U.S. Cenus Bureau.

Exhibit 9: One-Year Home Price Appreciation, by State



Prepared by Conning, Inc. Source: Federal Housing Finance Agency (FHFA) (2018), "U.S. House Prices Rise 1.1 Percent in Second Quarter," August 23, 2018, https://www.fhfa.gov/Media/PublicAffairs/Pages/US-House-Prices-Rise-1pt1-Percent-in-Second-Quarter.aspx

Ranking the States: Colorado to Mississippi

Conning's ranking of all 50 states are displayed in Exhibit 10.

Conning's five top-ranked states are Colorado, Idaho, Utah, Texas and Nevada, with Nevada replacing Washington in our top-ranked group from our Spring report. The common threads include strong economic growth, favorable business conditions and low fixed costs (see Exhibit 11).

Our five lowest-ranked states are Mississippi, Louisiana, Kentucky, New Mexico and New Jersey. Illinois and Connecticut both rose out of this group, reflecting significant revenue growth since our Spring report. They were replaced by New Jersey (weaker General Fund operations and high debt) and Mississippi (weakening economic conditions). The five lowest-ranked states share some combination of high legacy costs, slow economic growth and a less favorable business climate (see Exhibit 12).

The rankings of all states by total score is listed in Exhibit 13, and rankings by each indicator are in Appendix B.

Among the large states Texas and California stand out (see below), while New Jersey and Illinois continue to have weak credit profiles characterized by high economic debt and low reserves.

Exhibit 14 provides our current rankings alphabetically by state and whether the rank has materially improved, declined or remained stable from our Spring report. Since our last report, many oil patch states, including Texas, Oklahoma, North Dakota and Wyoming, have seen their relative state rankings improve due to the recovery of oil prices.

Texas and California: A Closer Look at Top-Ranked Large States

Two of the largest states are worth a closer look, given their impact on the U.S. economy. Texas and California provide us a perspective on our State of the States performance metrics from a high-ranking state and another that has recently made significant improvements.

Number four in our current rankings, Texas has strong individual socioeconomic indicators, including an unemployment rate of 3.9% (as of August 2018)[16] and a median household income on par with the nation.[17] Its population has grown 12.25% between FYs 2011 and 2017.[18]

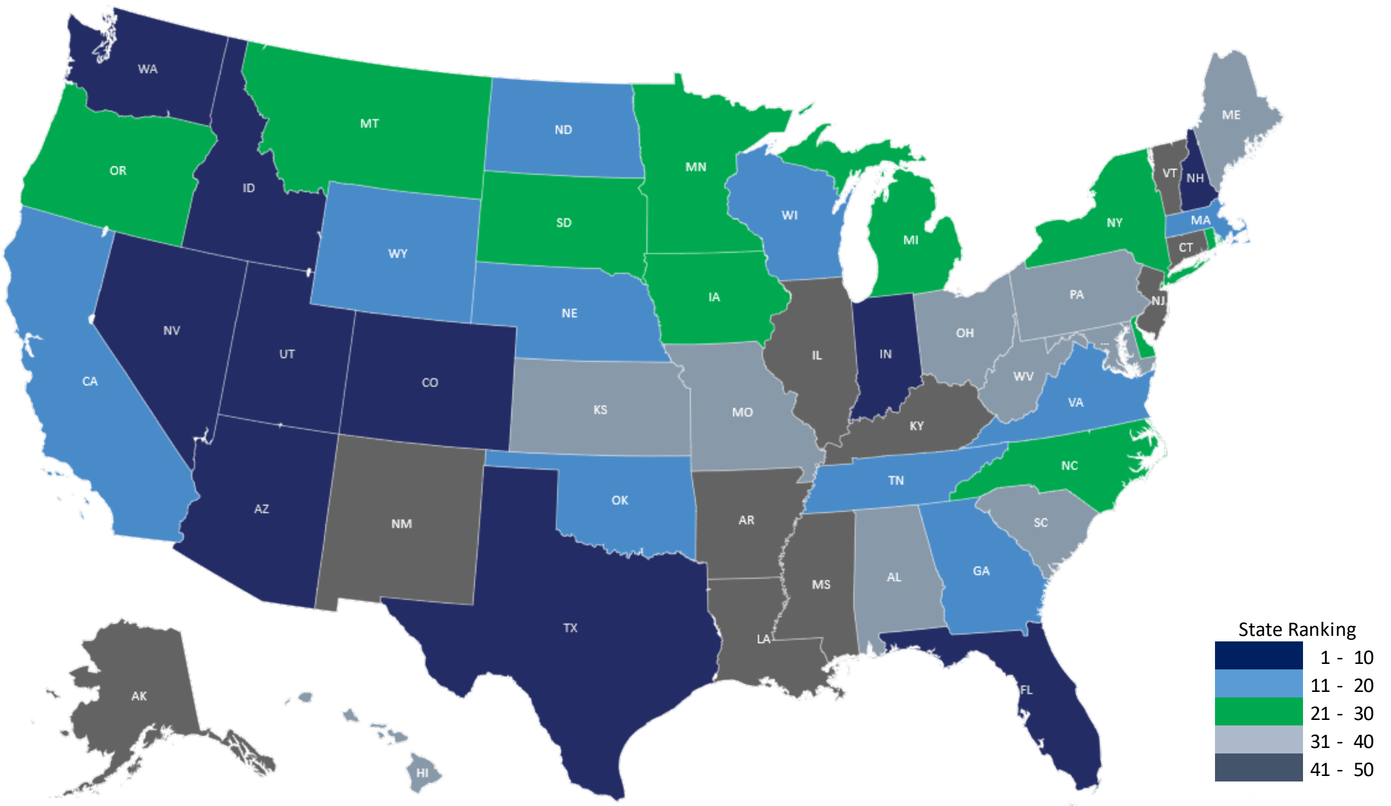
(continued on page 10)

