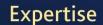


Fall 2020 NAHEFFA Virtual Conference Higher education confronts unprecedented uncertainty

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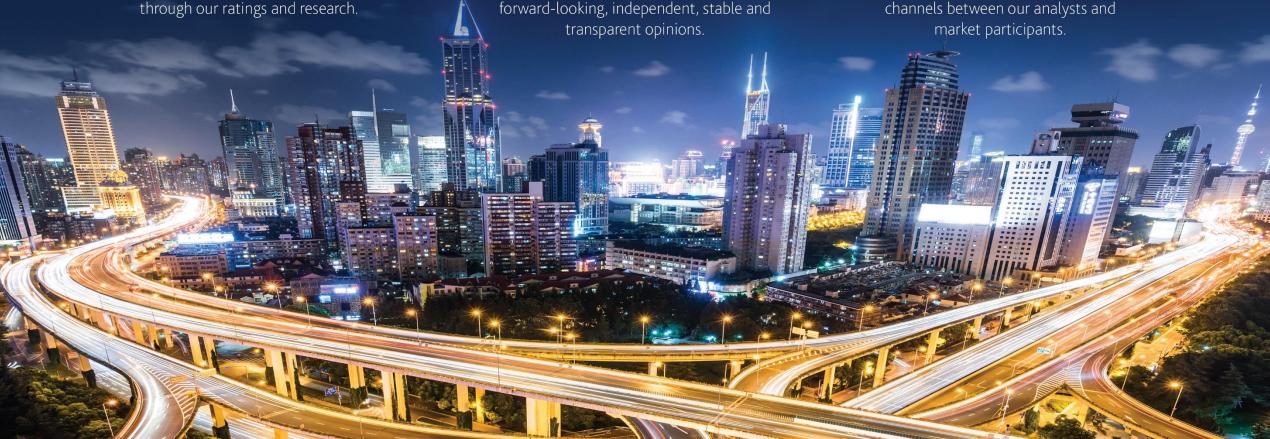
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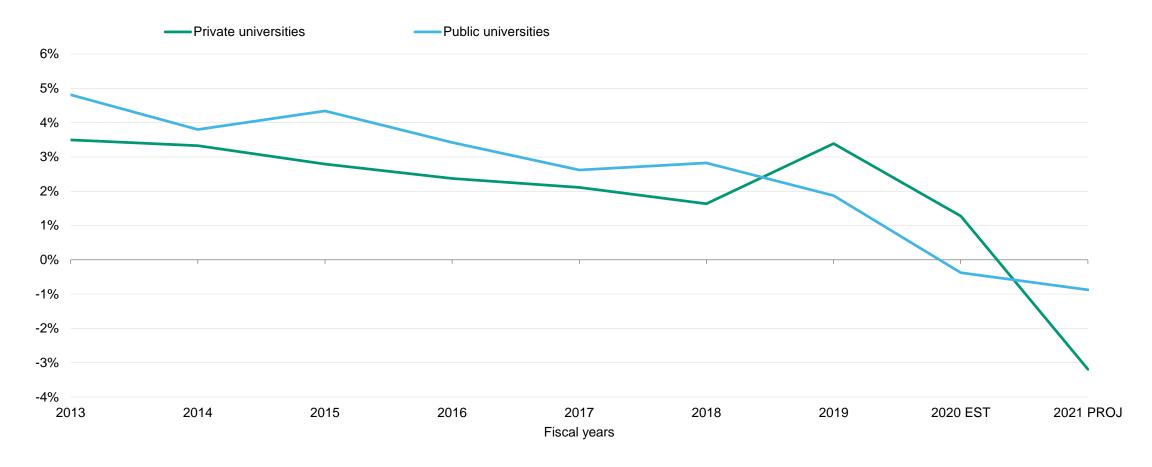


Issues over the next two years

- » Revenue impacts: enrollment, state funding
- » Expense measures: immediate v. permanent cuts
- » Balance sheet management:
 - » Liquidity preservation
 - » Debt management
- » Governance

