<table>
<thead>
<tr>
<th>Section 1</th>
<th>Sector Outlook and Trends</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 2</td>
<td>Financial Strength Monitoring: NECHE Pilot Program</td>
</tr>
</tbody>
</table>
Rating Agency Outlooks

- The rating agencies provide at least annual outlooks on their views of the higher education sector, however S&P’s outlooks focus more on the balance of rating changes than Moody’s.
- Moody’s approach is to forecast estimates of revenue and expense growth trends for the sector and thereby set an outlook that reflects the “fundamental credit conditions” impacting the sector over the next 12-18 months.
- S&P rates approximately 260 private colleges and universities as well as 150 public institutions.
- Moody’s rates approximately 245 private colleges and universities as well as 190 public institutions, not including community colleges that are rated primarily by other teams.
- Enrollment at rated institutions likely covers more than 75% of four-year, non-profit and public institution enrollment.
- In any given year, the vast majority of ratings reviewed are affirmed, however for every upgrade of a rating, there have generally been more downgrades in recent years.
Rating Evaluation

- Although the rating analysis is focused on financial performance, the largest single factor is “Market Profile.”
- Moody’s uses its rating scorecard as a broad, quantitative evaluation and then applies more qualitative judgement and opinions to arrive at a final rating level.
- Notably, most of the data that informs rating agency expertise is gathered from the institutions they rate.
  - The analytical teams meet with senior leadership teams from hundreds of institutions every year and get the latest views on enrollment trends, philanthropy, investment management, operating performance, debt management and strategic planning efforts.
  - These meetings, combined with broad economic and policy evaluations, inform the analysts’ views on the sector.
- Fitch has announced a new rating methodology and is requesting feedback on the approach but won’t be fully rolled out for another year.
Moody’s negative outlook was driven by several key factors:

– **Weak Net Tuition Revenue Growth**: Concerns about affordability and return on investment will generally continue to curtail growth in net tuition revenue. Other revenue streams will generally be steady or grow modestly, including state support for public universities. The only more rapid growth is associated with patient care activities.

– **Continued Cost-Containment Efforts**: Rising labor costs and the need for competitive programs, facilities and technology investments will keep expense growth above revenue growth.

The report clearly views four-year public institutions as facing more pressures than privates due to appropriation outlooks, competition with lower cost community colleges, rising pension and post-retirement benefit pressures and increasing prevalence of tuition and other price caps at the state level.

The report incorporates favorable endowment returns and forecasts healthy philanthropy trends.

### Moody's Expected Growth Rates Vary by Revenue Streams

<table>
<thead>
<tr>
<th>Source of Revenue</th>
<th>FY2018 and 2019 Forecast Growth Assumptions (%)</th>
<th>Median Private University Revenue (%)</th>
<th>Median Public University Revenue (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net tuition and auxiliaries</td>
<td>2 to 3.5</td>
<td>74</td>
<td>50</td>
</tr>
<tr>
<td>State appropriations</td>
<td>2 to 2.5</td>
<td>0</td>
<td>24</td>
</tr>
<tr>
<td>Patient care</td>
<td>5 to 7</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Grants and contracts</td>
<td>1 to 2</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Endowment income</td>
<td>2 to 5</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Gifts for operations</td>
<td>6 to 6.5</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Other revenue</td>
<td>6 to 6.5</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

Median data is the median of each revenue stream and may not add up to 100%. Source: Moody’s
S&P’s outlook forecast the greatest challenges for “the middle,” meaning schools that aren’t the most selective or aren’t close to open access.

