




SPECIAL REPORT

UPDATED

Study of U.S. Colleges and Universities

September 2025



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Introduction

We are pleased to present our updated Study of U.S. Colleges and Universities. The use cases of this study are numerous, and we trust you'll find your own key takeaways. At Northmarq, we intend to use this report as a reference point for working in collaboration with colleges and universities to maximize the value of their investment and operating portfolios.

Our advisory and investment businesses overlap with higher education in three key areas. First, as commercial real estate investors and advisors, we conduct market research focusing on population and job growth trends. College and universities are often among the largest employers in their geographic area. To determine an area's growth potential and risk factors, we want to understand the financial health of the local institutions.

Second, our investment strategies serve a variety of endowment investors. Studying the opportunities and challenges of higher education helps us best understand the investment needs and objectives of these institutions.

Third, in a time of financial challenges for most of the industry of higher education, we find that the owned real estate campus portfolios of 2- and 4-year institutions exceed \$1.3 trillion (excluding the value of campuses of less-than-2-year schools). For schools with less than 25% debt against the value of their property, plant and equipment, Northmarq Advisory Services may be able to offer creative real estate portfolio maximization and/or monetization strategies to free up capital, reduce operating costs, and create financial flexibility. Institutions with greater than 50% existing leverage may have more risk in their campus portfolio due to fewer financing options. In those cases, we can help develop and execute a plan to monetize the real estate assets via third-party leasing, building sales, sale-leasebacks, or other creative joint-use partnerships.

Please feel free to reach out and to explore how best to work together.

Contributors: Rance Gregory, Cody Jones and Jackson Coder

ABOUT US:

Northmarq Fund Management is a division of Northmarq, one of the largest privately held commercial real estate firms in the nation. Northmarq provides debt origination, loan servicing, investment sales and investment management services nationwide and spanning all product categories.

IMPORTANT NOTE:

Although some universities report their most recent financial statements or enrollment trends to their websites, many others only report into the NCES IPEDS database. These reports are often filed on a significant lag. Reform is needed to ensure that all schools report timely and that more current data is available via IPEDS. Full comparable data for all schools is only available through the 2022-2023 academic year. For purposes of internal consistency, we have used the most recent IPEDS data.

Overview

The first edition of this report was issued in 2020, as the pandemic was closing down in-person higher education. At the time, the industry was bracing for the headwinds of increasing fixed costs and demographic changes pointing to declining enrollment in the future. We initially embarked upon this project to determine what impact transformative forecasted trends of declining enrollment and forecasted decreases in revenue may have on local employment and to anticipate the positive or negative spillover to commercial real estate fundamentals.

We can now use this information to drill-down into specific employment markets to assist in underwriting real estate investments. In the process of this journey, we stumbled upon some ancillary observations regarding the status of higher education and have incorporated them into this report. We find that the intersection of college and university campus properties and investment portfolios and our skillsets as commercial real estate investors and advisors have interesting potential for collaborative benefit.

Higher education is facing numerous headwinds and cause for real concern, given declining enrollment, demographic shifts, potentially reduced government funding, and thin-to-negative operating margins. As we were updating this study, we noted the burn-off of Covid-era stimulus packages that held afloat many schools during that rough patch. Today, additional federal funding is at risk for schools not complying with the policies of the new Trump Administration which could accelerate and exacerbate many of these economic challenges. Following our observations and general conclusions, we will propose a few real estate-centric ideas that may help institutions raise cash, deleverage balance sheets and preserve scarce resources for future growth and innovation.

Real Estate Strategies

The ground is shifting so much under the higher education industry that in the coming years we believe campus land and buildings will play an even larger role in operational strategies and financial health. In this new financial environment for higher education, colleges and universities may need to rethink their existing uses of facilities and find ways to maximize the financial returns of campus real estate assets. Some schools may find they have excess land or buildings and may need to consider alternative uses or monetization.

In certain cases, corporate partnerships may become viable strategies. Additional leases to complementary uses including biotech, R&D facilities, venture-funded tenants or young companies incubated by faculty or students could create income from real estate holdings. Schools could consider adding classes for on-campus business and non-profit tenants as a supplement to traditionally enrolled students. Additional on-campus ventures could collaborate and cross-train with faculty in shared areas of expertise. Even some state, local or federal governmental agencies might be suitable co-habitants. Adding business, non-profit and governmental uses could create more hands-on career training and internship opportunities for enrolled students. Partnerships with business and outside entities may initially make some faculty and administrators uneasy, but all parties have an interest in building future leaders steeped in academic and practical experience relevant to their field of study. In an environment of surplus space, a diverse ecosystem of complementary occupancies could be a boon to colleges and universities in terms of stabilizing and diversifying revenue streams, righting balance sheets, and developing an even more energetic learning environment.

The sheer scale of land, buildings, and other forms of PPE is staggering. Excluding less-than-2-year institutions, for which comprehensive data is not available, the 2-year and 4-year schools had total 2023 property, plant and equipment¹ of over \$1.3 trillion, securing direct debt of \$375 billion. The good news here is 27.4% leverage on average leaves room for borrowing, which may provide some financial flexibility and options for raising capital. Only

¹Total PPE includes land, buildings, infrastructure, equipment, art, libraries and construction in progress.

25% of schools show debt levels above 25%. Those few schools significantly above 50% debt entering this down-trending period will be constrained in their ability to fund deficits going forward. For most schools, their land and buildings represent their largest financial assets, and it would be wise to work with objective real estate professionals such as those at Northmarq who can creatively evaluate and provide recommendations for maximizing operational efficiency and financial flexibility.

| Sector | Total PPE (dollars) | Total Debt (dollars) | Debt as % of PPE | % of Schools Below 25% Debt/PPE | % of Schools Between 25% and 50% Debt/ PPE | % of Schools Above 50% Debt/ PPE |
|--------------------|--------------------------|-------------------------|---------------------|---------------------------------------|--|--|
| Public 4 Yr | 740,967,575,411 | 199,986,850,377 | 27.0% | 70.6% | 21.9% | 7.5% |
| Public 2 Yr | 115,830,335,040 | 24,178,821,514 | 20.9% | 82.4% | 11.8% | 5.8% |
| Non-Profit 4 Yr | 505,025,330,753 | 148,642,597,552 | 29.4% | 68.1% | 27.0% | 4.9% |
| Non-Profit 2 Yr | 660,127,882 | 67,184,977 | 10.2% | 90.6% | 4.7% | 4.7% |
| For-Profit 4 Yr | 5,903,932,227 | 2,005,035,826 | 34.0% | 85.5% | 6.8% | 7.7% |
| For-Profit 2 Yr | 1,262,715,582 | 121,928,149 | 9.7% | 94.1% | 3.0% | 3.0% |
| Total Public | 856,797,910,451 | 224,165,671,891 | 26.2% | 76.3% | 17.1% | 6.7% |
| Total Non-Profit | 505,685,458,635 | 148,709,782,529 | 29.4% | 69.0% | 26.1% | 4.9% |
| Total For-Profit | 7,166,647,809 | 2,126,963,975 | 29.7% | 90.2% | 4.7% | 5.1% |
| Grand Total | 1,369,650,016,895 | 375,002,418,395 | 27.4% | 75.0% | 19.3% | 5.7% |

Please give us a call if you'd like to explore options for studying campus real estate optimization, freeing up liquidity, and/or redeploying capital into more diverse strategies.

State and Local Employment Impact

First, let's establish some surprising context as to what constitutes a significant employer for measuring state/local economic statistics and growth projections. This context will highlight the reasons the health of U.S. colleges and universities is relevant to investors in commercial real estate.