Declining net tuition revenue a key challenge in FY 2021

Median annual change in net tuition revenue, by institution type

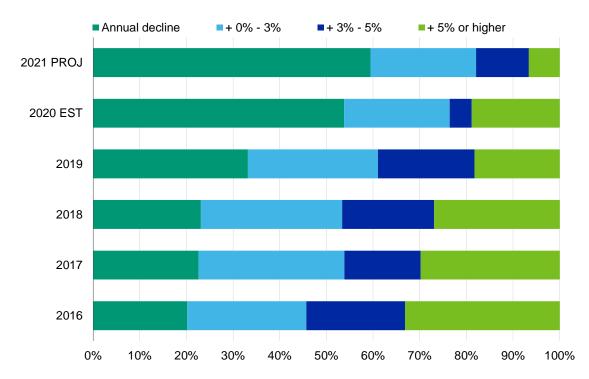


Source: Moody's Investors Service, fall 2020 tuition survey

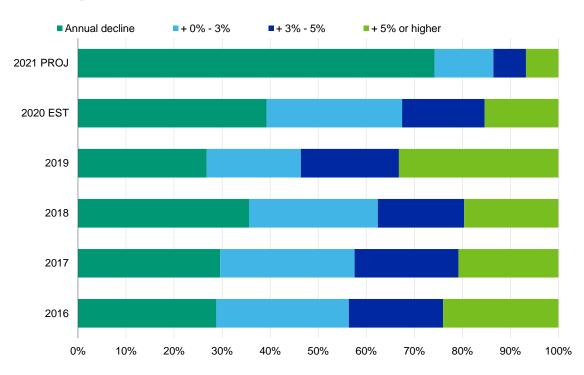
More private universities face declining tuition revenue

Falling enrollment, focus on affordability, rising discounting contribute

About 60% of publics project declining net tuition revenue....



...while nearly 75% of privates forecast falling net tuition revenue

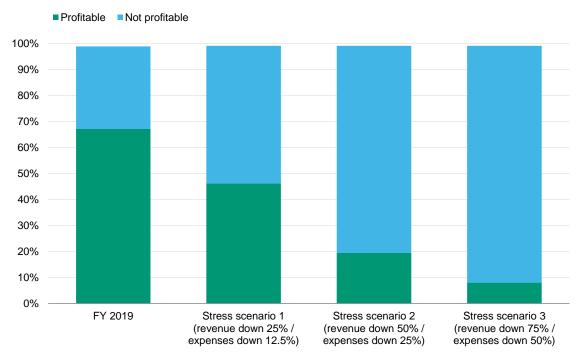


Source: Moody's Investors Service fall 2020 tuition survey

Source: Moody's Investors Service fall 2020 tuition survey

Auxiliary revenue impacted by campus closures and de-densification

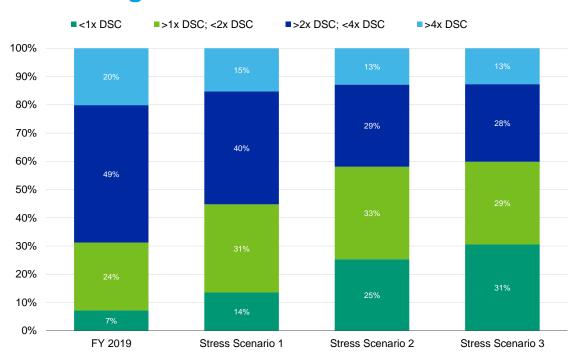
Declining auxiliary revenue reduces fiscal flexibility



Profitability defined as when auxiliary revenues are greater than auxiliary expenses; data may not fully incorporate depreciation and interest expense.