- These schools are viewed as having the most challenging message to convey to parents and students who are looking more and more for “value” for their tuition dollars.
- The view seems to be that community colleges face fewer challenges because they do not face the same skepticism about overall cost and student indebtedness while also potentially serving the need for flexible, skill-based programs that directly address employer needs.
- Highly selective institutions’ depth of demand and ability to support broad financial aid programs shields these institutions as well.
Key Sector Outlook Themes

**Pressures:**

**Affordability**
- Value perception
- Loans / Indebtedness
- Political pressures
- Competition

**International Student Market Changes**

**Demographics**

**Government**
- Taxation
- Increasing regulation

**Expense Pressures**
- Healthcare
- Compliance
- Wages & Low Unemployment
- Infrastructure

**Growing Distrust/Skepticism on Value of Degree**

**For-Profit Competition & Deregulation**

**Opportunities:**

**Delivery Methods**
- Online
- Asynchronous
- Competency based
- Corporate / Workplace delivery

**Philanthropy**

**Efficiency / Expenses**
- Multi-institutional pooling
- Mergers?
There is often discussion and focus on divergent trends between the wealthy/selective group of institutions and the “rest” of higher education that generates a larger share of revenue from tuition, room, and board.

One way to think about the distinction is to consider what revenue growth rate a particular institution is expected to achieve and the implications for the ability to invest in competitive salaries, innovation and growth.

<table>
<thead>
<tr>
<th>Revenue Source</th>
<th>Tuition Dependent Private College</th>
<th>Long-Term Growth Assumption</th>
<th>Resulting Revenue Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition, Room and Board</td>
<td>90%</td>
<td>2-3%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Endowment</td>
<td>5%</td>
<td>6-8%</td>
<td></td>
</tr>
<tr>
<td>Research</td>
<td>1%</td>
<td>1-2%</td>
<td></td>
</tr>
<tr>
<td>Gifts</td>
<td>2%</td>
<td>6-6.5%</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>2%</td>
<td>6-6.5%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Revenue Source</th>
<th>&quot;Endowed&quot; Private College</th>
<th>Long-Term Growth Assumption</th>
<th>Resulting Revenue Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition, Room and Board</td>
<td>35%</td>
<td>2-3%</td>
<td>4.7%</td>
</tr>
<tr>
<td>Endowment</td>
<td>35%</td>
<td>6-8%</td>
<td></td>
</tr>
<tr>
<td>Research</td>
<td>10%</td>
<td>1-2%</td>
<td></td>
</tr>
<tr>
<td>Gifts</td>
<td>10%</td>
<td>6-6.5%</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>10%</td>
<td>6-6.5%</td>
<td></td>
</tr>
</tbody>
</table>
Evidence of challenges for “have-nots” in the sector has been growing.

Schools in the bottom tier of the WSJ/Times Higher Ed ranking have seen a sharp divergence in enrollment trends since 2010.

**Falling Behind**
After years in which all colleges grew, the bottom tier is struggling to keep up.

**Percentage change in enrollment since 2000, by WSJ/Times Higher Education ranking**

Source: WSJ/Times Higher Education college rankings 2018 (rankings); Education Department (enrollment)
Net tuition revenue has been under pressure since the financial crisis with large numbers of colleges experiencing declines in revenue and most facing growth at or below inflation.

- Because of the annual and four-year cycle of classes, trends in net tuition may lag “current” trends.
- FY2019 and 2020 projections seem to indicate the long-term picture remains challenging.

Source: Moody’s Investors Service
The proportion of private universities reporting net tuition revenue growth less than 3% has increased.

Percent of private universities by annual change in net tuition revenue:

- Annual decline
- 0% - 3%
- 3% - 5%
- 5% or higher

Source: Moody’s Investors Service
Financial Aid Trends

- While there are many converging factors driving trends in financial aid and discounting, long-term data seems to clearly indicate:
  - Rapid tuition growth in the 2000-2008 years may have been boosted by access to debt, although data may be skewed by changes in the for-profit market.
  - The federal government provided an immense boost to grant aid through Pell during the aftermath of the financial crisis.
- The sector’s opaque pricing model and aid policies appear ripe for disruption and change.

Source: College Board Trends in Student Aid
Although state funding faced pressures after the financial crisis as state tax revenues were constrained, federal funding in aggregate across all funding types expanded dramatically helping to cushion the impact.

