

**CREDIT OPINION**

8 February 2019


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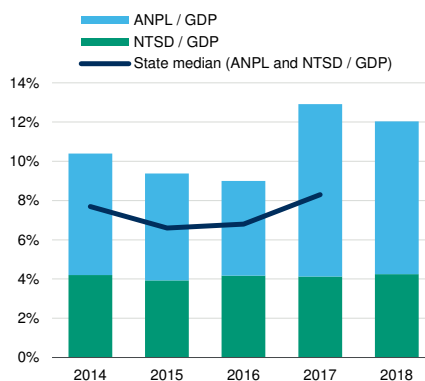
# Delaware (State of)

## Update to credit analysis

**Summary**

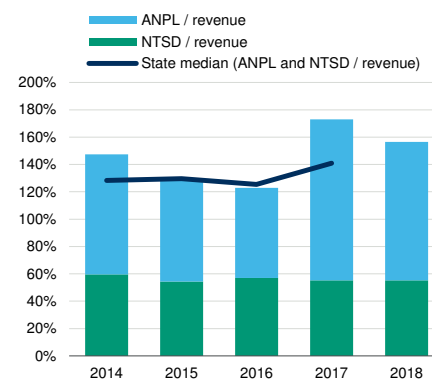
The [State of Delaware's](#) (Aaa stable) credit profile is largely supported by its strong management and governance, and stability of its budget reserves. The state has a well-established process for monitoring revenue. Additionally, it operates with strong limits on spending growth. Both of these factors have enabled the state to avoid dipping into its statutory budget reserve. The state closed a projected fiscal 2018 budget gap with a mix of expenditure cuts and new revenue, enhancing its capacity to hold onto healthy reserves. Notwithstanding these strengths, the state's leverage and fixed costs are high, especially among Aaa rated states. Delaware's concentration of financial services also results in lower industrial diversity than most states. But, demographic patterns are sound and the state's overall economic trajectory remains strong.

Exhibit 1

**Delaware's debt and pension burden is well above state median relative to GDP...**


NTSD is net tax supported debt. ANPL is adjusted net pension liability.  
 Source: Delaware's annual financial statements and Moody's Investors Service

Exhibit 2

**...but closer to other states relative to revenue**


NTSD is net tax supported debt. ANPL is adjusted net pension liability.  
 Source: Delaware's annual financial statements and Moody's Investors Service

**Credit strengths**

- » Stable budget reserve account backed by additional unencumbered reserves following a strong fiscal 2018
- » Strong financial management and governance indicated by frequent revenue forecasting and statutory limit on spending

## Credit challenges

- » Leverage and fixed costs are high among Aaa states and incorporate state issuance of bonds on behalf of school districts and state responsibility for funding post-employment benefits of school employees
- » Economic concentration in financial services
- » Heavy dependence on business taxes

## Rating outlook

The stable outlook is supported by the state's strong structural governance features that will keep the state in a sound position relative to peers through future economic cycles.

## Factors that could lead to an upgrade

- » Not applicable

## Factors that could lead to a downgrade

- » Growth in spending that the state accommodates with reserves or other nonrecurring resources
- » A sustained and material slowdown in economic expansion that is a drag on revenue growth
- » Growth in long-term liabilities that outpaces expansion of the state's economy