Source: Moody's Investors Service

Debt service coverage diminishes with decreasing revenue



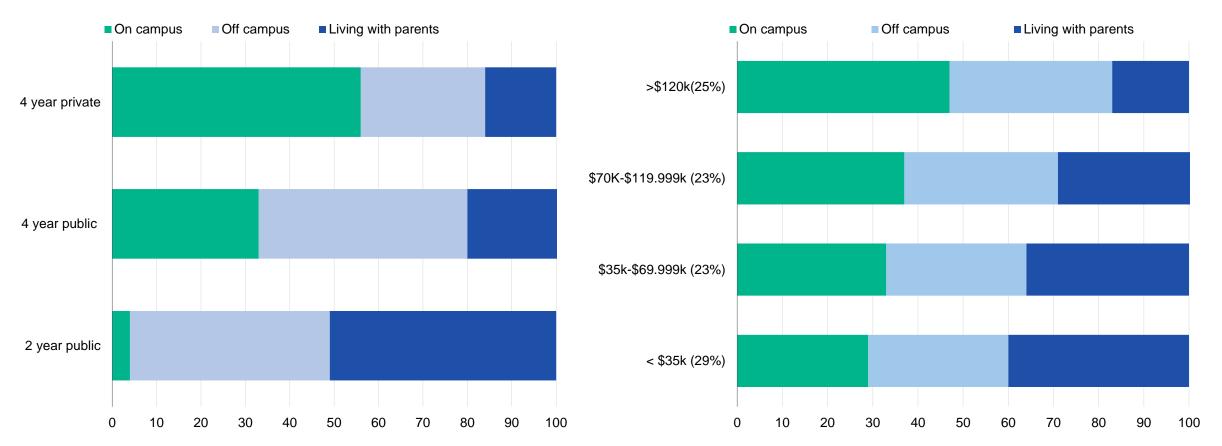
Projected debt service coverage under multiple revenue decline scenarios.

Source: Moody's Investors Service

Housing mix depends on type of institution and income

Private colleges have more on campus students

Higher family income correlated with on campus



Source: College Board, Trends in College Pricing 2019

Risk to revenue bonds depends on multiple factors



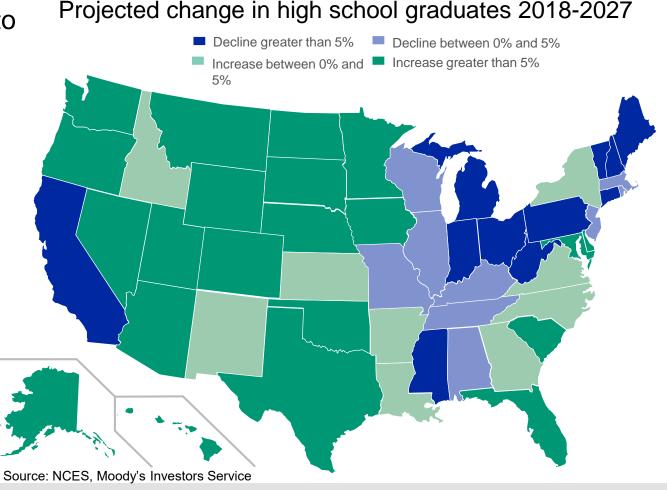
Beyond 2022

Scale will become increasingly important in rapidly changing world

- » Demographics
- » Technological changes & consumer preferences
- » Regulatory environment
- » Changing infrastructure needs
- » State & federal commitments
- » Pensions

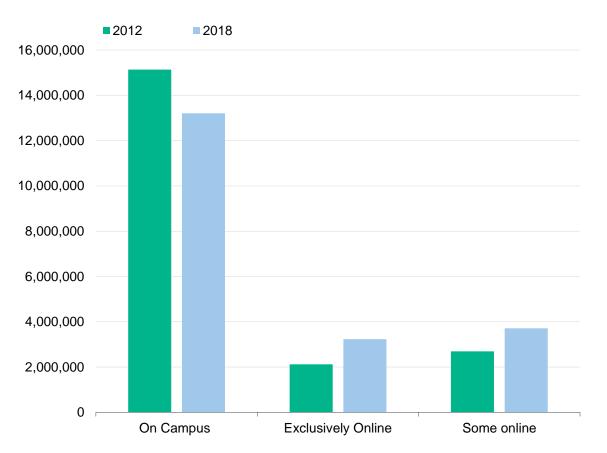
Prolonged period of flat enrollment over next decade