[16] Bureau of Labor Statistics, U.S. Department of Labor (2018), https://www.bls.gov/eag/eag.tx.htm

[17] Census Bureau, U.S. Department of Commerce (2018), "Household Income: 2016," https://www.census.gov/content/dam/Census/library/publications/2017/acs/acsbr16-02.pdf

[18] Census Bureau, U.S. Department of Commerce (2018), https://www.census.gov/quickfacts/tx

Exhibit 10: State Rankings Map



Preprared by Conning, Inc.

Exhibit 11: Highest-Ranked States

State	Rank	Key credit factors
Colorado	1	Strong employment, personal income, GDP growth with low economic debt and a favorable business climate.
Idaho	2	Fastest-growing state with strong home price appreciation, employment growth and favorable business conditions.
Utah	3	A top-ranked state for business conditions and personal income growth with low economic debt.
Texas	4	A top state for employment, population and GDP with significant General Fund reserves.
Nevada	5	Home price appreciation leader with strong employment, personal income and GDP growth.

Prepared by Conning, Inc.

Exhibit 12: Lowest-Ranked States

State	Rank	Key credit factors
New Jersey	46	Highest economic debt levels among the states with low GF reserve balances; slow personal income and employment growth offset by high income levels.
New Mexico	47	Slow employment growth, high economic debt levels and very low median household income.
Kentucky	48	Very high unfunded pension levels with low GF reserves and median family household income.
Louisiana	49	Employment, GDP and home price appreciation have been sluggish with weak tax revenue growth and a high unemployment rate.
Mississippi	50	Lowest median family income and home price appreciation among all states, poor growth in employment and income.

Prepared by Conning, Inc. Source: see Appendix A. GF=General Fund

Exhibit 13: Conning's State Rankings

State	Raw score	Rank
Colorado	9.60	1
Idaho	11.88	2
Utah	14.28	3
Texas	15.00	4
Nevada	17.76	5
New Hampshire	18.12	6
Arizona	18.32	7
Indiana	18.32	8
Florida	19.24	9
Washington	20.00	10
Nebraska	20.12	11
Virginia	20.64	12
Wyoming	21.28	13
Georgia	21.40	14
Tennessee	21.44	15
North Dakota	22.76	16
California	23.12	17
Massachusetts	23.24	18
Oklahoma	23.80	19
Wisconsin	23.80	20
North Carolina	24.04	21
Iowa	24.20	22
Oregon	24.20	23
Minnesota	24.44	24
South Dakota	24.96	25
Michigan	25.20	26
Delaware	25.32	27
Rhode Island	25.68	28
Montana	27.60	29
New York	27.60	30
South Carolina	27.68	31
Missouri	27.84	32
Hawaii	28.24	33
Alabama	28.68	34
Kansas	29.24	35
Maine	29.24	36
Ohio	30.44	37
Maryland	30.48	38
Pennsylvania	30.80	39
West Virginia	31.48	40
Vermont	31.72	41
Illinois	31.76	42
Alaska	31.80	43
Connecticut	32.00	44
Arkansas	33.84	45
New Jersey	33.92	46
New Mexico	34.44	47
Kentucky	35.28	48
Louisiana	36.40	49
Mississippi	39.00	50

Prepared by Conning, Inc.