The largest employers in each U.S. state tend to be state, local and federal governmental entities, which directly and collectively employ 21.11 million workers, or approximately 13.9% of the pre-Covid workforce (13.2% of post-Covid totals).

| Direct Employment | Total Employment | Pre-Covid % of Total U.S. Employment | Post-Covid % of Total U.S. Employment |
|--------------------------|---------------------|--|---|
| Federal Government | 2,924,388 | 1.9% | 1.8% |
| State Government | 3,554,265 | 2.3% | 2.2% |
| Local Government | 14,633,074 | 9.7% | 9.2% |
| Government Totals | 21,111,727 | 13.9% | 13.2% |

Setting aside those massive combined government employment numbers for a moment, we will review private-sector employment for a more normalized frame of reference. Consider that Walmart is the largest private employer in the U.S., with a headcount of 1.6 million. Amazon follows closely in second place with 1.1 million U.S. employees. Combined, Amazon and Walmart represent 1.7% of U.S. employment, and colleges and universities combine to represent 2.4% of national employment. Through that lens, U.S. college and university employment of nearly 4 million is obviously a very significant number.

Putting it all together, in just these few paragraphs, we have already summarized 21% of current U.S. employment, as shown below:

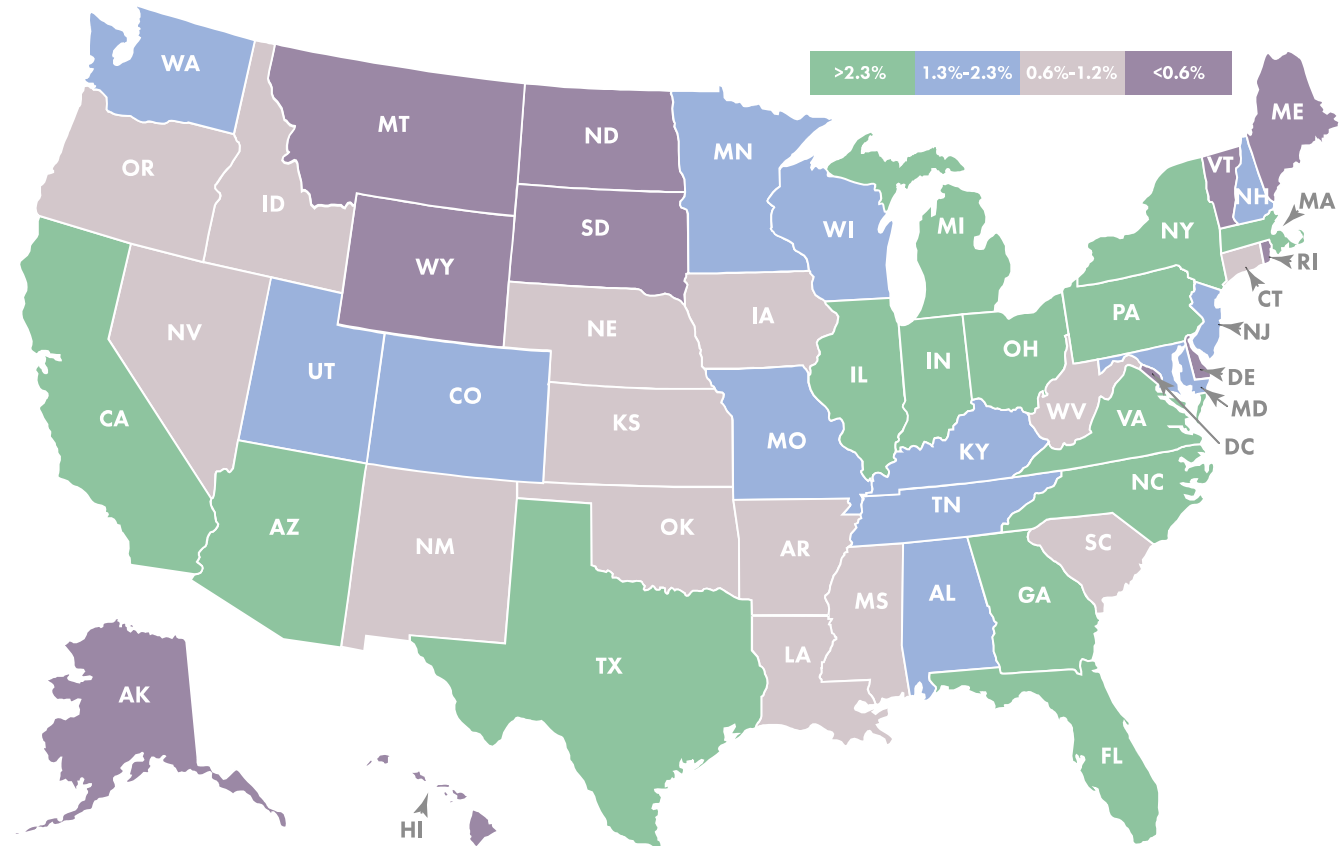
| Direct Employment | Total Employment | Pre-Covid % of Total U.S. Employment | Post-Covid % of Total U.S. Employment |
|--------------------------------------|------------------|--------------------------------------|---------------------------------------|
| Federal Government | 2,924,388 | 1.9% | 1.8% |
| State Government | 3,554,265 | 2.3% | 2.2% |
| Local Government | 14,633,074 | 9.7% | 9.2% |
| Government Totals | 21,111,727 | 13.9% | 13.2% |
| All Hospitals | 5,759,200 | 3.8% | 3.6% |
| Colleges and Universities | 3,878,973 | 2.6% | 2.4% |
| Hospitals & Post-Secondary Education | 9,638,173 | 6.4% | 6.0% |
| Walmart | 1,600,000 | 1.1% | 1.0% |
| Amazon | 1,100,000 | 0.7% | 0.7% |
| Large Private Employers | 2,700,000 | 1.8% | 1.7% |
| Totals | 33,449,900 | 22.1% | 21.0% |

Governmental entities, hospitals, secondary education, Walmart and Amazon combine to support at least 21% of total U.S. jobs.

As you can see, colleges and universities are important employers in terms of direct jobs, before factoring other qualitative and quantitative economic and societal benefits. To get a sense of the indirect jobs multiplier, after reviewing dozens of economic impact studies and removing the outliers, we use a midpoint value of 1.6x to establish additional indirect college and university-related jobs of 2.33 million, and thereby derived total direct and indirect employment of 6.21 million, or 4.1% of the pre-Covid employment base (3.9% post-Covid). In many real estate markets featuring a large presence from one or more colleges or universities, local economic strength and potential for future job growth depends to a significant extent on the health of these post-secondary institutions.

% Share (by State) of Total National Enrollment

California has by far the largest student population, with 13.9% of the national total. As would be expected based on overall population, Texas, New York, Florida and Illinois also account for large portions of total enrollment. Those five states combine to represent 37.6% of national totals. By contrast, the states labeled purple (less than 0.6% of national enrollment) combine to equal only 3.1% of total national enrollment. This means that these bottom states have the disadvantage of fewer job multiplier effects coming from higher education, but they are also less reliant on enrollment for their overall state employment picture.