Considering the potential for another recession in the future, the governmental funding support and cushion for the sector may not repeat and lead to more significant impacts on various revenues sources.

State and Federal Support for Higher Education
($Billions, adjusted for inflation)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Federal</th>
<th>Total State</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>$64</td>
<td>$89</td>
</tr>
<tr>
<td>2008</td>
<td>$70</td>
<td>$92</td>
</tr>
<tr>
<td>2009</td>
<td>$90</td>
<td>$90</td>
</tr>
<tr>
<td>2010</td>
<td>$111</td>
<td>$88</td>
</tr>
<tr>
<td>2011</td>
<td>$115</td>
<td>$83</td>
</tr>
<tr>
<td>2012</td>
<td>$109</td>
<td>$77</td>
</tr>
<tr>
<td>2013</td>
<td>$105</td>
<td>$77</td>
</tr>
<tr>
<td>2014</td>
<td>$107</td>
<td>$80</td>
</tr>
<tr>
<td>2015</td>
<td>$102</td>
<td>$84</td>
</tr>
<tr>
<td>2016</td>
<td>$101</td>
<td>$86</td>
</tr>
<tr>
<td>2017</td>
<td>$108</td>
<td>$87</td>
</tr>
</tbody>
</table>

Source: Pew Charitable Trust, “Two Decades of Change in Federal and State Higher Education Funding"
Other Enrollment and Tuition Pressures

- **International Students**
  - Typically a higher paying population, the IIE found that the number of new international enrollments at US Colleges declined for the third straight year in FY2019, declining by 1% and a cumulative drop of 11% since FY2016.

- **Demographic Trends**
  - NCES projects the number of high school graduates to grow 5% nationally from 2013 to 2028, but with 19 states showing declines over that period (10 with more than a 5% decline).
  - The decline of “White, non-Hispanic” is more dramatic at 14% from 2013 to 2028 according to NCES, while Hispanic high school graduates are projected to grow by 52% over that time period.

- **Alternate Delivery Sources**
  - Lower cost, online and other delivery sources may compete for the “incremental” student considering graduate or even undergraduate programs.

Source for Chart: Moody's.
The narrative around higher education has clearly shifted; after decades of a “mantra” of more enrollment in higher education would lead to better pay and better growth for the economy, the narrative in popular press has focused on stories of astronomical indebtedness and majors or programs with little practical application.

– In a recent survey, 42% of respondents agreed with the statement that “for most high school students, pursuing a college degree is not a worthwhile investment because it will lead to student debt with little chance of finding a good-paying job.”

– Articles have also focused on indebtedness with headlines about the “all-time high” balances of student loans at $1.6 trillion and balances of student loans rising 157% in the past eleven years.

The general positive or negative view of higher education comes back to impact the sector at a variety of levels, including policymaking, overall enrollment trends, and family decision-making on affordability.

– Higher education is tremendously diverse and the nuances of how the trends in debt and opinion polls are influenced by economic conditions, for-profit institution practices, and geography are unlikely to be dealt with in the media.

– Similarly, in the policy arena, the political narrative has largely followed the public opinion and media coverage tone.

– The perception of higher education as “elite”, wealthy, inefficient and slow to adapt seems to be embedded in many policy proposals.

– Adopted tax reform in 2017 may have, at least in part, been reflective of these pressures.
Section 1  Sector Outlook and Trends

Section 2  Financial Strength Monitoring: NECHE Pilot Program
Financial Oversight Development

- The closure of several small institution in the New England region, including a disruptive and high profile closure of Mount Ida College, created significant pressure to enhance financial oversight of schools in the political and policy arena.

- NECHE worked to strengthen its review of financially fragile institutions and to ensure that all governing boards understand their responsibilities with respect to financial monitoring.

