

CREDIT OPINION

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Mississippi (State of)

Update following change in outlook to stable

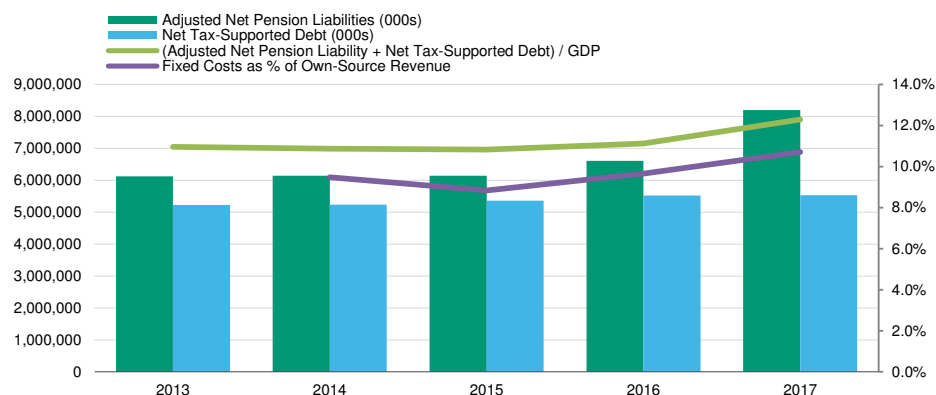
Summary

[Mississippi's](#) (Aa2 stable) economy and fiscal position have stabilized following a few challenging years that led to over \$200 million in mid-year budget cuts and draws of approximately \$115 million from the state's rainy day fund. After suspending a 2% set-aside law¹ for three years, the budget has returned to structural balance, enabling Mississippi to reinstate the set-aside and resume contributions to the rainy day fund. Much of this is due to the state's conservative fiscal management that allows the state to live within its means.

Nonetheless, a stable but weak economy, alongside elevated debt and pension burdens, continues to weigh on the state's credit profile. Mississippi is one of the poorest states in the country and, despite some recent economic progress, has low growth potential, which has frequently translated into revenue weakness. Economic challenges also exacerbate the debt burden, which when compared to the size of the economy is one of the largest in the US.

Exhibit 1

Mississippi's debt and pension burdens are elevated



Sources: Mississippi audited financials; Moody's Investors Service

Credit strengths

- » Historically stable revenues underpinned by a relatively stable economy
- » Demonstrated willingness and ability to reduce spending when revenues underperform
- » High level of financial reserves, including committed fund balance

Credit challenges

- » Elevated poverty levels and low educational attainment relative to nation
- » Above-average debt levels and pension liabilities

Rating outlook

The state's stable outlook, which applies to its GO as well as its appropriation debt, is supported by stabilization of revenue and economic trends and a resumption of deposits to the rainy day fund. The outlook also incorporates the expected continuance of conservative fiscal management, which will help limit the growth of already elevated debt levels and respond to potential future revenue weakness.

Factors that could lead to an upgrade

- » Growth in state wealth levels reflecting a sustained progress trending to national average
- » Sustained increase in fund balance
- » Substantial decrease in debt and pension liabilities

Factors that could lead to a downgrade

- » Depletion of financial reserves
- » Economic underperformance
- » Persistent growth in retiree benefit liabilities

Key indicators

Exhibit 2

Mississippi (State of)	2013	2014	2015	2016	2017	50-State Median (2017)
Operating Fund Revenues (000s)	8,166,270	8,552,370	8,788,064	8,941,226	8,623,974	
Available Balances as % of Operating Fund Revenues	6.4%	6.7%	2.7%	6.1%	4.7%	4.6%
Nominal GDP (billions)	103.5	104.6	106.2	109.0	111.7	
Nominal GDP Growth	2.1%	1.0%	1.6%	2.7%	2.5%	3.8%
Total Non-Farm Employment Growth	0.8%	0.9%	1.1%	1.2%	0.5%	1.0%
Fixed Costs as % of Own-Source Revenue	NA	9.5%	8.8%	9.7%	10.7%	NA
Adjusted Net Pension Liabilities (000s)	6,120,443	6,140,167	6,139,549	6,604,115	8,198,597	
Net Tax-Supported Debt (000s)	5,221,709	5,234,176	5,359,186	5,519,778	5,532,900	
(Adjusted Net Pension Liability + Net Tax-Supported Debt) / GDP	11.0%	10.9%	10.8%	11.1%	12.3%	8.3%