Exhibit 14: Relative Rank Change May 2018 – October 2018

State	Rank Oct 2018	May 18 - Oct 18
Alabama	34	Stable
Alaska	43	Declined
Arizona	7	Stable
Arkansas	45	Declined
California	17	Stable
Colorado	1	Stable
Connecticut	44	Stable
Delaware	27	Improved
Florida	9	Stable
Georgia	14	Stable
Hawaii	33	Declined
Idaho	2	Stable
Illinois	42	Improved
Indiana	8	Stable
Iowa	22	Improved
Kansas	35	Improved
Kentucky	48	Stable
Louisiana	49	Stable
Maine	36	Stable
Maryland	38	Stable
Massachusetts	18	Improved
Michigan	26	Declined
Minnesota	24	Stable
Mississippi	50	Stable
Missouri	32	Stable

State	Rank Oct 2018	May 18 - Oct 18
Montana	29	Stable
Nebraska	11	Stable
Nevada	5	Improved
New Hampshire	6	Improved
New Jersey	46	Stable
New Mexico	47	Stable
New York	30	Stable
North Carolina	21	Stable
North Dakota	16	Stable
Ohio	37	Declined
Oklahoma	19	Stable
Oregon	23	Stable
Pennsylvania	39	Stable
Rhode Island	28	Improved
South Carolina	31	Stable
South Dakota	25	Stable
Tennessee	15	Declined
Texas	4	Stable
Utah	3	Stable
Vermont	41	Stable
Virginia	12	Improved
Washington	10	Stable
West Virginia	40	Stable
Wisconsin	20	Improved
Wyoming	13	Stable

Prepared by Conning, Inc.

Exhibit 15: Texas and California Credit Indicators Compared to State Averages

Conning Credit Indicator	State Average	Texas	California
State of the States Rank		4	17
ALEC-Laffer Economic Outlook Ranking 2018 for business conditions	25	14	47
Economic Debt per Personal Income	11.20%	10.40%	10.80%
FY 2018 General Fund Balance as % of General Fund Expenditures	9.40%	19.90%	10.90%
Debt per Capita	$1,487	$433	$2,188
Tax Revenue Growth over the past 12 months	4.80%	6.10%	7.40%
GDP per Capita	$60,589	$62,544	$71,505
Real State GDP Growth over the past 12 months	4.70%	6.00%	5.45%
Employment Growth over the past 12 months	1.07%	2.11%	0.46%
Personal Income Growth over the past 12 months	4.60%	5.60%	4.70%
Unemployment Rate	3.90%	3.90%	4.20%
Median Household Income	$61,372	$59,295	$69,759
Home Price Growth over the past 12 months	6.50%	5.90%	7.10%
Annual Population Growth	1.00%	1.40%	0.61%

Prepared by Conning, Inc.

(continued from page 6)

Employment growth, GDP growth, and General Fund balance/General Fund expenditures were strong in Texas. GDP increased 2.6% in 2017, ranking ninth among states and outpacing the nation's 2.1% growth.[19] Texas oil production jumped to 4.01 million barrels a day in February 2018, nearly 21% higher from a year earlier, according to the Energy Information Administration, the largest increase the agency has reported since 1981.

The state's net tax-supported debt is low relative to other states at $383 per capita, according to Moody's State Debt Medians 2017 report. Texas contributes to four pension retirement plans that have an aggregate funded ratio of 73%, per The Pew Charitable Trusts' "State Pension Funding Gap: 2016."

California, currently 17th in our ranking, has an economy that has continued to perform better than the nation as measured by employment, GDP and personal income growth.

General revenue growth for California has been above the average of all states for the most recent 12-month period ending June 30, 2018, leading to improved current and future reserves. General Fund reserves for FY 2019 (ending June 30, 2019) are projected by California's Department of Finance to reach $17 billion, equaling a strong 12.5% of FY 2019 expenditures, up from 10.9% for FY 2018. Recent revenue revisions have been to the upside.