## Key indicators

Exhibit 3

| Delaware (State of)   | 2014      | 2015      | 2016      | 2017      | 2018      | 50-State Median (2017) |
|---|-----------|-----------|-----------|-----------|-----------|------------------------|
| Operating Fund Revenues (000s)                                  | 4,255,647 | 4,749,041 | 4,816,998 | 4,854,688 | 5,265,653 | 11,064,791             |
| Available Balances as % of Operating Fund Revenues              | 24.7%     | 21.9%     | 13.6%     | 5.7%      | 13.0%     | 4.6%                   |
| Nominal GDP (billions)  | 67.2      | 70.9      | 70.5      | 72.5      | 74.8      | 224.4                  |
| Nominal GDP Growth  | 10.7%     | 5.6%      | -0.6%     | 2.8%      | 3.2%      | 3.9%                   |
| Total Non-Farm Employment Growth                                | 2.3%      | 2.3%      | 1.1%      | 0.7%      | 1.1%      | 1.0%                   |
| Fixed Costs as % of Own-Source Revenue                          | NA        | 12.8%     | 12.9%     | 13.6%     | 12.8%     | 9.2%                   |
| Adjusted Net Pension Liabilities (000s)                         | 3,715,067 | 3,857,455 | 3,405,482 | 6,376,963 | 5,825,452 | 12,033,341             |
| Net Tax-Supported Debt (000s)                                   | 2,818,890 | 2,789,718 | 2,939,056 | 2,985,593 | 3,171,683 | 4,450,975              |
| (Adjusted Net Pension Liability + Net Tax-Supported Debt) / GDP | 9.7%      | 9.4%      | 9.0%      | 12.9%     | 12.0%     | 8.3%                   |

Source: Delaware's annual financial statements, US Bureau of Economic Analysis and Moody's Investors Service

## Profile

Delaware is the sixth-smallest state, based on its estimated population of just over 960,000. The state's gross domestic product, currently about \$75 billion, ranks 41st among states. Delaware's personal income per capita in 2017 was \$49,700, or 96% of the national level.

## Detailed credit considerations

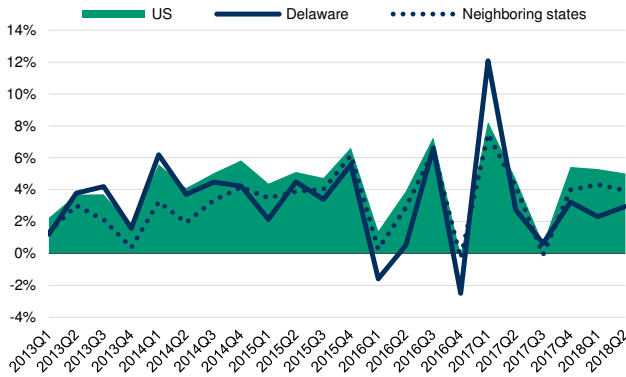
### Economy

Delaware's economic outlook is strong. On many measures of growth, such as change in employment, GDP and wages, Delaware lagged the US and its neighboring states through 2017 and most of 2018. However, job growth accelerated in the latter part of 2018 as Delaware began creating jobs faster than the US and its neighbors.

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Exhibit 4  
**Delaware's wage growth fell below peers and the nation over the last few quarters**

Year-over-year growth in quarterly wages

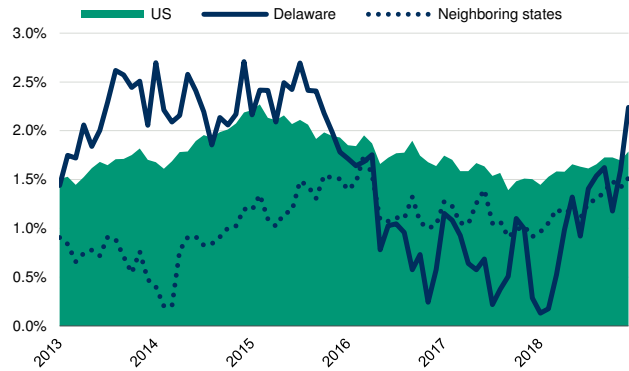


Neighboring states consists of the District of Columbia, Maryland, New Jersey, Pennsylvania and Virginia.

Source: US Bureau of Economic Analysis

Exhibit 5  
**Delaware's job growth accelerated in the latter part of 2018**

Year-over-year growth in monthly nonfarm employment



Neighboring states consists of the District of Columbia, Maryland, New Jersey, Pennsylvania and Virginia.