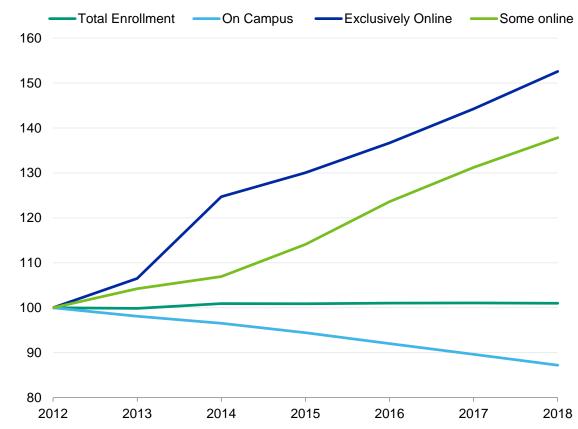
- Total college enrollment currently projected to rise just 2.4% between 2018-2028 (NCES)
- » Demand will be influenced by a number of factors:
 - Numbers of high school graduates
 - Participation rates
 - Economy
 - Employer demand for further education
 - Return on education investment
 - Federal and state support



Technology gradually transforming higher education

Online enrollment small but rapidly growing share

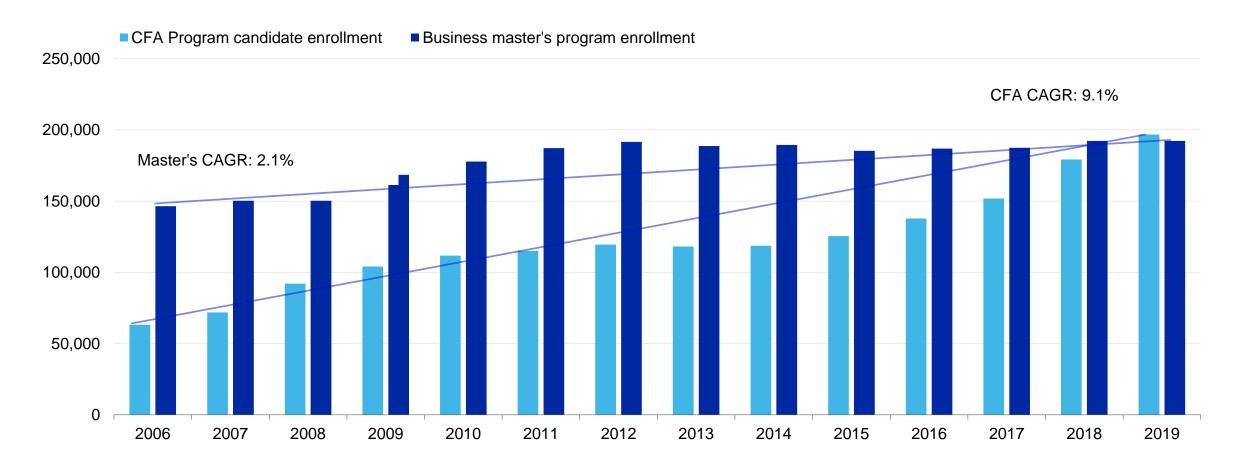




Source: IPEDS Data Center - National Center for Education Statistics

Alternative credentials on the rise

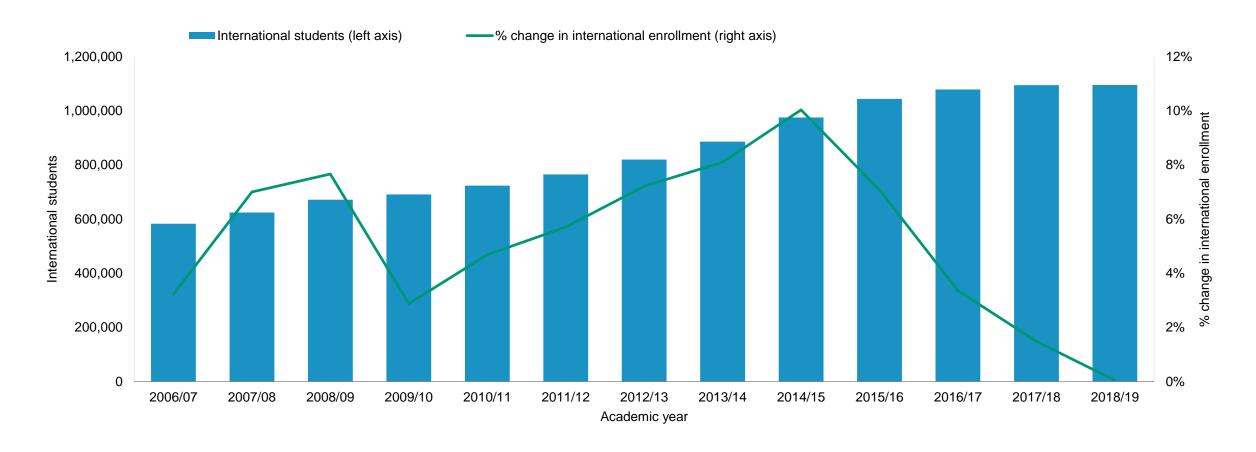
Employer acceptance will drive demand



Source: CFA Institute, National Center for Education Statistics