Percentage of Total National Enrollment

| State | % of Enrollment |
|-------|-----------------|
| CA | 13.9% |
| TX | 8.4% |
| NY | 5.7% |
| FL | 5.7% |
| IL | 3.9% |
| AZ | 3.7% |
| OH | 3.3% |
| PA | 3.2% |
| VA | 2.8% |
| NC | 2.8% |
| GA | 2.8% |
| IN | 2.4% |
| MI | 2.4% |

| State | % of Enrollment |
|-------|-----------------|
| MA | 2.4% |
| UT | 2.3% |
| NJ | 2.1% |
| MN | 2.0% |
| CO | 2.0% |
| MD | 1.8% |
| WA | 1.7% |
| MO | 1.7% |
| TN | 1.6% |
| WI | 1.6% |
| AL | 1.5% |
| KY | 1.3% |
| NH | 1.3% |

| State | % of Enrollment |
|-------|-----------------|
| LA | 1.2% |
| SC | 1.2% |
| OR | 1.1% |
| OK | 1.0% |
| IA | 1.0% |
| CT | 1.0% |
| KS | 1.0% |
| WV | 0.8% |
| MS | 0.8% |
| AR | 0.8% |
| ID | 0.7% |
| NE | 0.7% |
| NV | 0.6% |

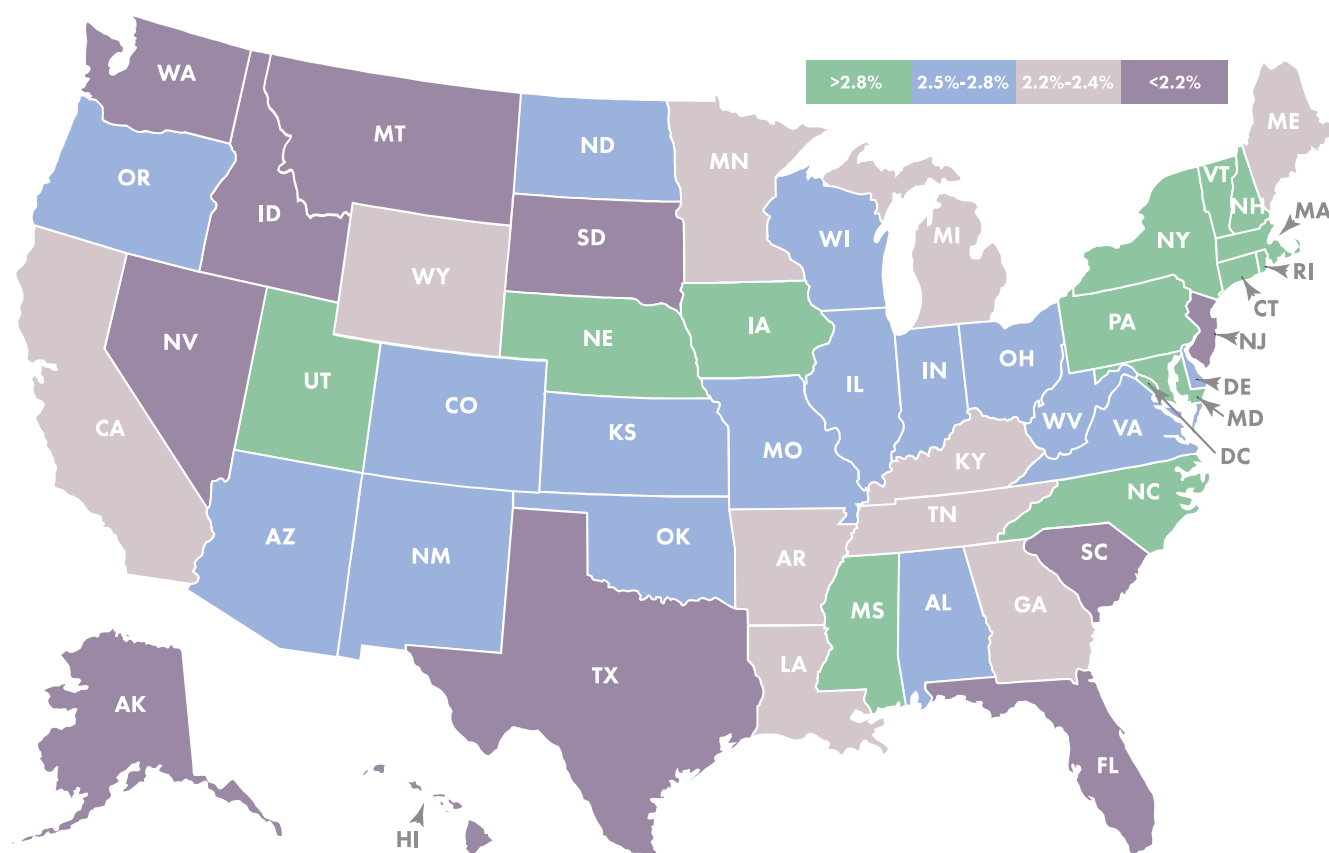
| State | % of Enrollment |
|-------|-----------------|
| NM | 0.6% |
| DC | 0.5% |
| ME | 0.4% |
| RI | 0.4% |
| HI | 0.3% |
| DE | 0.3% |
| SD | 0.3% |
| ND | 0.3% |
| MT | 0.2% |
| VT | 0.2% |
| AK | 0.2% |
| WY | 0.1% |

Since 2020

- Biggest increase: California (CA) up 0.9% (from 13% to 13.9%)
- Biggest decrease: New York (NY) down 0.9% (from 6.6% to 5.7%)

Higher Education's Percentage Share of Total Jobs in Each State

This map summarizes the concentration of higher education jobs within each state. For the purpose of looking at downside effects of enrollment declines on statewide jobs, we assumed that higher concentrations of college/university jobs were in the green category of over 2.8% of total employment, and less than 2.2% of a state's total indicates relatively less reliance on higher education.



Higher Education Percentage of Each State's Employment Totals

| State | % of Jobs | State | % of Jobs | State | % of Jobs | State | % of Jobs |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| NH | 4.3% | PA | 2.9% | WI | 2.5% | MN | 2.2% |
| MA | 4.3% | MO | 2.8% | CO | 2.5% | WA | 2.1% |
| RI | 4.1% | WV | 2.8% | DE | 2.5% | MT | 2.1% |
| DC | 3.9% | KS | 2.8% | OK | 2.5% | SC | 2.1% |
| CT | 3.7% | NM | 2.8% | CA | 2.4% | ID | 2.0% |
| VT | 3.6% | AL | 2.7% | MI | 2.4% | TX | 2.0% |
| MD | 3.4% | IN | 2.7% | KY | 2.4% | NJ | 2.0% |
| MS | 3.3% | IL | 2.7% | AR | 2.3% | SD | 2.0% |
| UT | 3.3% | AZ | 2.6% | GA | 2.3% | AK | 1.9% |
| NY | 3.1% | VA | 2.6% | ME | 2.3% | FL | 1.7% |
| IA | 3.0% | OR | 2.6% | WY | 2.3% | HI | 1.7% |
| NE | 3.0% | ND | 2.5% | TN | 2.2% | NV | 1.3% |
| NC | 2.9% | OH | 2.5% | LA | 2.2% | | |

Since 2020

- Biggest % increase: Mississippi (MS) Up 1.9% (from 1.4% to 3.3%)
- Biggest % decrease: Vermont (VT) Down 0.9% (from 4.5% to 3.6%)

School Categories and Enrollment Trends

The following chart (Table 1) summarizes and sorts U.S. colleges and universities into three primary buckets (Public, Non-Profit and For-Profit) and further subdivides into 4-year schools, 2-year schools, and less-than-2-year schools. This results in a total of nine subcategories to go along with the three consolidated totals for Public, Non-Profit and For-Profit.