Exhibit 15 illustrates how Texas and California compare to other states using our State of the States indicators.

Texas has strong fund balances, low debt, and above-average growth in its economic indicators as compared to the average state. Areas of concerns are its somewhat lower wealth levels as measured by GDP and median household income.

California has exhibited strong tax revenue growth with high wealth levels, but its rates of growth in personal income, employment, home prices and population have slowed recently.

[19] Bureau of Economic Analysis, U.S. Department of Commerce (2018), GDP by State, https://www.bea.gov/data/gdp/gdp-state

U.S. Supreme Court Rulings May Enhance State Revenues

Since our Spring 2018 report, the U.S. Supreme Court has handed down three decisions with positive implications for state credit quality.

The most significant case in terms of revenue is *South Dakota v. Wayfair, Inc.*[20], in which the Court overturned a 1992 decision that exempted out-of-state retailers from collecting sales tax on sales made to South Dakota residents. In Wayfair, the Court upheld a South Dakota law requiring out of state e-commerce retailers with no physical presence in South Dakota to collect and remit sales tax on sales made to the state's residents, provided such retailers annually have either 200 transactions or at least $100,000 of sales in the state.

The revenue implications are potentially significant but estimates vary considerably. Conning believes an increase of $20 billion in aggregate sales taxes collected annually is a reasonable assumption, and this figure would increase state tax revenues by an estimated 2%. Several states, including New Jersey and Illinois, began collecting online sales revenue from out-of-state retailers on October 1st.

There are wide variations in the amount of sales tax revenue collected by states. Florida, which has the largest reliance on sales tax revenue, collected 77.9% of its general fund revenues from sales taxes in 2017. South Dakota was second (60.6%), followed by Tennessee (59.8%), Texas (55.5%) and Washington (51.5%).[21] In contrast, only five states—Alaska, Delaware, Montana, New Hampshire and Oregon—do not levy statewide general sales taxes.

The U.S. Supreme Court also ruled in favor of New Jersey's appeal to strike down the federal law outlawing sports betting outside of Nevada.[22] All states can now permit sports betting, subject to state and local legislation, which they can tax; New Jersey taxes 15% of gross internet gaming revenue.[23] The state joins West Virginia, Delaware and Mississippi[24] in opening sports betting for residents since the U.S. Supreme Court's decision, with other states considering it. While positive, it is too early to project the revenue impact of legalized sports betting.

Finally, the U.S. Supreme Court ruled that state and local government employees who choose not to join unions cannot be required to pay "agency" or "fair share" fees to public-sector unions.[25] Over time this is expected to weaken the financial strength of public-sector unions, giving states and local governments a stronger bargaining position.

About This Report

Conning's State of the States report is our proprietary, ongoing ranking of the U.S. states by credit outlook. States are the largest issuers of municipal bonds and we believe that a sound understanding of their credit quality is a prerequisite to effective municipal bond investing. This report forms the basis for our internal ratings, which also consider security features and fiscal management, yielding a comprehensive assessment of both credit quality and direction. This analysis centers our disciplined approach to constructing and managing municipal bond portfolios.

[20] *South Dakota v. Wayfair*, No. 17-494 (June 21, 2018)

[21] Census Bureau, U.S. Department of Commerce (2018), https://www.census.gov/quickfacts/tx

[22] *Murphy v. National Collegiate Athletic Assn.*, No. 16-476 (May 14, 2018)

[23] New Jersey Division of Gaming Enforcement, Atlantic City Gaming Industry Casino Revenue Fund Taxes and Fees Source Report, September 20, 2018, https://www.nj.gov/lps/ge/docs/Financials/CRFTF/CRFTFSourceReport.pdf

[24] http://www.espn.com/chalk/story/_/id/24967983/184-million-bet-sports-september-new-jersey

[25] *Janus v. American Federation of State, County and Municipal Employees*, No. 16-1466 (June 27, 2018)

Conning's Municipal Credit Research Team

Conning manages more than $9 billion of municipal bonds held in client portfolios. Its dedicated municipal research team follows the firm's existing holdings and makes recommendations for new purchases.

Paul Mansour, a Managing Director and Head of Municipal Credit Research, joined Conning in 2006. Previously, Mr. Mansour was employed by MBIA Corporation as a Managing Director and business leader for revenue producing units where he prepared and approved municipal credit reports while also supervising credit analysts for 23 years. Mr. Mansour started his career at the New York State Power Authority serving four years as a revenue and power forecasting analyst. He is a graduate of Colgate University with a degree in economics and earned an MBA from Pace University. He is a member of the Municipal Analyst Group of New York and the Municipal Bond Club of New York.