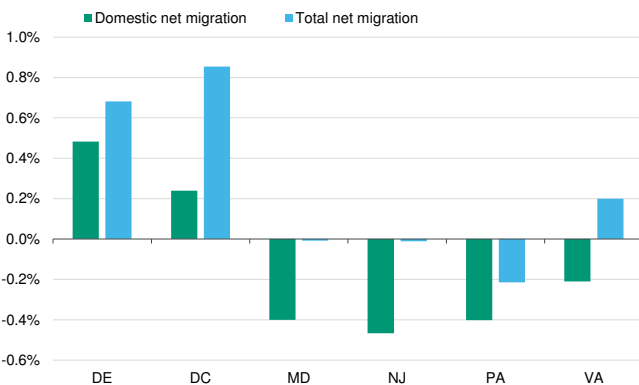
Source: US Bureau of Labor Statistics

Most of the state's job gains were in the leisure/hospitality and business/professional services sectors. Less progress was made in the state's finance industry, which may explain some sustained underperformance in wage growth. But, although wages and income may rise slightly slower than in other states in the region, Delaware's economy will benefit from its favorable migration and demographic patterns, which have diverged from those of its neighbors.

Aside from the District of Columbia, Delaware is unique in its Mid-Atlantic locale for its positive net migration, both on a domestic basis and total basis. Its neighboring states have fared more poorly with regard to domestic migration, in part because many residents of the region have moved to Delaware. The state's low costs attract businesses and its low taxes and cost of living are a draw for residents. Furthermore, even though Delaware has a reputation as a retiree destination, it is showing stability in its prime working age population.

Exhibit 6  
**Net migration, both domestic and total, is more positive in Delaware than most of its neighbors**

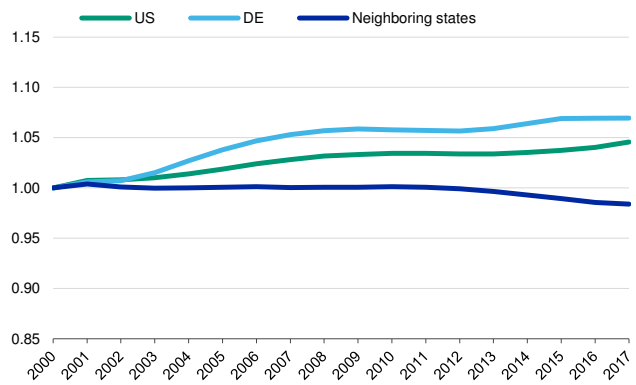
Five-year average of annual migration as a percentage of state population



Source: Moody's Analytics

Exhibit 7  
**Delaware's prime working age population grew faster than peers over the past several years**

Prime working age population relative to the year 2000



Neighboring states consists of the District of Columbia, Maryland, New Jersey, Pennsylvania and Virginia.

Source: Moody's Analytics

Delaware's population of residents aged 25-54 (prime working age) boomed in the mid 2000s. It rose again over the period 2013-2015. Since then, this population has remained fairly flat. But this sets Delaware apart from its neighbors, who, with the exception of DC, have seen a slow and steady decline in their prime working age population.

A notable economic project in the state is the recently-announced \$600 million upgrade of the Port of Wilmington by Gultainer. In late 2018, the state transferred operations of the port to Gultainer pursuant to a 50-year lease.

## ENVIRONMENTAL CONSIDERATIONS

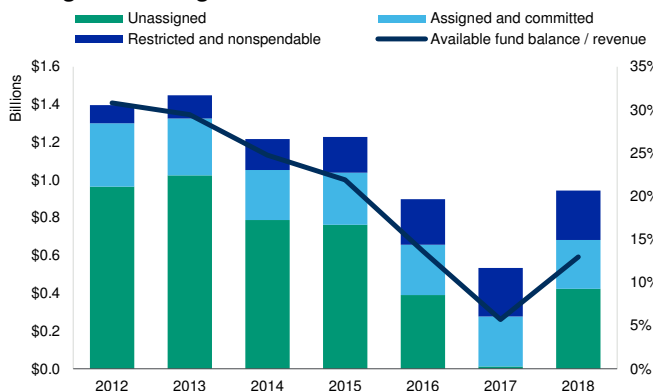
Given Delaware's small size and location on the Atlantic Ocean, it is exposed to a large degree of environmental risk from hurricanes and heavy storms. In recent years, Delaware has been spared extensive destruction by storms that hit areas further south and north along the eastern seaboard. Tropical storm damage from 1980 through 2017, adjusted for inflation, amounted to just 0.9% of Delaware's GDP. In the past 150 years, no hurricane has made landfall in the state. Still, Delaware is home to a lot of low-lying land and the entire state consists of coastal counties. Intense storms that fall more directly on the state could cause more extensive damage and flooding than has occurred in the past.