Table 1: Employment, Enrollment and Campus Locations by Institutional Sector

| Sector | Total Employment | 12-month Full-Time Equivalent Undergraduate Enrollment | 12-month Full-Time Equivalent Graduate Enrollment | 12-month Full-Time Equivalent Total Enrollment | Total Active Campuses | 2023 Campus Closures |
|-----------------------------------|------------------|--|---|--|-----------------------|----------------------|
| Public 4 yr | 2,134,839 | 6,431,110 | 1,092,499 | 7,523,609 | 868 | 0 |
| Non-profit 4 yr | 1,250,358 | 2,564,892 | 950,501 | 3,515,393 | 1642 | 14 |
| For-profit 4 yr | 79,857 | 572,629 | 175,125 | 747,754 | 354 | 24 |
| Subtotal for 4 yr schools | 3,465,054 | 9,568,631 | 2,218,125 | 11,786,756 | 2,864 | 38 |
| Public 2 yr | 464,231 | 2,757,538 | - | 2,757,538 | 899 | 0 |
| Non-profit 2 yr | 7,293 | 47,458 | - | 47,458 | 134 | 2 |
| For-profit 2 yr | 26,462 | 255,235 | - | 255,235 | 530 | 11 |
| Subtotal for 2 yr schools | 497,986 | 3,060,231 | - | 3,060,231 | 1,563 | 13 |
| Public less than 2 yr | 13,708 | 48,293 | - | 48,293 | 232 | 0 |
| Non-profit less than 2 yr | 1,312 | 7,348 | - | 7,348 | 58 | 1 |
| For-profit less than 2 yr | 26,456 | 242,353 | - | 242,353 | 1415 | 25 |
| Subtotal < 2 yr schools | 41,476 | 297,994 | - | 297,994 | 1,705 | 26 |
| Total Public Schools | 2,612,778 | 9,236,941 | 1,092,499 | 10,329,440 | 1,999 | - |
| Total Non-Profit Schools | 1,258,963 | 2,619,698 | 950,501 | 3,570,199 | 1,834 | 17 |
| Total For-Profit Schools | 132,775 | 1,070,217 | 175,125 | 1,245,342 | 2,299 | 60 |
| TOTAL - ALL SCHOOLS | 4,004,516 | 12,926,856 | 2,218,125 | 15,144,981 | 6,132 | 77 |
| % Change Since 2020 | 11.3% | -9.3% | 6.0% | -7.4% | -3.1% | -80.8% |

Total enrollment across all schools exceeded 15.1 million in 2023. In the column entitled Campus Closures, it's notable that For-Profit schools experienced more closures due to "gainful employment," although this sector has recovered significantly since new regulations were put into place. The Biden administration implemented new rules in 2023 which focus on financial value transparency and accountability for all post-secondary programs, not just those at for-profit institutions. Key changes include a debt-to-earnings test and new high school earnings test, alongside increased reporting requirements for all programs receiving financial aid.

Public and Non-Profit schools experienced modest enrollment declines in recent years. Meanwhile, published tuition has continued to increase and competition among schools for quality and quantity of students has become fierce.

Table 2: Enrollment and Revenue Growth

| Sector | Fall Undergrad Enrollment CAGR (2018-2023) | Net Tuition Revenue CAGR (2018-2023) |
|-----------------------------------|--|--------------------------------------|
| Public 4 yr | -0.3% | 1.6% |
| Non-profit 4 yr | -0.4% | 1.8% |
| For-profit 4 yr | 1.0% | 1.5% |
| Subtotal for 4 yr schools | -0.2% | 1.7% |
| Public 2 yr | -5.7% | -4.9% |
| Non-profit 2 yr | -2.0% | -1.1% |
| For-profit 2 yr | 1.1% | 3.0% |
| Subtotal for 2 yr schools | -5.1% | -2.7% |
| Public less than 2 yr | 1.9% | 3.2% |
| Non-profit less than 2 yr | -5.2% | -3.0% |
| For-profit less than 2 yr | 0.5% | 1.7% |
| Subtotal < 2 yr schools | 0.6% | 1.7% |
| Total Public Schools | -2.1% | 0.9% |
| Total Non-Profit Schools | -0.4% | 1.8% |
| Total For-Profit Schools | 0.9% | 1.8% |
| TOTAL - ALL SCHOOLS | -1.5% | 1.4% |

Table 3 shows degree of student dependence on external funding (loans/grants) as well as the increasing prevalence of school grants. Other than for elite schools with large endowments, a higher percentage of school grants can in some cases be an indication of intense competition with similar institutions and an inability to convert rack rates to equivalent net tuition revenue.

Table 3: Financial Aid

| Sector | Students Receiving Some Form of Financial Aid | Students with Loans | Students with Pell Grants | Students with School Grants |
|-----------------------------------|---|---------------------|---------------------------|-----------------------------|
| Public 4 yr | 85.3% | 36.7% | 35.4% | 59.5% |
| Non-profit 4 yr | 89.8% | 51.6% | 29.6% | 84.1% |
| For-profit 4 yr | 89.2% | 68.5% | 62.4% | 39.5% |
| Subtotal for 4 yr schools | 86.6% | 41.8% | 34.6% | 65.8% |
| Public 2 yr | 81.2% | 13.7% | 49.6% | 21.1% |
| Non-profit 2 yr | 84.0% | 64.2% | 71.1% | 21.0% |
| For-profit 2 yr | 86.0% | 72.2% | 67.9% | 18.3% |
| Subtotal for 2 yr schools | 82.1% | 25.2% | 53.5% | 20.6% |
| Public less than 2 yr | 68.7% | 13.1% | 40.2% | 15.1% |
| Non-profit less than 2 yr | 82.2% | 35.7% | 56.7% | 13.5% |
| For-profit less than 2 yr | 80.9% | 67.5% | 66.4% | 10.3% |
| Subtotal < 2 yr schools | 79.5% | 59.8% | 62.9% | 11.0% |
| Total Public Schools | 84.0% | 30.3% | 39.3% | 48.7% |
| Total Non-Profit Schools | 89.5% | 51.9% | 31.4% | 81.2% |
| Total For-Profit Schools | 84.2% | 69.4% | 66.2% | 18.3% |
| TOTAL - ALL SCHOOLS | 85.2% | 39.1% | 40.7% | 52.0% |

Taking into consideration deteriorating market conditions for post-secondary education, too much dependence on any one source of revenue may prove risky. Tuition revenue is the greatest concern for Non-Profit and For-Profit schools given that it constitutes the largest share of their revenue. By contrast, for most public-sector institutions, government funding is the most significant contributor to revenues. The fiscal situation of the federal government and most cities and states is now such that reliance on government revenues may be less predictable than it has been in recent decades.

Table 4: Breakdown of Institutional Funding Sources

| Sector | Tuition | Federal Gov't | "State Gov't" | Local Gov't | Private Grants | Auxiliary | Hospital | Inv. Income | Other |
|-----------------------------------|--------------|---------------|---------------|--------------|----------------|-------------|--------------|-------------|--------------|
| Public 4 yr | 16.8% | 13.1% | 20.1% | 4.9% | 2.6% | 7.1% | 17.3% | 4.0% | 14.1% |
| Non-profit 4 yr | 30.1% | 10.0% | 0.8% | 0.2% | 12.9% | 10.9% | 15.7% | 7.4% | 11.9% |
| For-profit 4 yr | 93.1% | 1.2% | 0.1% | 0.0% | 0.1% | 1.0% | 0.0% | 0.5% | 4.1% |
| Subtotal for 4 yr schools | 23.0% | 11.7% | 12.5% | 3.1% | 6.5% | 8.5% | 16.7% | 5.2% | 12.8% |
| Public 2 yr | 11.5% | 18.6% | 34.8% | 22.0% | 0.6% | 1.6% | 0.0% | 1.3% | 9.5% |
| Non-profit 2 yr | 69.2% | 4.1% | 0.7% | 0.2% | 7.0% | 2.3% | 0.0% | 10.3% | 6.2% |
| For-profit 2 yr | 91.2% | 3.8% | 0.1% | 0.0% | 0.0% | 0.2% | 0.0% | 0.4% | 4.3% |
| Subtotal for 2 yr schools | 16.7% | 17.6% | 32.4% | 20.5% | 0.7% | 1.5% | 0.0% | 1.4% | 9.2% |
| Public less than 2 yr | 14.9% | 12.5% | 38.1% | 21.5% | 1.5% | 0.0% | 0.0% | 0.9% | 10.6% |
| Non-profit less than 2 yr | 61.7% | 18.4% | 3.8% | 0.6% | 8.8% | 0.0% | 0.0% | -0.7% | 7.4% |
| For-profit less than 2 yr | 89.8% | 1.6% | 0.1% | 0.2% | 0.0% | 0.0% | 0.0% | 0.2% | 8.1% |
| Subtotal < 2 yr schools | 68.8% | 5.0% | 10.5% | 6.0% | 0.6% | 0.0% | 0.0% | 0.4% | 8.8% |
| Total Public Schools | 16.1% | 13.8% | 21.9% | 7.0% | 2.4% | 6.5% | 15.2% | 3.6% | 13.5% |
| Total Non-Profit Schools | 30.3% | 10.0% | 0.8% | 0.2% | 12.9% | 10.9% | 15.6% | 7.4% | 11.9% |
| Total For-Profit Schools | 92.2% | 1.7% | 0.1% | 0.0% | 0.1% | 0.7% | 0.0% | 0.4% | 4.8% |
| TOTAL - ALL SCHOOLS | 22.8% | 12.2% | 14.1% | 4.5% | 6.0% | 7.8% | 15.3% | 4.9% | 12.4% |

