# 2U, Inc. (TWOU)

## Initiating Coverage; Leading Universities Down the Yellow Brick Road

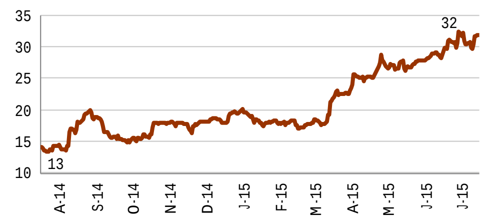
**Well positioned in earlier stage secular growth market; initiating with Outperform.** 2U enables fully online degrees at leading universities, leveraging some of the best established consumer brands. We view 2U's early mover advantage and position in what we view as an earlier stage secular growth market as a significant advantage that we expect to help drive strong, sustainable long-term growth, and expect profitability to improve with company and program life cycle maturation/scale. Initiating with Outperform/Speculative Risk, $35 price target.

- **2U is helping enable a transformational change in the sizable post-secondary education market,** by enabling fully online programs at leading not-for-profit colleges and universities (NFPCUs).
  - We view fully online enrollment at NFPCUs as a relatively early stage secular growth market.
  - Signed University Program Partners include (partial list): CA-Berkeley, Georgetown, Northwestern, UNC, USC, Washington University in St. Louis, and Yale.
- **Early mover advantage, capabilities, and positioning notable enablers of future growth.** 2U has partnered with some of the world's most prestigious universities, and has developed sophisticated capabilities including but not limited to technology and marketing. We believe its perceived market position and referencable partners are a significant competitive advantage to signing new program partners (in a shared governance "market") that may not be fully appreciated by some investors, and expect strong partner (and revenue share percentage) retention (aided by contract structure, and University partner motivation).
- **We believe a 25-30%+ acyclical organic revenue CAGR is sustainable the next 5+ years,** based on growth at existing partners, and 5+ new partners signed annually. We believe $600mn+ in annual revenue run-rate is achievable over the next 5-6 years, assuming 40+ total programs (and using TWOU's $16.7mn revenue/program at "steady state" as a benchmark).
- **We also expect progress toward, and increased investor confidence in, management's long-term margin targets,** due to individual program maturation, mix shift towards greater percentage of relatively scaled programs, improved marketing efficiency, MPV strategy, and leveraging corporate expenses.
  - Ability to leverage its University partner brands coupled with 2U's relative marketing sophistication/capabilities, should be a source of significant marketing efficiency.
- **Current SaaS/fast growth multiples suggest potential for material appreciation in TWOU over multi-year period** based on our view of sustainable revenue growth and margin progress.
- **Initiating coverage with Outperform, $35 price target (8.2x EV/'16E revenue), Speculative Risk Suitability rating.**

**2U is a leading provider of cloud-based SaaS technology and services that enable leading nonprofit colleges/universities to deliver high quality fully online degree programs.**

### INITIATING COVERAGE

**1-Year Price Chart**




**Stock Data**

| | |
|---|---|
| Rating: | Outperform |
| Suitability: | Speculative Risk |
| Price Target: | $35 |
| Price (7/14/15): | $32.11 |
| Market Cap (mil): | $1,317 |
| Shares Out (mil): | 41.0 |
| Average Daily Vol (mil): | 0.30 |
| Dividend Yield: | 0.0% |

**Estimates**

| FY Dec | 2014A | 2015E | 2016E |
|---|---|---|---|
| Q1 | (0.77) A | (0.08) A | |
| Q2 | (0.22) A | (0.18) E | |
| Q3 | (0.13) A | (0.11) E | |
| Q4 | (0.05) A | (0.02) E | |
| **Fiscal EPS** | **(0.67) A** | **(0.39) E** | **(0.28) E** |
| Fiscal P/E | NM | NM | NM |

Chart/Table Sources: Factset and Baird Data

EPS (Net): Above calculation of adj. EPS and market cap excludes anti-dilutive shares.

**Please refer to Appendix - Important Disclosures and Analyst Certification**

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# Investment Perspective

**Initiating coverage on 2U Inc. (TWOU) with an Outperform rating, Speculative Risk suitability rating, $35 price target.**

2U is a leading suite solution provider of cloud-based SaaS technology and services that enable not-for-profit colleges and universities (NFPCUs) to deliver high quality fully online degrees. 2U enables fully online, primarily graduate level degrees at leading universities, with a focus on programs that it believes can scale to a certain critical mass based on its data-driven program selection algorithm. Through long-term contracted partnerships (typically initially 10-15 years) at a college/program level, 2U provides online learning/classroom platforms and other cloud-based applications, outsourced marketing, field placement services, and other administrative services; while the not-for-profit college/university (NFPCU) partner remains responsible for accreditation, admissions criteria, and financial aid, as well as the delivery of core academic services, including teaching and assessment, and the oversight of faculty and curriculum. Online students pay tuition equivalent to those on ground, and 2U generates a revenue share in the low- to mid-60s as a percentage of related tuition and related fees.