Karel Citroen, a Director Municipal Credit Research, joined Conning in 2015. Previously, Mr. Citroen was employed by MBIA Corporation as a Vice President of municipal portfolio surveillance. Prior to obtaining an MBA from the Yale School of Management, he worked in the Netherlands as a banking and securities lawyer for different financial institutions. Mr. Citroen earned an LL.M from the University of Amsterdam in 2000. He is a member of the Municipal Analyst Group of New York and has 10 years of industry experience.

Diane Diaz, a Vice President, joined Conning in 2014. Previously, Ms. Diaz held positions in the public and non-profit sectors. Ms. Diaz earned a BA from the University of Pittsburgh and a Master of Public Administration from the University of Connecticut. She is a member of the National Federation of Municipal Analysts and the Municipal Analyst Group of New York.

Nolan Cicerrella, an Assistant Vice President, joined Conning in 2015. Previously, Mr. Cicerrella was employed by Bank of America as a Residential Credit Analyst. Mr. Cicerrella is a graduate of the University of Connecticut with a degree in economics and is currently pursuing an MBA from the University of Connecticut School of Business. He is a member of the Municipal Analyst Group of New York.

About Conning®

Conning (www.conning.com) is a leading global investment management firm with a long history of serving the insurance industry. Conning supports institutional investors, including pension plans, with investment solutions and asset management offerings, award-winning risk modeling software, and industry research. Founded in 1912, Conning has investment centers in Asia, Europe and North America.

Appendix A — Methodology and Description of Indicators

Conning analyzes 13 economic and government-obligation credit ratios to calculate our state rankings, measuring business climate, credit-specific metrics, economic and income levels, and housing activity. Exhibit 16 sets forth the indicators and their respective weightings. We emphasize indicators that we think are forward-looking and correlate to future financial results. Below are the definitions and sources of each indicator.

Exhibit 16: Quantitative Measures of State Performance

Credit Metrics	Weighting 40%
ALEC-Laffer Economic Outlook Ranking 2018	8%
Economic Debt per Personal Income	8%
FY 2017 General Fund Balance as % of General Fund Expenditures	8%
Debt per Capita	8%
Tax Revenue Growth	8%

Economic and Income Measures	Weighting 60%
GDP per Capita	8%
Real State GDP Growth	8%
Employment Growth	8%
Personal Income Growth	8%
Unemployment Rate	8%
Median Household Income	8%
Home Price Growth	8%
Population Growth	4%
Total	**100%**

Prepared by Conning, Inc.

Laffer State Competitive Environment (8% weight)

The index, created by economist Arthur Laffer, assigns an Economic Outlook rank based on a state's current standing in 16 state policy variables including top marginal personal and corporate income tax rates, property and sales tax burdens, and state minimum wage.

Source: ©2018 American Legislative Exchange Council (ALEC), Rich States Poor States, Authors: Dr. Arthur B. Laffer, Jonathan Williams, and Stephen Moore, 11th Edition, published April 16, 2018—used with permission, https://www.alec.org/publication/rich-states-poor-states-11th-edition/

Economic Debt Per Personal Income (8% weight)

A ranking of each state according to its economic debt as a percentage of 2018 annualized second-quarter personal income. Conning defines economic debt for each state as its net tax-supported debt + state unemployment trust fund loan balance (if any) + unfunded pension liabilities + unfunded OPEB liabilities. Each state's economic debt is then divided by its personal income.

Sources: ©2018 Moody's Investors Services, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates – used with limited permission; Bureau of Economic Analysis, U.S. Department of Commerce (2018), "State Quarterly Personal Income, 2nd quarter 2018," (September 25, 2018), https://www.bea.gov/news/2018/state-quarterly-personal-income-2nd-quarter-2018

FY17 General Fund Balance as Percentage of GF Expenditures (8% weight)

A ranking of states that compares available funding to expenditures. Each state's total funds—the sum of its General Fund balance and budget stabilization fund—are divided by state expenditures.

Source: ©2018 The National Association of State Budget Officers, "Fiscal Survey of the States (Spring 2018)," https://www.nasbo.org/reports-data/fiscal-survey-of-states

Debt per Capita (8%)

Dividing total state debt by population provides a measure of a state's debt burden.