Is Demography Destiny?

In this case, the trend is not the friend of higher education. Due to declining birth rates and excess deaths during the pandemic, the U.S. population nearly shrank in 2020. Since then, growth hasn't been much better. Without significant net immigration, most forecasts indicate the U.S. population could stall and decline beginning in 2033. There will be winners among the losers, but most colleges and universities need to plan for a future of reduced enrollment.

Demographics

A more complete demographic forecast analysis would incorporate mortality rates, migration, and detailed factors such as geography, gender, race, and parental income. For purposes of this analysis which focuses more on employment and demand impacts on commercial real estate, we conducted a more simplistic review of the gross potential market based on birth rates and the number of newly turned 18-year-olds by forecast year. Since the last peak of 4.3 million newborns in 2007, the birth rate has generally trended down, averaging just above 3.6 million since 2020. This 16% decrease is somewhat predictive of similar decreases in future enrollment (absent offsetting immigration of future college-age youths).

In Figure 2, we took the births since 2002 and rolled them forward to forecast (absent the important effects of mortality and migration) the gross potential market for newly minted 18-year-olds between now and 2040. As shown, the number of children turning 18 is set to increase until 2025, and then will begin to decline, consistent with the historic trendline in births.

Moderate future economic downturns could prompt more people to return to school or attend for the first time in an effort to improve their job prospects. On the other hand, recessions can strain family finances and worsen the ratio of cost of attendance to potential earnings post-graduation.

Figure 1: U.S. Births by Year

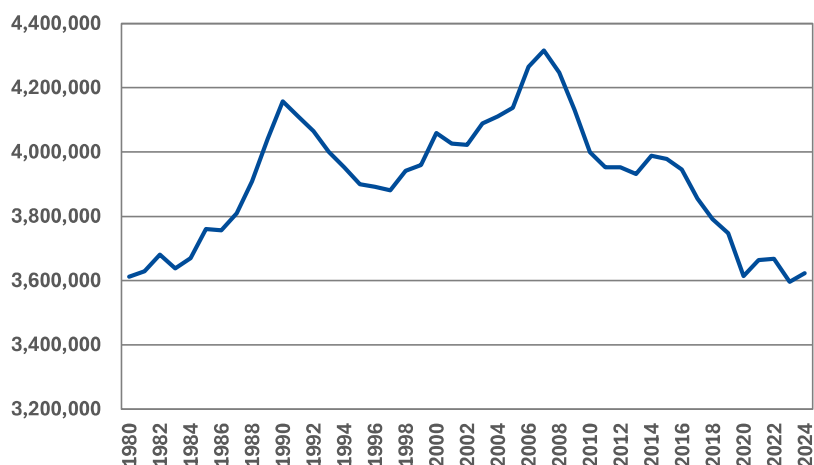
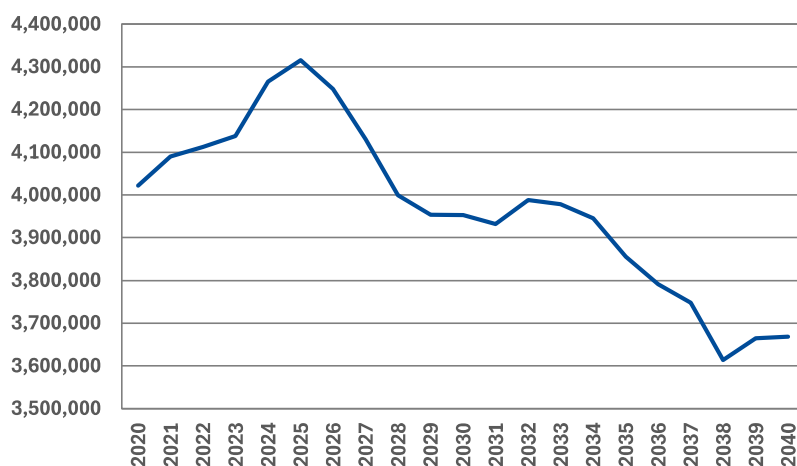
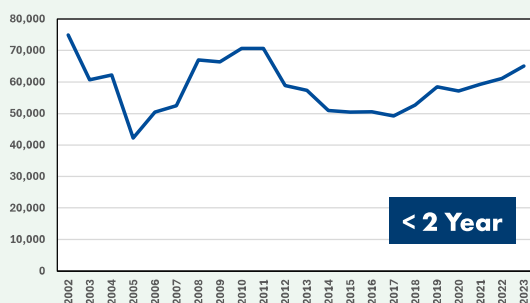
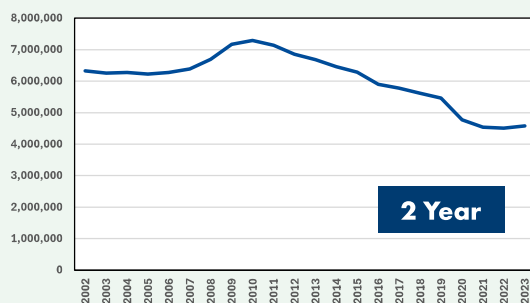
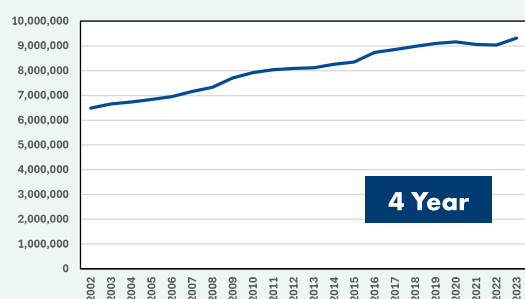


Figure 2: Population Turning 18
(Gross Potential excluding Immigration and Mortality)