Sources: US Bureau of Economic Analysis, State CAFRs, Moody's Investors Service

Profile

Mississippi is the 31st-largest state, with a population of 3.0 million, and the 32nd-largest by area. With a nominal GDP of \$111.7 billion in 2017, it had the 36th-largest economy in the union. Per-capita income was just 72.1% of the US level last year, making Mississippi the poorest state in the country.

Detailed credit considerations

Economy

Mississippi's economy is poor, but generally stable. Although in many indicators it lags the US, the state has experienced moderate improvement in recent years despite a weak rebound following the 2007-2009 recession. However, despite the recent cyclical

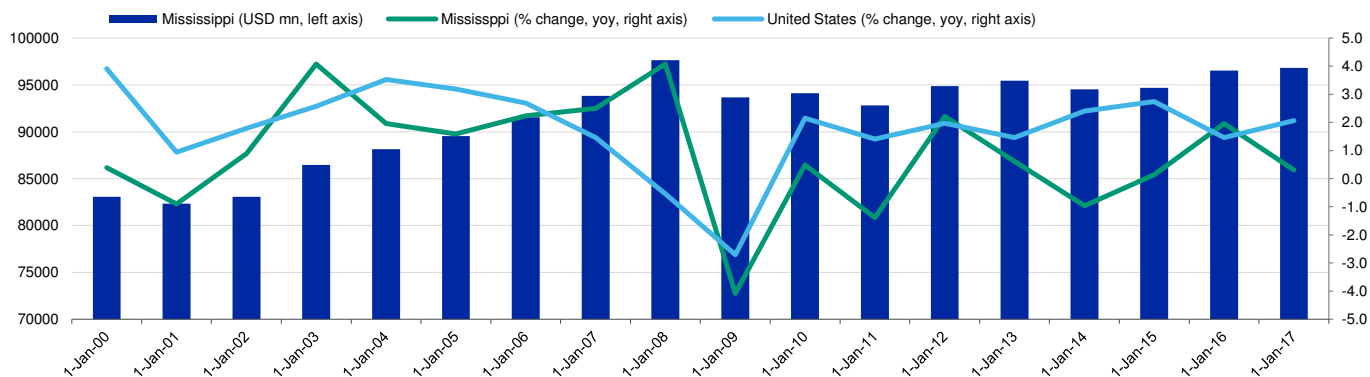
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upturn, low education levels, population dynamics and reliance on the increasingly automated manufacturing sector will likely keep Mississippi's economy on its current modest trajectory over the near term.

Mississippi has struggled with low economic growth and elevated poverty for decades. Between 2000 and 2017, real GDP grew by a compound annual growth rate (CAGR) of 0.9%, well below the 1.7% US rate. The economy has fared worse since the recession: between 2009 and 2017, annual real GDP growth was just 0.2%. Indeed, as of 2017, real GDP has yet to reach its 2008 peak of \$97.7 billion. The US surpassed its pre-recession peak by 2011 (Exhibit 3).