## Finances

Overall, Delaware's finances are strong. The state faced a large budget gap in fiscal 2018 after expenditures grew more quickly than revenue for several years. The state enacted a mix of spending reductions and tax increases to more than offset the gap. On a budgetary basis, the state closed fiscal 2018 with a \$275 million operating surplus. On a GAAP-basis, the state increased its available fund balance to 13% of revenue from 5.7% in fiscal 2017. On a budgetary basis, the state's unencumbered reserves grew to just under 13% of revenue. This consists of the state's mandated 5% budget reserve and other unencumbered cash.

Exhibit 8

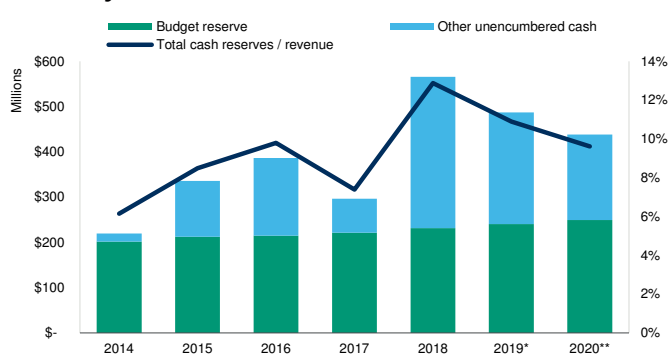
### Delaware increased its available fund balance after steadily drawing down through 2017



Available fund balance is the sum of unassigned, assigned and committee. The ratio excludes restricted and nonspendable fund balance.  
Source: Delaware's annual financial statements

Exhibit 9

### Delaware built up reserves in fiscal 2018 with plans to spend moderately in 2019 and 2020

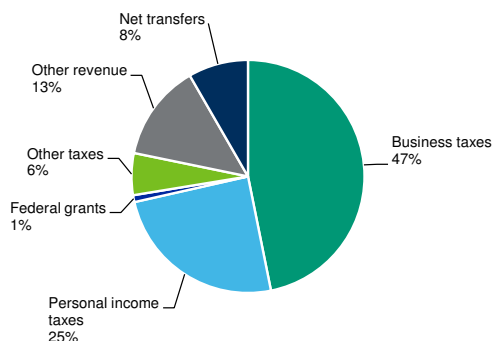


\* estimated. \*\* governor's proposed budget.  
Source: Delaware's annual budget reports

The fiscal 2019 budget kept recurring revenue well above recurring expenses. The budget included \$238 million of nonrecurring spending (80% for capital investments), financed with a drop in budgetary reserves to about 11% of revenue. The governor's recently proposed fiscal 2020 budget keeps growth in recurring spending to under 4% and includes about \$135 million in nonrecurring spending. The budget assumes year-end reserves of just under 10% of anticipated revenue.

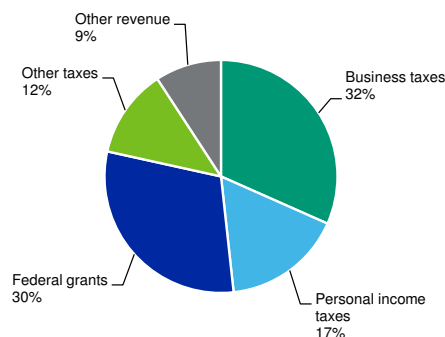
Delaware's tax revenue system relies on the state's role as the preferred legal home for publicly traded companies. About half of all US publicly traded firms and more than two-thirds of the Fortune 500 are organized under Delaware law. The state derives over 45% of its general fund revenue from taxes on businesses. The two largest components of business-related revenue are franchise taxes levied on corporations based in the state and abandoned property revenue. Together, these two sources account for 30% of the state's anticipated fiscal 2020 general fund revenue.