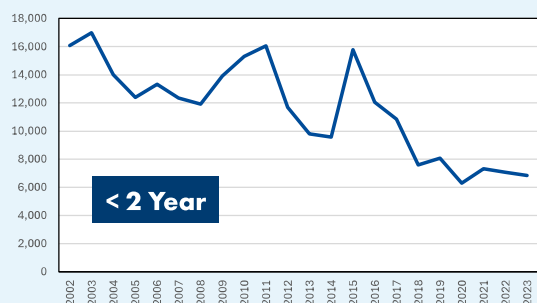
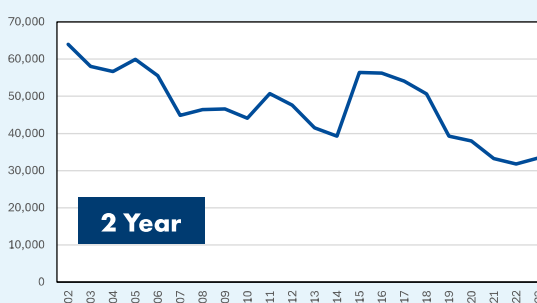
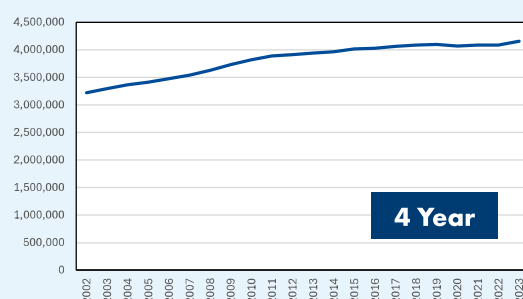


Trends by Sector

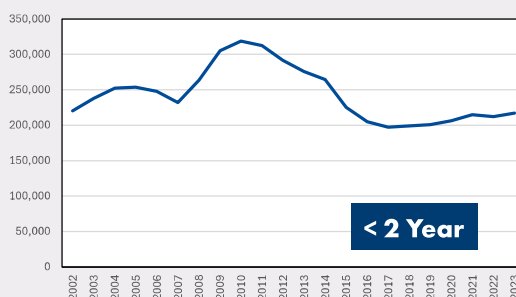
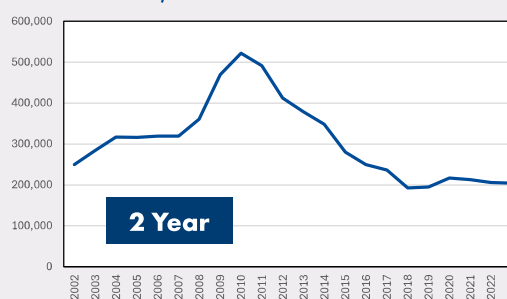
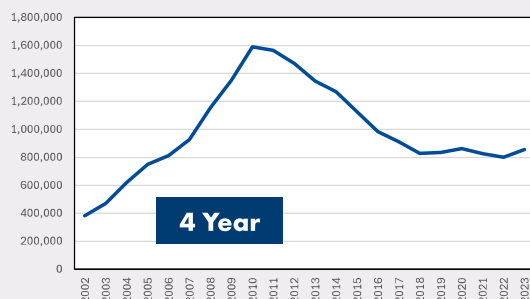
PUBLIC (Total Fall Enrollment)



NON-PROFIT (Total Fall Enrollment)



FOR-PROFIT (Total Fall Enrollment)



Revenue-to-Expense Ratios

As real estate managers, without the burden of excess knowledge of university financial operations, we wanted to gut-check the simplest version of operating performance before we launched into a more complex analysis of a variety of factors for measuring school financial health: Revenue divided by Expense.

There are two ways to look at the revenue-to-expense ratio for colleges and universities: based on their core educational operations only, or also including other divisions such as hospitals and other auxiliary enterprises (sports, cafeterias, sales of other services). We observe that 29.9% of institutions have core expenses greater than their core operating revenues, and 70.1% had most recent expenses exceeding their total revenues from all sources.

The financial headwinds described herein existed before the Covid-related spring semester closures and before forecasting future decreases in enrollment. The larger more elite institutions are more able to weather a storm and run operating deficits due to their perennial fundraising capabilities and contributions from large endowment pools. Smaller institutions lacking a deep donor base and those experiencing more pronounced decreases in government sources of funding will be unable to manage significant operating deficits without severe cuts to staffing and programs.

Key Ratios

| Total Revenue to Expense Ratio | | |
|--------------------------------|---------------|------------|
| Public Schools Total | | % of Total |
| | Rev/Exp >=1.0 | 79.8% |
| | Rev/Exp <1.0 | 20.2% |
| | Subtotal | 100.0% |
| Non-Profit Schools Total | | % of Total |
| | Rev/Exp >=1.0 | 57.3% |
| | Rev/Exp <1.0 | 42.7% |
| | Subtotal | 100.0% |
| For-Profit Schools Total | | % of Total |
| | Rev/Exp >=1.0 | 74.1% |
| | Rev/Exp <1.0 | 25.9% |
| | Subtotal | 100.0% |
| Overall Totals | | % of Total |
| | Rev/Exp >=1.0 | 70.9% |
| | Rev/Exp <1.0 | 29.1% |
| | | 100.0% |

| Core Revenue to Core Expense Ratio | | |
|------------------------------------|---------------|------------|
| Public Schools Total | | % of Total |
| | Rev/Exp >=1.0 | 81.6% |
| | Rev/Exp <1.0 | 18.4% |
| | Subtotal | 100.0% |
| Non-Profit Schools Total | | % of Total |
| | Rev/Exp >=1.0 | 52.6% |
| | Rev/Exp <1.0 | 47.4% |
| | Subtotal | 100.0% |
| For-Profit Schools Total | | % of Total |
| | Rev/Exp >=1.0 | 74.1% |
| | Rev/Exp <1.0 | 25.9% |
| | Subtotal | 100.0% |
| Overall Totals | | % of Total |
| | Rev/Exp >=1.0 | 70.1% |
| | Rev/Exp <1.0 | 29.9% |
| | | 100.0% |

Downside Scenario

In order to consider the risk of continued decreases in enrollment and downward pressure on revenue, we again used this simplistic revenue-to-expense formula to look at annual profitability in a downside scenario. The following analysis assumed a 15% decrease in total annual revenue and a 10% decrease in annual expenses. In other words, the scenario used a presumption that revenues would fall faster than expenses, particularly due to factors such as fixed facilities costs, tenure, and other non-variable expenses. Although we didn't give credit to the potential cash flow and balance sheet benefits from endowment contributions or increased public and private funding to fill cash flow deficits, we correspondingly did not assume any increases in other financial burdens such as debt service, pension and/or other post-employment liabilities.

Note, we did not attempt to predict solvency or specific failures based on review of the available financial information, in part because colleges and universities are unique in serving both as independent operating businesses as well as important community resources that may be helped out by local, state, federal governments and/or private funding

sources. One method of doing a solvency analysis would be to look at current financial resources compared to projected annual operating losses; but again, the unknown variable would be new financial contributions from external sources. From the simple analysis presented here, we predict a 15% revenue erosion would result in a total shift of at least 927 schools from profitable to unprofitable operations. The percentage of profitable schools according to the core revenue/core expense ratio decreases from 70.1% to 56.7% in this downside scenario.