International enrollment already under pressure

Questions abound around long term competitiveness

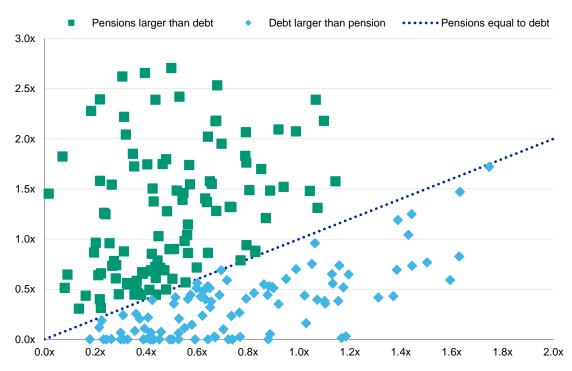


Source: Institute for International Education

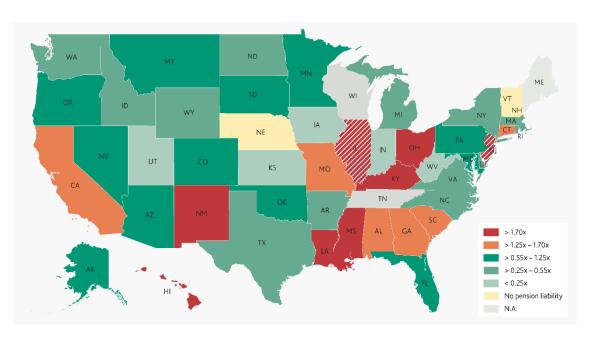
Pension burdens will add budget strain for some publics

Universities with the highest pension liabilities tend to be more vulnerable to economic and fiscal disruptions

Over half of rated universities have pensions that exceed direct debt



Pension liability exposure varies widely across US public universities

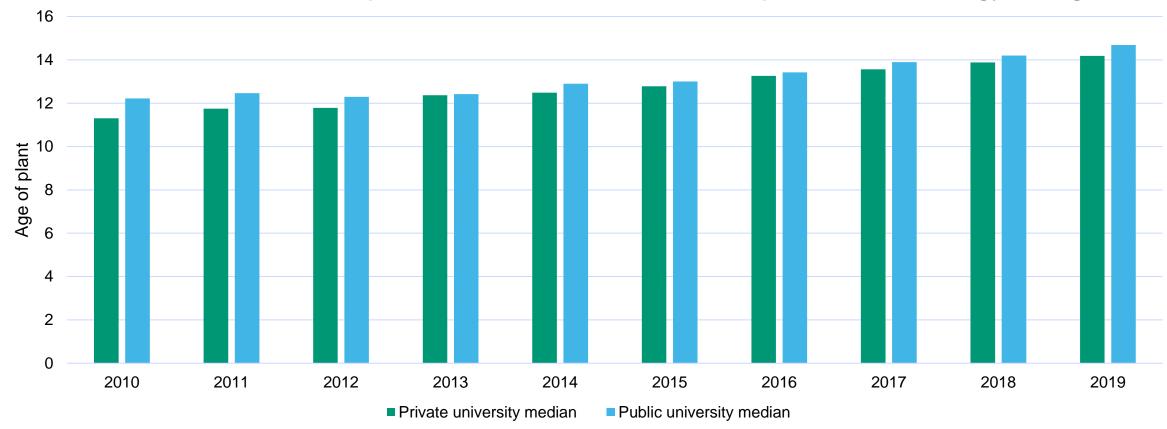


Source: Moody's Investors Service

Source: Moody's Investors Service

Campus of the future: How will business model changes impact capex?