Exhibit 10  
**Delaware's general fund is heavily dependent on business taxes**  
 Composition of general fund revenue



Source: Delaware's annual financial statements

Exhibit 11  
**Business taxes also make up the largest share of total governmental revenue**  
 Composition of total governmental revenue



Source: Delaware's annual financial statements

Since 1980, Delaware has maintained a budget reserve account, a rainy day fund that holds cash and is managed by the state's Cash Management Policy Board. The account can have as much as 5% of the state General Fund's estimated budgetary revenue. Drawing these funds requires approval by legislative super-majorities (three-fifths of the members of each chamber).

By observing a limit on appropriations, Delaware creates a second buffer against revenue underperformance. The state can only appropriate 98% of estimated available funds (sum of general fund revenue and unencumbered cash outside of the budget reserve account), and this can only be waived with super-majority legislative approval.

**LIQUIDITY**

Delaware's liquidity has always been strong. The state closed fiscal 2018 with just under \$2 billion of cash and investments held in its general fund. Delaware has not had to issue bond- or revenue-anticipation notes in more than 40 years because of its strong liquidity.

**Debt and pensions**

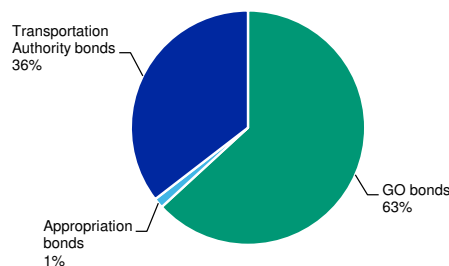
Delaware's debt and pension burden is high among states relative to GDP. Relative to revenue, Delaware's burden is closer to the state median (see Exhibits 1 and 2 above). A share of Delaware's revenue is derived from economic activity outside the state because of the state's taxes and franchise fees on businesses incorporated in the state. This largely accounts for the difference in the debt and pension burdens as shares of GDP and revenue relative to other states.

Exhibit 12  
**Delaware's fiscal 2018 tax-supported debt statement**

| Type of debt                          | Principal (millions) |
|---------------------------------------|----------------------|
| GO bonds                              | \$1,502.4            |
| GO bonds paid with local school taxes | \$501.2              |
| Appropriation bonds                   | \$43.9               |
| Delaware Transportation Authority     |                      |
| Transportation system revenue bonds   | \$635.8              |
| US 301 project revenue bonds          | \$423.7              |
| GARVEEs                               | \$64.7               |

Source: Delaware's annual financial statements

Exhibit 13  
**Composition of Delaware's \$3.2 billion fiscal 2018 tax-supported debt**



Source: Delaware's annual financial statements

## DEBT STRUCTURE

All of Delaware's debt is fixed rate. In addition to general obligation bonds and [Delaware Transportation Authority](#) bonds, the state has a moderate amount of appropriation debt ultimately backed by appropriations to various state agencies by the state legislature.

## DEBT-RELATED DERIVATIVES

The state is not party to any debt-related derivative agreements.

## PENSIONS AND OPEB

The state carries 100% of the post-employment liabilities associated with local school districts. Delaware's fiscal 2018 adjusted net pension liability is \$5.8 billion, or 7.8% of GDP and 101% of own-source revenue. The state's ANPL fell from \$6.4 billion in fiscal 2017 due largely to strong investment returns in its pension funds. The rise in the ANPL from 2016 to 2017 was driven by several factors. These include pension fund asset losses, an increase in the reported liability due to a change in mortality assumptions, and a drop in the market-based interest rate we use to value accrued pension liabilities when calculating a government's ANPL. The market-based interest rate used to calculate the state's fiscal 2017 ANPL was 3.6%, down from 4.4% used to calculate the fiscal 2016 ANPL. The market-based interest rate rose moderately to 3.9% for the state's fiscal 2018 ANPL.