DOWNSIDE SCENARIO (15% Revenue decrease and 10% expense decrease from 2023 levels)

| Total Revenue to Expense Ratio | | |
|--------------------------------|--|------------|
| Public Schools Total | | % of Total |
| Rev/Exp >=1.0 | | 59.0% |
| Rev/Exp <1.0 | | 41.0% |
| Subtotal | | 100.0% |
| Non-Profit Schools Total | | % of Total |
| Rev/Exp >=1.0 | | 42.7% |
| Rev/Exp <1.0 | | 57.3% |
| Subtotal | | 100.0% |
| For-Profit Schools Total | | % of Total |
| Rev/Exp >=1.0 | | 60.9% |
| Rev/Exp <1.0 | | 39.1% |
| Subtotal | | 100.0% |
| Overall Totals | | % of Total |
| Rev/Exp >=1.0 | | 54.8% |
| Rev/Exp <1.0 | | 45.2% |
| | | 100.0% |

| Core Revenue to Core Expense Ratio | | |
|------------------------------------|--|------------|
| Public Schools Total | | % of Total |
| Rev/Exp >=1.0 | | 66.6% |
| Rev/Exp <1.0 | | 33.4% |
| Subtotal | | 100.0% |
| Non-Profit Schools Total | | % of Total |
| Rev/Exp >=1.0 | | 40.2% |
| Rev/Exp <1.0 | | 59.8% |
| Subtotal | | 100.0% |
| For-Profit Schools Total | | % of Total |
| Rev/Exp >=1.0 | | 61.3% |
| Rev/Exp <1.0 | | 38.7% |
| Subtotal | | 100.0% |
| Overall Totals | | % of Total |
| Rev/Exp >=1.0 | | 56.7% |
| Rev/Exp <1.0 | | 43.3% |
| | | 100.0% |

Endowments

For many 2- and 4-year public and non-profit schools, their most important ballast against unfavorable trends is the endowment. Less-than-2-year and all for-profit schools do not have this added insulation. Of the \$900 billion total in 2023 endowment assets across all schools, more than 78% was concentrated with schools enjoying endowments of more than \$1 billion.

| Endowment Assets | |
|---------------------|--------------------------|
| 4 Year Public | \$291,629,419,253 |
| 2 Year Public | \$5,750,271,762 |
| < 2 Year Public | \$0 |
| 4 Year Non-Profit | \$602,397,189,531 |
| 2 Year Non-Profit | \$316,702,363 |
| < 2 Year Non-Profit | - |
| 4 Year For-Profit | - |
| 2 Year For-Profit | - |
| < 2 Year For-Profit | - |
| Total Public | \$297,379,691,015 |
| Total Non-Profit | \$602,713,891,894 |
| Total For-Profit | - |
| Grand Total | \$900,093,582,909 |

Other Factors

In addition to demographic headwinds, the depth, duration and lasting damage from the Covid pandemic set back many aspects of higher education, making tuition gains more difficult to attain. At this point, decreases in real net tuition are likely for non top-tier institutions. The CARES Act and other government assistance efforts were enacted to help schools navigate through these challenges. For many institutions these proceeds mitigated some immediate losses but didn't reverse the long-run trends.

For the average institutions not blessed with ongoing tuition and enrollment gains, the most resilient mid- and lower-tier schools will adapt to changes in enrollment composition by offering a flexible combination of remote and in-person learning experiences. Strategically managing real estate holdings to achieve flexibility in response to market conditions will be paramount.

Fixed Costs

One of the challenges of the modern college and university model will be managing fixed costs to account for decreases in revenue. The magnitude of tenure and pension obligations are not sufficiently variable at many institutions to account for continued years of declining enrollment. The likely depth, duration and lasting damage from the Covid-19 recession will make real tuition gains more difficult to achieve—decreases are more likely for all but top tier schools.

A legacy of the previous boom years in higher education will be an excess of property, plant and equipment that in many cases were financed by significant levels of PPE debt. To the extent that more schools and students adopt remote or hybrid learning models, unused or under-utilized space could become a drag on financial performance.

Budgeting for the Future

Standard Financial Health Measurements

The Department of Education regulates institutions based on a set of financial formulas that serve as indicators of financial health and help determine the suitability for schools and students participating in federal financial aid/student loan programs. At times you will see a combination of the Primary Reserve Ratio, the Viability Ratio and a Return on Assets Ratio to determine overall health; other methods also include a Net Operating Income Ratio. The exact weighting and uses of these formulas are too detailed for the purposes of this paper, but we took a quick glance at composite scores for 2023 and found 90.7% to be financially responsible, 2.4% requiring additional oversight, and 6.8% found to be not financially responsible and under supervision to achieve compliance.

Northmarq Fund Management Research Method Detailed Financial Health Assessment

Far beyond these traditional measurements, we compiled a comprehensive health assessment tool that looked at 19 factors for Non-Profit and For-Profit institutions and 21 factors for Public colleges and universities, with the extra two

factors accounting for pension and post-employment obligations unique to public schools. This framework results in far too many numbers to put on these pages, so after a brief description of the factors included, we'll attempt to summarize our findings. For future due diligence purposes, we have the following data for most U.S. colleges and universities and will be able to run specialized reports for specific properties and submarkets.

The following measurements were used in our assessment:

1. Total Enrollment
2. Assets / Liability Ratio
3. Return on Assets %: Change in Net Assets / Beginning Net Assets
4. Primary Reserve Ratio: (Unrestricted and Temporarily Restricted Assets) / Total Expenses
5. Viability Ratio: (Unrestricted and Temporarily Restricted Assets) / Total Debt
6. Equity Ratio: (Net Assets – Intangibles) / (Total Assets – Intangibles)
7. Pension Liabilities as a % of Total Assets (public schools only)
8. Unrestricted Assets as a % of Total Assets (public schools only)
9. Debt as a % of Long-Term Investments
10. Debt as a % of Revenue
11. Liabilities as a % of Long-Term Investments
12. Revenue / Expense Ratio
13. Primary Selectivity Ratio: Admissions / Applicants
14. Admissions Yield: Enrollments / Admissions
15. Endowment Per full-time Equivalent Student
16. Tuition Revenue as % of Core Revenue
17. Tuition Revenue as % of Core Expense
18. Instruction Expense Per Full-Time Equivalent Student
19. Core Operating Margin: (Core Revenue - Core Expenses) / Core Revenue
20. % of Freshmen Receiving School Grants
21. Auxiliary, Other, and Hospital Income or Loss

Public Institutions

| Sector | FTE Undergrad Enrollment | FTE Grad Enrollment | Total FTE Enrollment | Assets/ Liabilities | Return on Assets | Primary Reserve Ratio | Viability Ratio | Equity Ratio |
|----------------|--------------------------|---------------------|----------------------|---------------------|------------------|-----------------------|-----------------|--------------|
| Public 4 Year | 6,475,395 | 1,335,541 | 7,810,936 | 1.74 | 9.1% | 0.68 | 1.40 | 40.6% |
| Public 2 Year | 2,758,798 | - | 2,758,798 | 1.66 | 13.4% | 0.43 | 0.90 | 38.9% |
| Public <2 year | 48,575 | - | 48,575 | | | | | |

| Sector | Pension Liabilities as % of Total Assets | Unrestricted Assets as % of Total | Debt as % of LT Investments | Debt as % of Revenue | Liabilities as % of LT Investments | Total Revenue/ Expense Ratio |
|----------------|--|-----------------------------------|-----------------------------|----------------------|------------------------------------|------------------------------|
| Public 4 Year | 21.3% | -2.5% | 27.2% | 45.1% | 72.6% | 1.07 |
| Public 2 Year | 20.7% | -3.6% | 30.3% | 39.9% | 90.9% | 1.19 |
| Public <2 year | | | | | | 1.15 |

| Sector | Primary Selectivity % | Admissions Yield % | Endowment Per FTE | Tuition as % of Core Revenue | Tuition as % of Core Expense | Instruction Expense per FTE | Core Operating Margin | % of Fresh with School Grants | Auxiliary & Hospital Income/ Loss |
|----------------|-----------------------|--------------------|-------------------|------------------------------|------------------------------|-----------------------------|-----------------------|-------------------------------|-----------------------------------|
| Public 4 Year | 64.4% | 21.6% | 37,336 | 22.1% | 24.7% | 13,044 | 10.6% | 57.2% | -2.2% |
| Public 2 Year | 87.5% | 33.5% | 2,084 | 11.6% | 13.2% | 7,446 | 11.9% | 24.5% | -66.6% |
| Public <2 year | 66.9% | 87.5% | - | 14.9% | 17.1% | 10,299 | 13.1% | 10.1% | |

NOTE: IPEDS does not include complete data for all categories for <2 Year institutions.