Exhibit 3

Real GDP has improved, but growth remains weak



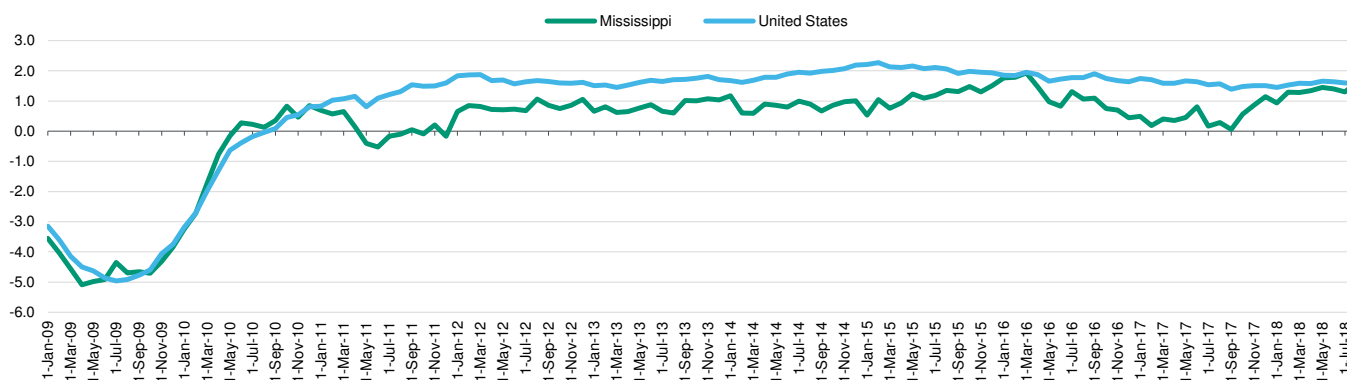
Sources: US Bureau of Labor Statistics; Moody's Investors Service

Accordingly, Mississippi is one of the poorest states in the country, with per capita personal income (PCPI) of just 72.1% of the US level in 2017 and a two-year average poverty rate of 19.7% (compared to 12.5% in the US). Although Mississippi's PCPI has increased every year (except 2009) over the past 17 years, in recent years the US's growth rate has outpaced that of the state, leading Mississippi to fall from a high of 75.9% of US PCPI in 2010 to its current level.

Historically, the state's economic difficulties are highlighted by its relatively low nonfarm employment growth, which was a mere 0.5% year-on-year in 2017, below the US rate of 1.6%. Although employment growth has consistently been below that of the US since the economic recovery began, since 2017 it has accelerated toward the US rate. Indeed, Mississippi's employment growth (1.60%) surpassed the US growth rate (1.58%) in August 2018 for the first time since December 2010 (Exhibit 4).

Exhibit 4

Employment growth has been consistently below US levels – until the past year (% change, year-on-year)



Sources: US Bureau of Labor Statistics; Moody's Investors Service

Employment growth has been hampered by the predominance of low-growth industries in the state. Non-farm employment is heavily concentrated in government (20.5%) and trade, transportation and utilities (20.0%), followed by manufacturing (12.5%),

education and healthcare (12.5%) and leisure and hospitality (12.1%). Since 2000, employment in trade, transportation and utilities and government has remained stagnant, while in manufacturing it has been cut by one third.

Unemployment has also been consistently above the US rate, although the long-term trends have been essentially identical, continuing an eight-year improvement since a high of 10.9% in February 2010, following the recession. Unemployment has been at its lowest levels in decades in late 2017 and through 2018, falling below 5% for the first time. However, these figures are flattered by low, albeit stable, labor force participation at approximately 56%.

Mississippi's economy has been hampered by low educational attainment. As of 2016, 83% of the population had a high school degree or higher and 21% had a bachelor's degree or higher, compared to 87% and 30.3%, respectively, in the United States.