Delaware's fiscal 2018 fixed costs were 12.8% of its own-source revenue (all governmental revenue less federal revenue). Fixed costs consist of debt service, pension contributions and payments of other post-employment benefits (OPEB). For the pension contribution, we calculate a pension "tread water" indicator, which is an estimate of the payment to a government's pension plans that keeps reported net pension liabilities from growing, assuming other actuarial assumptions hold.

For fiscal 2018, we estimate Delaware's "tread water" indicator at about \$240 million. The state's actual pension contribution was \$225 million. The difference between the actual contribution and the "tread water" indicator was a small 0.3% of revenue.

Delaware's fiscal 2018 OPEB payment was \$225 million. Over the past decade, the state has made small, annual deposits to its OPEB trust in addition to covering benefits on a pay-go basis. Still, Delaware's unfunded OPEB liability is high. At the close of fiscal 2018, the state's reported net OPEB liability was \$7.6 billion, or another 10% of GDP and 133% of own-source revenue. There is no constitutional guarantee of retiree healthcare benefits.

Importantly, Delaware's pension and OPEB burdens account for all assets and liabilities of plans associated with local school districts. The state reports 100% of local school district retirement liabilities on its own balance sheet and these are incorporated in our calculation of the state's adjusted liabilities.

## Governance

Delaware's Aaa rating is based in large part on legal provisions that will encourage the state to maintain a strong financial profile over a long period. A panel of 31 gubernatorial appointees, known as the Delaware Economic and Financial Advisory Council (DEFAC), provides the state's revenue estimates. This panel, which includes officials from the public and private sector, meets six times each year and issues revenue and expenditure forecasts used by both the executive and legislative branches of government during the budget process.

The state's requirements for consensus forecasts, well-managed expenditure growth, and a limit on appropriations support long-term prospects for financial strength. Delaware's otherwise strong management profile is tempered by a constitutional requirement that tax increases be approved by a three-fifths legislative majority, which reduces the state's financial flexibility.

## 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.

Delaware's Aaa rating is one notch above its scorecard-indicated outcome because it incorporates a history of quickly responding to operating challenges identified by its strong forecasting methods in order to avoid the use of reserves to close budget gaps.

Exhibit 14

## US States and Territories Rating Methodology scorecard

State of Delaware

| Rating Factors   | Measure | Score |
|--|---------|-------|
| <b>Factor 1: Economy (25%)</b>                                 |         |       |
| a) Per Capita Income Relative to US Average [1]                | 96.2%   | Aa    |
| b) Nominal Gross Domestic Product (\$ billions) [1]            | \$74.8  | Aaa   |
| <b>Factor 2: Finances (30%)</b>                                |         |       |
| a) Structural Balance  | Aaa     | Aaa   |
| b) Fixed Costs / State Own-Source Revenue [2]                  | 12.8%   | Aa    |
| c) Liquidity and Fund Balance                                  | Aa      | Aa    |
| <b>Factor 3: Governance (20%)</b>                              |         |       |
| a) Governance / Constitutional Framework                       | Aaa     | Aaa   |
| <b>Factor 4: Debt and Pensions (25%)</b>                       |         |       |
| a) (Moody's ANPL + Net Tax-Supported Debt) / State GDP [2] [3] | 12.0%   | Aa    |
| <b>Factors 5 - 10: Notching Factors [4]</b>                    |         |       |
| Adjustments Up: None   | 0       |       |
| Adjustments Down: Pension or OPEB Characteristics              | -0.5    |       |
| <b>Rating:</b>   |         |       |
| a) Scorecard-Indicated Outcome                                 |         | Aa1   |
| b) Actual Rating Assigned                                      |         | Aaa   |

[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 pension 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.

Source: US Bureau of Economic Analysis, Delaware's CAFRs, Moody's Investors Service



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