- NECHE adopted a pilot program following the recommendations of the Boston Consortium for Higher Education, which included a governance training effort and a financial screening tool.
  - The financial screening tool was developed by The Yuba Group in conjunction with The Boston Consortium and other experts as a complement to NECHE’s existing oversight process.
Screening Process Overview

**Data Collection**
- Audited Financials
- Summary enrollment

**Screen 1**
- Quantitative only

**Pass**
- No other actions
- Data collection annually

**Fail**
- ARFE data request

**Data Collection**
- Interim financials and enrollment data
- Other tailored requests

**Screen 2**
- Quantitative and Qualitative
- ARFE Committee Review

**Enhanced Screening Key Steps:**
1. All institutions submit data necessary to run the screen
2. NECHE processes screen to identify institutions for ARFE review
3. NECHE’s ARFE committee reviews all data and determines appropriate actions for institutions that fail the quantitative screen
   - ARFE committee enhanced by new metrics and consistent data as baseline

**Pass**
- Return to Screen 1 the following year
- Demonstrate teachout responsibility awareness

**Fail**
- Public Notice / Show Cause / Probation
- Required teachout plan
Screening Summary

- The table to the right shows the categories identified as key elements of institutional health, and viability and the screen uses metrics from each of these areas.
  - The green categories display quantifiable metrics used in the proposed screen with each metric having a “red flag” threshold identified.
  - Governance & Management, while not quantifiable, is also an important determination of viability, but is addressed in other recommendations.
- An institution will “fail” the screen if at least four metrics fall below “red flag” thresholds with at least 1 red flag in the market or cash flow categories.
- A key goal of the model was to identify institutions with potential financial distress at least 3 years prior to a required closing or merger.
- When back-tested, the proposed screen was successful in identifying institutions that have announced closure as well as those that have been identified as having financial difficulties (in ARFE or below investment grade) without identifying otherwise healthy institutions, or “false positives.”

### Market Revenue / Durability
- Market Index (100 - Selectivity + Matriculation)
- 3Y Change in FTE Enrollment
- 3Y Change in Operating Revenue
- 3Y Change in Net Tuition Revenue

### Cash Flow Sufficiency
- 3Y Average Free Cash Flow Margin
- 3Y Av Operating Cash Flow Margin Excluding Gifts
- 3Y Av Debt Service Coverage

### Liquidity
- 3Y Change in Cash & Investments
- Cash + Unrestricted Endowment / Daily Operations

### Wealth
- Cash & Investments to Debt
- Cash & Investments per Student ($000s)
- Total Resources to Operations

### Governance & Management
Sample Dashboard

- The table below was shared with NECHE as a potential dashboard for ARFE committee members to observe trends over time of the key screening metrics.
- For institutions, a similar approach may make sense in order to monitor performance against the screen.
- However, for each institution more relevant and detailed metrics could likely be identified to be more valuable to governance and management team discussions and planning.