ENVIRONMENTAL CONSIDERATIONS

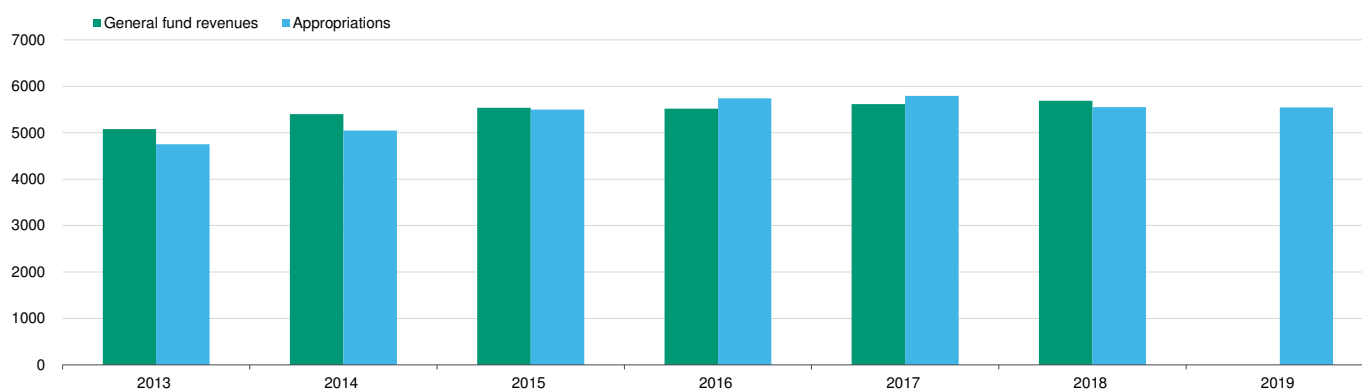
Mississippi has some exposure to climate risk, given its coastline and hurricane risk. Although only 14.6% of the state's GDP is in coastal counties, hurricane damage between 1980 and 2017 represented 43.8% of 2016 GDP. The housing stock is exposed to flood risk, with 37.7% of the state's dwelling units in 100/500 year floodplains. Non-coastal risks are considerably smaller. Only 2.5% of state GDP is in the agricultural sector, limiting the potential for climate impacts.

Finances and liquidity

Although a weak economy and the consequent often-low revenue growth weigh on Mississippi's finances, the state's conservative management of its budget has successfully allowed the state to live within its means. Total general fund revenues increased by a CAGR of 1.4% between 2008 and 2018; although with some volatility. Revenues declined by 4.2% and 5.8% in 2009 and 2010, respectively, which was followed by accelerated growth (an annual average of 5.7%) in fiscal years 2012 through 2014. Since then, total revenue growth has moderated to its historical levels, growing by 1.4% in fiscal 2018. Revenues are forecast to remain essentially flat going forward.

Exhibit 5

Appropriations have remained flat and even declined in response to revenue weakness (USD millions)



Note: Data represents initial appropriations, prior to any midyear adjustments. Midyear budget cuts of \$55.6 million and \$154.7 million (including \$56.8 million due to an accounting error) were made in 2016 and 2017, respectively.

Sources: Mississippi Legislative Budget Office, Mississippi Treasury, Moody's Investors Service

The government has responded to recent revenue weakness – the growth rate even turned negative (-0.4%) in fiscal 2016 – by keeping appropriations level or implementing cuts.² After a few years of rapid growth in appropriations, including an increase of 8.9% in fiscal 2015, growth slowed to 0.9% in fiscal 2017 before turning negative in fiscal 2018 (-4.2%) and fiscal 2019 (-0.1%). The reduced expenditures, however, have weighed on the provision of some services, including infrastructure, as was highlighted in two recent reports.³

Additionally, the legislature suspended the 2% set-aside between fiscal 2015 and fiscal 2017. The rule requires the legislature to appropriate only 98% of estimated revenues, providing a cushion in the case of revenue underperformance. The remaining 2%, should estimates be met, have historically been evenly split between the Working Cash Stabilization Reserve Fund (the rainy day fund) and the

capital expense fund. While the suspension of the set-aside highlights some weakness in governance and put pressure on the state's reserves, it simultaneously facilitated management of the state's immediate fiscal challenges.

The fiscal conservatism has helped the state weather its revenue difficulties, which have since moderately eased. Starting in fiscal 2018, the legislature reinstated the rule: first with a set-aside of 1% (\$56 million) last year and now with an expected full 2% in fiscal 2019 (\$113 million). In part, the reinstatement of the rule was driven by a policy decision to prioritize fiscal prudence over expenditure growth, as total appropriations in fiscal 2019 are lower than the prior year.