Non-Profit Institutions

| Sector | FTE Undergrad Enrollment | FTE Grad Enrollment | Total FTE Enrollment | Assets/ Liabilities | Return on Assets | Primary Reserve Ratio | Viability Ratio | Equity Ratio |
|----------------|--------------------------|---------------------|----------------------|---------------------|------------------|-----------------------|-----------------|--------------|
| Public 4 Year | 2,652,461 | 1,226,076 | 3,878,537 | 4.07 | 1.5% | 1.85 | 3.30 | 75.4% |
| Public 2 Year | 47,710 | - | 47,710 | 2.47 | 18.4% | 0.78 | 7.51 | 48.4% |
| Public <2 year | 7,476 | - | 7,476 | | | | | |

| Sector | Pension Liabilities as % of Total Assets | Unrestricted Assets as % of Total | Debt as % of LT Investments | Debt as % of Revenue | Liabilities as % of LT Investments | Total Revenue/ Expense Ratio |
|----------------|--|-----------------------------------|-----------------------------|----------------------|------------------------------------|------------------------------|
| Public 4 Year | 13.3% | 53.9% | 24.6% | 1.04 | 72.6% | 1.07 |
| Public 2 Year | 5.5% | 6.9% | 51.6% | 1.52 | 90.9% | 1.19 |
| Public <2 year | | | | | | 1.15 |

| Sector | Primary Selectivity % | Admissions Yield % | Endowment Per FTE | Tuition as % of Core Revenue | Tuition as % of Core Expense | Instruction Expense per FTE | Core Operating Margin | % of Fresh with School Grants | Auxiliary & Hospital Income/Loss |
|----------------|-----------------------|--------------------|-------------------|------------------------------|------------------------------|-----------------------------|-----------------------|-------------------------------|----------------------------------|
| Public 4 Year | 49.7% | 18.4% | 155,316 | 41.0% | 43.2% | 18,793 | 5.2% | 79.6% | -0.2% |
| Public 2 Year | 27.7% | 41.9% | 6,638 | 70.7% | 78.6% | 5,866 | 10.0% | 35.1% | 17.2% |
| Public <2 year | 44.3% | 63.1% | - | 61.3% | 55.3% | 9,874 | -11.0% | 9.0% | 0.0% |

NOTE: IPEDS does not include complete data for all categories for <2 Year institutions.

For Profit Institutions

| Sector | FTE Undergrad Enrollment | FTE Grad Enrollment | Total FTE Enrollment | Assets/ Liabilities | Return on Assets | Primary Reserve Ratio | Viability Ratio | Equity Ratio |
|----------------|--------------------------|---------------------|----------------------|---------------------|------------------|-----------------------|-----------------|--------------|
| Public 4 Year | 599,691 | 202,145 | 801,836 | 2.07 | 27.3% | 0.26 | 1.42 | 43.1% |
| Public 2 Year | 268,060 | - | 268,060 | 1.55 | 9.6% | 0.16 | 4.48 | 30.9% |
| Public <2 year | 259,868 | - | 259,868 | | | | | |

| Sector | Pension Liabilities as % of Total Assets | Unrestricted Assets as % of Total | Debt as % of LT Investments | Debt as % of Revenue | Liabilities as % of LT Investments | Total Revenue/ Expense Ratio |
|----------------|--|-----------------------------------|-----------------------------|----------------------|------------------------------------|------------------------------|
| Public 4 Year | 56.9% | 16.4% | 213.5% | 1.11 | 72.6% | 1.07 |
| Public 2 Year | 21.6% | 3.3% | 366.2% | 1.07 | 90.9% | 1.19 |
| Public <2 year | | | | | | |

| Sector | Primary Selectivity % | Admissions Yield % | Endowment Per FTE | Tuition as % of Core Revenue | Tuition as % of Core Expense | Instruction Expense per FTE | Core Operating Margin | % of Fresh with School Grants | Auxiliary & Hospital Income/Loss |
|----------------|-----------------------|--------------------|-------------------|------------------------------|------------------------------|-----------------------------|-----------------------|-------------------------------|----------------------------------|
| Public 4 Year | 62.6% | 34.8% | - | 93.9% | 104.8% | 3,618 | 10.4% | 22.6% | -61.0% |
| Public 2 Year | 84.3% | 48.1% | - | 91.4% | 99.0% | 4,088 | 7.7% | 14.2% | -551.0% |
| Public <2 year | 78.0% | 84.5% | - | 89.8% | 111.4% | 4,055 | 19.4% | 7.5% | 0.0% |

NOTE: IPEDS does not include complete data for all categories for <2 Year institutions.

The old method of aggressively hiking tuition to offset expense increases is going to become difficult. Education consumers are going to be more selective and often simply can't justify taking on the debt needed to pay escalated tuition levels. In many businesses there is a temptation to avoid discounting prices for fear of a slippery slope. But the difference between tuition rack rates and actual collection revenue is widening and stands out amidst widespread concerns over increased student loan debt relative to earning potential post-graduation. It's difficult to see a scenario in which reduced demand for enrollment combined with an increased proportion of online versus in-person instruction could result in a positive trend in tuition revenues.

Tuition Inflation Compared to Other Goods/services

Since 1983, college tuition has increased at an average annual rate of 5.8%, compared to average inflation of 2.8% per year. Over the past 10 years, tuition growth has slowed to about 2.9% compared to 2.9% CPI inflation.



Nevertheless, earnings for both parents and students have not always kept pace with rising college costs, heightening the relative burden of student loans. Entering a recessionary phase with a prolonged period needed to restore full employment and wage growth, it will become increasingly difficult for families to afford the full cost of higher education if tuition continues to outstrip earning potential.

Online class offerings are clearly going to increase and may pose several risks to campus life and traditional college revenue streams. If online learning options are of poor quality, parents and students will question the price of a college education and expect discounts for remote learning models. If online classes are conducted effectively, some parents and students may become relatively more satisfied and wonder if an on-campus experience is necessary. They may still expect a discounted price due to the lack of direct campus services.

It is obvious that for colleges and universities to survive and thrive in this new environment, they are going to need to compete by providing relative value in terms of cost, experience, value-added learning and earning potential. Much of the liberal arts infrastructure that has dominated the private 4-year experience for decades is challenged to remain relevant by the educational needs of today's students. Many schools will need to adapt quickly or run the risk of being overwhelmed by those with greater endowment and reputational resources. Amidst prevailing industry headwinds, there will continue to be a sorting into haves/have nots, and the data seems clear that too many small institutions are in a near-term struggle for survival, particularly campuses lacking momentum in crowded enrollment markets. The most prestigious brands with the largest endowments and fortress public 4-year universities will continue to get stronger, likely further expanding the institutional inequality gap in the coming years.

Wrap Up

Higher education is at an inflection point. The top tier 4-year institutions will get stronger at the expense of certain weaker schools as the industry goes through a period of rapid change and adaptation. Real estate assets located in close proximity to the stronger institutions should continue to thrive. When underwriting properties proximate to lower tier institutions, we will be focused on the financial health of that particular institution and the local economy's relative dependence upon higher education jobs. The granular detail available through our more detailed school financial health assessment tool allows reports covering specific schools in relevant target markets.

For the schools themselves, careful consideration of the highest-and-best use of each asset (whether land or buildings) within their real estate holdings could become increasingly critical to their financial success in a challenging market environment.

SOURCES:

Integrated Postsecondary Education Data System (IPEDS)
Bureau of Labor Statistics (BLS)
Centers for Disease Control and Prevention (CDC)
U.S. Department of Education
National Center for Education Statistics
Walmart
Amazon
Northmarq Fund Management Research