Deferred maintenance and competitive facilities investments compete with technology changes

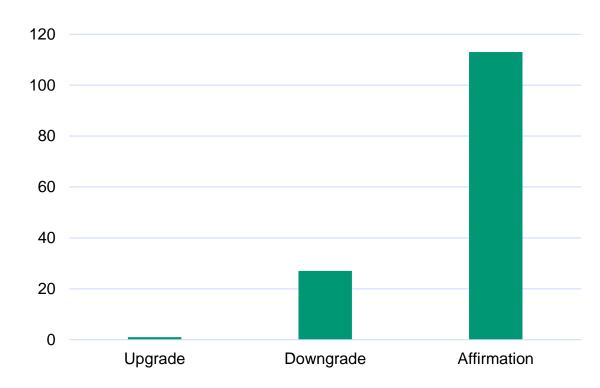


Source: Moody's Investors Service

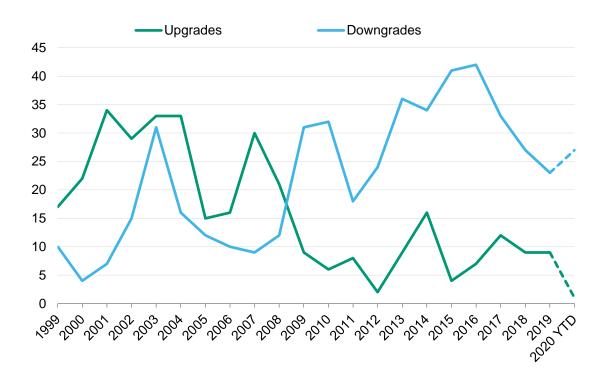
Rating actions reflect prior conditions & Covid

18 of the 26 downgrades previously carried negative outlooks

YTD downgrades have increased



Downgrades have outpace upgrades since 2008



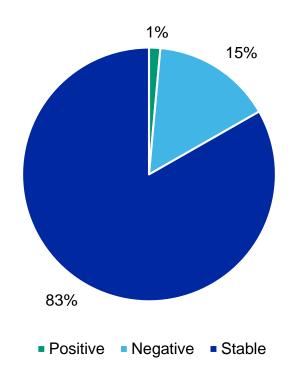
Moody's Investors Service, as of October 13, 2020

Source: Moody's Investors Service; 2020 YTD is as of October 13,2020

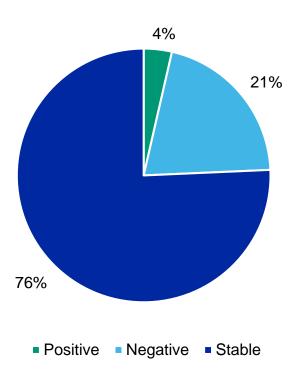
Individual outlooks incorporate mitigants

9 public and 19 private outlooks YTD revised to negative

Public Universities



Private Colleges



Source: Moody's Investors Service, as of October 13, 2020

Recent research

- » <u>Higher Education US: Lower enrollment due to coronavirus impact will lead to weaker tuition revenue</u>, 28 October 2020
- » Public Finance US Coronavirus crisis to spur changes in workplace and consumer behavior, 16 September 2020
- » <u>Higher Education US: Mounting uncertainty over in-person attendance threatens auxiliary revenue</u>, 31 August 2020
- » Cross Sector US: Coronavirus will slow pace of demand-risk PPPs for universities, 27 August 2020
- » <u>Higher Education US: Coronavirus will accelerate business model transformation with varied credit effects</u>, 26 August 2020
- » <u>Higher Education US: Rising pension burdens will add to credit strains for many public universities</u>, 18 August 2020
- » Higher Education US: College sports postponements dampen revenue prospects, though interruption in debt payments is unlikely, 12 August 2020
- » <u>Suspension of work visas will further stifle international demand for US universities</u>. 1 July 2020



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