Sources: "©2018 Moody's Investors Services, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates – used with limited permission, "Medians – Total State Debt Remains Flat in 2017" (May 3, 2017) and Census Bureau, U.S. Department of Commerce (2017), https://census.gov/data/tables/2017/demo/popest/state-total.html

Appendix A — Methodology and Description of Indicators *(continued)*

Tax Revenue Growth (8% weight)

A ranking of states by tax revenue growth for the 12 months ending June 30, 2018.

Source: Census Bureau, U.S. Department of Commerce (2018), *https://www.census.gov/data/tables/2018/econ/qtax/historical/q2.html*

Gross Domestic Product (GDP) Growth by State (8% weight)

A ranking of each state's annual growth in GDP.

Source: Bureau of Economic Analysis, U.S. Department of Commerce (2018), *https://bea.gov/newsreleases/regional/gdp_state/qgsp_newsrelease.htm*

Gross Domestic Product per capita (8% weight)

A ranking that compares each state's GDP divided by its population.

Source: Bureau of Economic Analysis, U.S. Department of Commerce (2018), https://bea.gov/newsreleases/regional/gdp_state/qgsp_newsrelease.htm

Year-over-Year Employment Growth (8% weight)

A ranking of states based on year-over-year total employment growth from August 2017 to August 2018.

Source: Bureau of Labor Statistics, U.S. Department of Labor (2018), *https://www.bls.gov/news.release/laus.t01.htm*

Median Family Income (8% weight)

A ranking of states by median household income.

Source: Census Bureau, U.S. Department of Commerce (2018). https://www.census.gov/data/tables/time-series/demo/income-poverty/historical-income-households.html

Unemployment Rate (8% weight)

A ranking of states by their August 2018 unemployment rate, which is the percentage of the labor force that is unemployed but actively seeking employment and is willing and able to work.

Source: Bureau of Labor Statistics, U.S. Department of Labor (2018), *https://www.bls.gov/news.release/laus.t01.htm*

Year-over-Year Personal Income Growth (8% weight)

A ranking of states by personal income growth, comparing annualized second-quarter income growth in 2018 to the same metric in 2017.

Source: Bureau of Economic Analysis, Department of Commerce (2018), *https://bea.gov/newsreleases/regional/spi/2018/pdf/spi0318.pdf*

One-Year Change in Home Prices (8% weight)

A ranking of states based on one-year change in home prices as of June 30, 2018.

Source: Federal Housing Finance Agency (FHFA) (2018), *https://www.fhfa.gov/AboutUs/Reports/ReportDocuments/2018Q2_HPI.pdf*

Population Change (4% weight)

A ranking of states by annual change in population from July 2016 to July 2017.

Source: Census Bureau, U.S. Department of Commerce (2017) *https://www.census.gov/data/tables/2017/demo/popest/state-total.html*