Fiscal belt-tightening has enabled the state to focus on rebuilding reserves. A combination of revenue outperformance and the 1.0% set-aside will allow the state to make an estimated deposit in the rainy day fund of \$56.6 million, which would increase the balance to \$351.9 million – just under the pre-recession peak of \$362.8 million, reached in 2008 (Exhibit 6).

Exhibit 6

The rainy day fund has been replenished after a few years of withdrawals
(USD millions)



Note: Beginning in FY19, the projected fund balance is calculated assuming a 2% set-aside of the estimated general fund revenue collections and the distribution of unencumbered cash.
Sources: Mississippi Legislative Budget Office, Moody's Investors Service

FUND BALANCE

Available balances as a share of operating revenues were 4.7% in fiscal 2017, above the 50-state median (4.1%) and well-above the Aa2 (0.9%) and Aa3 (0.0%) medians.

LIQUIDITY

As of June 2018, Mississippi had \$612.9 million of liquid resources available in its general fund and other available funds. Liquidity has generally been stable. Mississippi does not engage in external cash-flow borrowing, but does borrow from internal funds.

Debt and pensions

In dollar terms, Mississippi's net-tax supported debt (NTSD) burden is moderate, with a total of \$5.5 billion outstanding at the end of fiscal 2017. However, when compared to the small size of the economy and low population, Mississippi's debt burden looks considerably worse. The state's debt burden is ranked 14th highest per capita (\$1,854; US median: \$987), seventh highest as a share of personal income (5.2%; US median: 2.3%) and fifth highest as a share of GDP (5.1%; US median: 2.1%).

Pressure from the higher debt burden is somewhat mitigated by the moderating pace of its growth. Mississippi's NTSD has grown with a CAGR of 2.7% between 2008 and 2017 – exactly the 50-state median. However, much of this growth occurred in 2008-2011, immediately following the last recession. Since then, NTSD only grew by a CAGR of 1.1% (between 2011 and 2017), with annual growth below 0.3% in 2012, 2014 and 2017. Although this rate was higher than the 50-state median (0.1%) as many states began to de-lever, it remains solidly between the Aa2 and Aa3 medians.

Total debt and pensions were 12.3% of GDP in 2017, an increase from fiscal 2016 (11.1%) – largely due to an increase in ANPL – and above the 50-state median of 8.3% but below the Aa2 (13.2%) and Aa3 (12.9%) medians.

Fixed costs⁴ were 10.7% of own-source revenue in 2017, well above the 50-state median (9.2%) but below both the Aa2 (11.1%) and Aa3 (12.8%) medians.

DEBT STRUCTURE

The bulk of the state's debt is general obligation (79.8%) with the remainder consisting of notes payable (16.4%), gaming tax revenue bonds (3.6%) and capital leases (0.2%). The majority of Mississippi's debt is fixed rate, with only \$162.4 million in variable rate exposure.

DEBT-RELATED DERIVATIVES

Mississippi has swaps outstanding with a notional amount of \$155.4 million. As of 30 June 2018, the swaps had a negative fair market value of \$23.5 million.

PENSIONS AND OPEB

Mississippi's pension obligations are moderate, with a fiscal 2017 ANPL of \$8.2 billion, or 95.1% of own-source revenues. Contributions, however, are below the amount needed to stabilize liabilities, at 73.7% of tread-water⁵ in fiscal 2016, yielding a shortfall of 0.8% of own-source revenues. This figure is likely to improve since in June the Public Employees Retirement System (PERS) approved an increase in employer contributions (beginning in July 2019) to 17.4% from 15.75%.

