Access is everything™

**Expertise**
A comprehensive view of the global markets through our ratings and research.

**Credibility**
Over 100 years of experience delivering forward-looking, independent, stable and transparent opinions.

**Engagement**
Meaningful interactions across multiple channels between our analysts and market participants.
Moody’s has public ratings on 256 private universities and 226 four-year public universities.

Other sectors include community colleges with revenue-backed debt, not-for-profits, and independent schools.

The annual outlook reflects our forward looking view on sector credit conditions for the next 12 to 18 months.
Higher education outlook

2019 outlook remains negative with continued low net tuition revenue growth

**NEGATIVE**

Drivers of the negative outlook

» Weak net tuition revenue growth curbing operating revenue growth, which is projected in the 3%-4% range (excludes patient care).

» With rising labor costs, expense growth will top revenue growth for many

» Public universities face more difficulty than private universities.

**STABLE**

What could change outlook to stable

» A greater proportion of colleges and universities able to grow net tuition revenue at 3% or higher.

» Revenue growth exceeding expense growth for most universities

**POSITIVE**

What could change outlook to positive

» Stronger pricing power leading to healthy net tuition revenue growth.

» Continued strong investment market, bolstering endowment spending and philanthropy

» Operating surpluses for many universities, allowing greater capital and programmatic investment.

This outlook represents our forward-looking view on credit conditions over the next 12-18 months. This sectorwide outlook, however, does not imply the likelihood or direction of rating actions for individual issuers.
Expense growth will outpace constrained revenue growth for many universities

Aggregate revenue growth
Aggregate expense growth
Aggregate revenue growth without patient care
Aggregate expense growth without patient care

2018 is an estimate, 2019 and 2020 are forecasts; data includes Moody's-rated public and private universities

Source: Moody's Investors Service
Revenue growth varies greatly across the sector

A majority of public universities generated revenue growth below our proxy for higher education inflation.

Each bar represents annual revenue growth at an individual university and those in the shaded area reported fiscal 2017 revenue growth below Moody’s higher education inflation proxy. Outlook period extrapolates but may have different underlying institutions.

Source: Moody’s Investors Service
Public universities have weaker performance than private counterparts

Fiscal 2017 operating margins for rated universities

Source: Moody’s Investors Service
### Growth rates by revenue stream

Net tuition revenue growth lags other revenue sources

<table>
<thead>
<tr>
<th>Source of operating revenue</th>
<th>12-18 month forecast growth assumptions</th>
<th>% of aggregate public university operating revenue</th>
<th>Median public university operating revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net tuition</td>
<td>1%-3.5%</td>
<td>24%</td>
<td>50%</td>
</tr>
<tr>
<td>Auxiliaries</td>
<td>2%-4%</td>
<td>8%</td>
<td>Included with net tuition</td>
</tr>
<tr>
<td>State appropriations</td>
<td>2.5%-3%</td>
<td>19%</td>
<td>24%</td>
</tr>
<tr>
<td>Patient care</td>
<td>7%-9%</td>
<td>19%</td>
<td>0%</td>
</tr>
<tr>
<td>Grants &amp; contracts</td>
<td>4%-5%</td>
<td>16%</td>
<td>10%</td>
</tr>
<tr>
<td>Endowment income</td>
<td>5%-8.5%</td>
<td>4%</td>
<td>2%</td>
</tr>
<tr>
<td>Gifts for operations</td>
<td>4%-6%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Other revenue</td>
<td>5.5%-6%</td>
<td>7%</td>
<td>4%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>100%</strong></td>
<td></td>
</tr>
</tbody>
</table>

Median data is the median for each revenue stream and will not add up to 100%. Median data may be 0 in some cases, meaning that the median data point indicated no revenue from that particular revenue source. Aggregate data is driven by the largest universities in the portfolio, whereas median data adjusts for the diversity across the sector.

Source: Moody's Investors Service
Steady moderation in pricing power felt across all public university types

Median annual net tuition per student growth by public university type

"Est." indicates our estimated data based on preliminary information. "Proj." indicates our projected data.

Source: Moody’s Investors Service
Changes in state funding vary widely across states

5-Year % Change in State Support, fiscal 2013-18

- Seven large states (CA, TX, NY, FL, NC, GA and IL) accounted for half of FY 2018 state support for higher education. Their total increase for FY 2018 was 2.4%, compared to 0.9% for remaining states.

Source: Illinois State University Grapevine; Moody’s Investor Service
Research funding moderately improving

» Research funding will likely continue to shift toward comprehensive universities, which offer more opportunity for collaboration across disciplines.

“Est.” indicates our estimated data based on preliminary information. “For.” indicates our forecasted data.

Sources: Moody’s Investors Service, National Science Foundation, National Center for Science and Engineering Statistics, Higher Education Research and Development Survey
Debt has funded approximately half of public university campus infrastructure.

Source: Moody’s Investors Service
Pension benefit liabilities significantly increase adjusted leverage

By public university classification

Source: Moody's Investors Service, based on fiscal 2017
Increasing financial reserves support public university flexibility

2018 is an estimate, 2019 is a forecast; data includes Moody's-rated public universities.

Source: Moody's Investors Service
Salary boost by degree attainment supports long-term ROI of higher education

Mean earnings for people 18+ years old, 2017

- High School Graduate (Incl GED): $38,145
- Some College No Degree: $38,695
- Associate Degree: $46,381
- Bachelor's Degree: $67,763
- Master's Degree: $87,674
- Professional Degree: $138,378
- Doctorate Degree: $118,903

Source: U.S. Census data