Appendix B—State Rankings by Credit Indicator*

State	Raw score	Rank	Laffer 8%	Economic Debt/PI 8%	GF Balance/ GF Expenditures 8%	Debt/ capita 8%	Tax Revenue Growth 8%	State GDP/ capita 8%	Employment Growth 8%	GDP Growth 8%	Unemploy- ment Rate 8%	Personal Income Growth 8%	One Year Home Price Change 8%	Median house- hold income 8%	Population Growth 4%
Colorado	9.6	1	15	24	17	11	6	15	4	3	8	4	5	4	8
Idaho	11.88	2	2	7	6	10	14	48	7	14	5	9	2	24	1
Utah	14.28	3	1	8	27	20	44	28	14	7	13	1	3	11	3
Texas	15	4	14	35	4	9	9	17	8	2	27	5	26	28	7
Nevada	17.76	5	13	12	12	15	48	32	2	4	42	3	1	37	2
New Hampshire	18.12	6	17	20	31	21	28	19	11	32	4	12	18	3	21
Arizona	18.32	7	5	10	37	17	11	41	16	5	43	6	12	23	6
Indiana	18.32	8	3	18	15	6	18	29	9	37	18	26	8	30	24
Florida	19.24	9	6	9	24	22	12	40	18	30	23	7	6	41	5
Washington	20	10	37	27	8	44	39	9	28	6	42	2	4	2	4
Nebraska	20.12	11	28	1	14	1	16	13	29	41	5	50	17	27	19
Virginia	20.64	12	10	15	47	32	13	18	15	18	10	21	38	12	18
Wyoming	21.28	13	8	11	1	2	34	7	50	1	27	25	43	32	50
Georgia	21.4	14	11	30	18	25	23	30	6	31	25	18	10	34	13
Tennessee	21.44	15	12	5	26	8	42	34	20	16	19	27	14	38	14
North Dakota	22.76	16	4	6	32	3	2	5	49	38	3	46	50	25	43
California	23.12	17	47	36	16	41	8	8	35	9	36	15	15	13	20
Massachusetts	23.24	18	25	43	43	49	19	2	1	26	19	19	27	6	23
Oklahoma	23.8	19	16	2	48	7	5	38	10	24	23	24	44	39	35
Wisconsin	23.8	20	19	13	39	36	38	25	26	22	10	20	16	19	29
North Carolina	24.04	21	7	32	20	14	32	33	19	27	27	17	22	45	11
Iowa	24.2	22	29	4	25	5	40	20	24	49	2	49	25	18	25
Oregon	24.2	23	41	21	7	39	50	22	40	13	25	14	11	15	9
Minnesota	24.44	24	44	25	19	31	21	14	13	50	8	41	21	10	17
South Dakota	24.96	25	9	3	21	19	30	23	23	47	10	48	36	35	16
Michigan	25.2	26	18	23	23	18	3	36	34	34	32	31	13	33	34
Delaware	25.32	27	36	44	11	43	29	3	5	39	27	13	37	22	15
Rhode Island	25.68	28	39	37	36	42	17	24	12	10	31	32	9	14	36
Montana	27.6	29	43	17	44	4	22	43	44	40	19	10	24	29	12
New York	27.6	30	50	39	10	46	7	1	41	46	36	8	20	21	40
South Carolina	27.68	31	33	28	9	12	47	45	36	33	17	34	7	40	10
Missouri	27.84	32	23	14	35	13	33	37	31	28	15	39	29	36	30
Hawaii	28.24	33	45	46	5	48	10	16	32	43	1	44	35	5	46
Alabama	28.68	34	20	33	13	23	24	46	17	44	32	23	23	44	33
Kansas	29.24	35	26	16	42	33	4	27	39	36	15	47	31	31	37

Prepared by Conning, Inc. Sources: and publicly available information. *(x%=weighting)

Appendix B—State Rankings by Credit Indicator* (continued)

State	Raw score	Rank	Laffer 8%	Economic Debt/PI 8%	GF Balance/ GF Expenditures 8%	Debt/ capita 8%	Tax Revenue Growth 8%	State GDP/ capita 8%	Employment Growth 8%	GDP Growth 8%	Unemploy- ment Rate 8%	Personal Income Growth 8%	One Year Home Price Change 8%	median house- hold income	Population Growth 4%
Maine	29.24	36	42	34	28	24	31	42	25	35	14	16	19	42	27
Ohio	30.44	37	21	26	30	28	45	26	37	20	43	35	28	26	31
Maryland	30.48	38	32	40	34	40	35	11	43	17	36	38	41	1	26
Pennsylvania	30.8	39	38	29	49	30	27	21	42	11	32	33	34	20	38
West Virginia	31.48	40	30	22	3	27	15	47	38	12	49	30	48	48	49
Vermont	31.72	41	49	41	29	26	36	35	21	42	5	45	30	17	41
Illinois	31.76	42	48	49	41	45	26	12	33	21	32	11	39	16	48
Alaska	31.8	43	34	48	2	34	46	6	48	8	50	43	46	9	47
Connecticut	32	44	40	47	40	50	1	4	46	15	39	42	47	8	42
Arkansas	33.84	45	22	19	45	16	37	49	47	48	19	22	42	46	22
New Jersey	33.92	46	46	50	46	47	25	10	45	19	36	37	40	7	32
New Mexico	34.44	47	35	42	22	29	49	39	3	29	43	40	33	47	39
Kentucky	35.28	48	31	45	50	38	20	44	22	25	41	36	32	43	28
Louisiana	36.4	49	27	38	33	35	41	31	30	23	48	29	49	49	44
Mississippi	39	50	24	31	38	37	43	50	27	45	47	28	45	50	45

Prepared by Conning, Inc. Sources: © 2018 Conning, Inc. and publicly available information. *(x%=weighting)