### Dashboard Summary

<table>
<thead>
<tr>
<th>Institution</th>
<th>Final Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Market Revenue / Durability</strong></td>
<td>2013 2014 2015 2016 2017</td>
</tr>
<tr>
<td>Sample</td>
<td></td>
</tr>
<tr>
<td>Market Index (100 - Selectivity + Matriculation)</td>
<td>51 45 52 42 41</td>
</tr>
<tr>
<td>3Y Change in Enrollment</td>
<td>0% -6% -6% 0% -11%</td>
</tr>
<tr>
<td>3Y Change in Operating Revenue</td>
<td>15% 15% 4% 11% -2%</td>
</tr>
<tr>
<td>3Y Change in Net Tuition Revenue</td>
<td>35% 22% 13% 8% 1%</td>
</tr>
<tr>
<td><strong>Cash Flow Sufficiency</strong></td>
<td>2013 2014 2015 2016 2017</td>
</tr>
<tr>
<td>3Y Average Free Cash Flow Margin</td>
<td>11% -11% -7% 6% 7%</td>
</tr>
<tr>
<td>3Y Av Operating Flow Margin Excluding Gifts</td>
<td>-7% -9% -6% -1% 1%</td>
</tr>
<tr>
<td>3Y Av Debt Service Coverage</td>
<td>0.24 -0.51 1.65 4.24 5.98</td>
</tr>
<tr>
<td><strong>Liquidity</strong></td>
<td>2013 2014 2015 2016 2017</td>
</tr>
<tr>
<td>3Y Change in Cash &amp; Investments</td>
<td>36% 25% 21% 105% 56%</td>
</tr>
<tr>
<td>Cash + Unres Endowment / Daily Operations</td>
<td>22 31 24 88 62</td>
</tr>
<tr>
<td><strong>Wealth</strong></td>
<td>2013 2014 2015 2016 2017</td>
</tr>
<tr>
<td>Cash &amp; Investments to Debt</td>
<td>1.31 1.50 1.53 1.18 1.01</td>
</tr>
<tr>
<td>Cash &amp; Investments per Student ($000s)</td>
<td>6 7 7 13 11</td>
</tr>
<tr>
<td>Total Resources to Operations</td>
<td>0.31 0.31 0.34 0.60 0.59</td>
</tr>
</tbody>
</table>

### Thresholds

<table>
<thead>
<tr>
<th>Market Revenue / Durability</th>
<th>Warning</th>
<th>Red Flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Index (100 - Selectivity + Matriculation)</td>
<td>50 30</td>
<td></td>
</tr>
<tr>
<td>3Y Change in Enrollment</td>
<td>-5% -10%</td>
<td></td>
</tr>
<tr>
<td>3Y Change in Operating Revenue</td>
<td>-5% -15%</td>
<td></td>
</tr>
<tr>
<td>3Y Change in Net Tuition Revenue</td>
<td>-5% -15%</td>
<td></td>
</tr>
<tr>
<td><strong>Cash Flow Sufficiency</strong></td>
<td>Warning</td>
<td>Red Flag</td>
</tr>
<tr>
<td>3Y Average Free Cash Flow Margin</td>
<td>0% -5%</td>
<td></td>
</tr>
<tr>
<td>3Y Av Operating Flow Margin Excluding Gifts</td>
<td>0% -5%</td>
<td></td>
</tr>
<tr>
<td>3Y Av Debt Service Coverage</td>
<td>1.50 1.25</td>
<td></td>
</tr>
<tr>
<td><strong>Liquidity</strong></td>
<td>Warning</td>
<td>Red Flag</td>
</tr>
<tr>
<td>3Y Change in Cash &amp; Investments</td>
<td>0% -5%</td>
<td></td>
</tr>
<tr>
<td>Cash + Unres Endowment / Daily Operations</td>
<td>180 90</td>
<td></td>
</tr>
<tr>
<td><strong>Wealth</strong></td>
<td>Warning</td>
<td>Red Flag</td>
</tr>
<tr>
<td>Cash &amp; Investments to Debt</td>
<td>1.05 0.80</td>
<td></td>
</tr>
<tr>
<td>Cash &amp; Investments per Student ($000s)</td>
<td>50 30</td>
<td></td>
</tr>
<tr>
<td>Cash &amp; Investments to Operations</td>
<td>1.10 0.85</td>
<td></td>
</tr>
</tbody>
</table>
Background on Yuba Group

- The Yuba Group provides independent, objective analysis and advice to not-for-profit and higher education Institutions through its offices in Boston, New York and San Francisco. The firm’s professionals have extensive prior direct experience with investment banking, rating agency, underwriting and swap activities in addition to providing advisory services.

- Yuba clients include a broad range of higher education and not-for-profit Institutions. In addition to assisting in the issuance of taxable and tax-exempt bonds, as well as direct bank purchases, letter of credit substitutions, swap unwinds and restructurings, the firm works with its clients on capital project and financing strategies, debt capacity analyses and developing debt/swap management guidelines.

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