Mississippi offers medical and life insurance benefits to all state and public education employees (both retired and current employees are under the same plan). The state's OPEB liabilities (AAL of \$784,753 as of June 30, 2017) are completely unfunded, and are financed on a pay-go basis by state and local school districts, retirees and active employees. Mississippi's OPEB contribution was low in 2017 (0.4% of own-source revenues, 37th lowest) and below the 50-state median (0.9%), Aa2-median (0.6%) and Aa3-median (1.5%).

Governance

Mississippi has generally average governance characteristics. It is not an initiative and referendum state, a factor that has added spending pressure in other states. The constitution does not have revenue-raising caps, although there is a supermajority requirement of three-fifths of each house to raise taxes.

The governor is required by law to make mid-year budget cuts if revenues are more than 2% below forecasts, which mitigates the impact of revenue and economic weaknesses. As previously discussed, state law limits appropriations to 98% of expected revenues, providing the state with additional financial cushion. After three years of suspending this limit, the legislature reinstated half of the limit to 99% for fiscal 2018 and the full limit for fiscal 2019.

The state does not have any requirements to perform debt affordability analysis, but has opted to perform one from 2014 to 2017. In June 2017, the legislature passed the FORTIFY Act, which requires the Legislative Budget Office to prepare a multi-year financial projection.

The FORTIFY Act also increased the cap on the rainy day fund to 10.0% of general fund appropriations from 7.5%, no longer includes unencumbered beginning cash in the calculation of 98% rule and revised the year-end distribution of cash to deposit \$750,000 in the Municipal Aid Revolving Fund and split the remainder between the rainy day fund and the capital expense fund.

Rating methodology and scorecard factors

The [US States and Territories Rating Methodology](#) includes a scorecard, which summarizes the 10 rating factors generally most important to state and territory credit profiles. Because the scorecard is a summary, and may not include every consideration in the credit analysis for a specific issuer, a scorecard-indicated outcome may or may not map closely to the actual rating assigned.

Exhibit 7

States rating methodology scorecard

Mississippi (State of)

Rating Factors	Measure	Score
Factor 1: Economy (25%)		
a) Per Capita Income Relative to US Average [1]	72.1%	A
b) Nominal Gross Domestic Product (\$ billions) [1]	\$111.7	Aaa
Factor 2: Finances (30%)		
a) Structural Balance	A	A
b) Fixed Costs / State Own-Source Revenue [2]	10.7%	Aa
c) Liquidity and Fund Balance	Aa	Aa
Factor 3: Governance (20%)		
a) Governance / Constitutional Framework	Aa	Aa
Factor 4: Debt and Pensions (25%)		
a) (Moody's ANPL + Net Tax-Supported Debt) / State GDP [2] [3]	12.3%	Aa
Factors 5 - 10: Notching Factors [4]		
Adjustments Up: None	0	
Adjustments Down: Growth Trend	-0.5	
Rating:		
a) Scorecard-Indicated Outcome		Aa3
b) Actual Rating Assigned		Aa2

[1] Economy measures are based on data from the most recent year available.

[2] Fixed costs and debt and pensions measures are based on data from the most recent debt and pensions medians report published by Moody's.

[3] ANPL stands for adjusted net pension liability.

[4] Notching factors 5-10 are specifically defined in the US States and Territories Rating Methodology.

Sources: US Bureau of Economic Analysis, State CAFRs, Moody's Investors Service

Endnotes

- 1 The set-aside law requires the legislature to only budget 98% of expected revenues. The remaining 2%, should revenue targets be met, is deposited in the rainy day fund and capital expense fund.
- 2 The government is required by law to cut expenditures when revenues fall below 98% of expectations.
- 3 [Mississippi's crumbling bridges highlight state's and counties' infrastructure needs](#), 19 April 2018. [Mississippi's special legislative session boosts infrastructure funding, a credit positive](#), 12 September 2018.
- 4 Fixed costs include annual debt service, OPEB contribution and pension tread water, the level of pension contributions that would prevent a change in net pension liabilities if all assumptions are met.
- 5 Tread water contributions are the level of pension contributions that would prevent a change in net pension liabilities if all assumptions are met.

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