We view 2U's early mover advantage, capabilities, and current position in what we view as an earlier stage secular growth market with a large potential TAM (i.e., fully online enrollment at “traditional” colleges/universities) as a significant advantage that we expect to help drive strong, sustainable long-term growth. We also expect 2U profitability to improve with company and program life cycle maturation/scale, have been very impressed by our conversations with 2U’s partners regarding their views of 2U, and believe 2U has several competitive moats around its business.

From a financial perspective we believe a 25-30%+ acyclical organic revenue CAGR is sustainable the next 5+ years (with long runway for strong growth beyond that), based on growth at existing partners, and 5+ new partner programs signed annually. Consequently, we believe a $600 million+ annual revenue run-rate is achievable over the next 5-6 years (or potentially sooner if 2U accelerates its pace of new partner signings/onboardings, which it appears to be considering), assuming 40+ total programs, and using management’s estimate of $16.7 million in steady state revenue to 2U per program (while recognizing some programs would still be scaling and other programs are already operating above the $16.7 million average and still growing). We also expect progress toward, and increased investor confidence in management's long-term margin targets, due to individual program maturation, mix shift toward a greater percentage of relatively scaled programs, improved marketing efficiency, MPV strategy, and leveraging corporate expenses.

We recognize that shares have materially outperformed both the broader market and stocks of other fast growth companies during 2015 YTD (due in part to TWOU consensus revenue estimates being upwardly revised and the consensus adj. EPS loss estimate being reduced), and TWOU also trades at relatively elevated EV/revenue multiples for a company that is currently loss generating and unlikely to generate a significant operating margin near-to-intermediate term. However, we are not aware of any likely material negative catalysts. Rather, we believe a long runway for strong sustainable growth exists, with progress toward and increased investor confidence in 2U’s long-term margin targets, and favorable developments in other important qualitative factors that we expect to drive 2U shares. We are also constructive on the sustainability of 2U’s revenue share, although we would expect 2U to continue to improve and expand its bundle/suite solution to help it materially sustain its revenue share (we view a perceived inability to sustain its revenue share percentage as a key bear thesis on the stock). Further, in our experience 2U remains a relatively unknown/little known stock to many investors, and in our view, the secular trend of fully online students away from for-profit/private sector colleges and universities to “traditional” not-for-profit colleges and universities is not fully appreciated, nor is the market for their third-party enabler partners like 2U. We also do not believe that valuation is at a level that will prevent multi-year outperformance if our view on the fundamental outlook is correct (and assuming multiples for high growth stocks generally do not contract materially). Therefore, while acknowledging that investor expectations appear to have risen materially since early March, which could limit potential NTM outperformance in TWOU shares, we are initiating coverage with an Outperform rating given our view of both the one-year and multi-year fundamental outlook, a reasonable valuation relative to multiples of other fast growth companies, and our view that material negative company-/industry-specific catalysts are unlikely in the near term (although while we view 2U's fundamentals as largely acyclical, we believe TWOU shares could underperform the broader market should a significant market contraction occur given TWOU's premium multiple).

**Additional perspective on key tenets of our investment thesis:**

1) **Strong positioning in secular growth market should drive strong long-term revenue growth.** We believe that NFPCUs, especially the "leading" institutions that 2U primarily targets today, are at the early stages of offering fully online degree programs. We view 2U as a highly attractive potential partner and expect it to materially grow its number of NFPCU partners and programs with a significant long-term growth opportunity. We also expect more recently signed programs to continue to grow enrollment, and believe that it is noteworthy that some of 2U's partners' online programs have generated enrollment that is orders of magnitude larger than their on ground enrollment in the same programs (at least in some instances based on the small sample size of 2U's historical track record). Further, we believe that 2U's revenue share percentage will be sustainable. While we view revenue share sustainability as a legitimate investor question (and notable potential risk) given the relatively high percentage that 2U derives, we also believe that the primary motive of its NFPCU partners is mission-driven over profit-driven. Hence, in our view the more important factor is whether 2U can meet its partners' operating expectations and quality expectations. It would also be a significant cost and risk for a 2U partner university with a successful program to shift the program to another provider or bring it in house. Further, even though we believe it is primarily a mission-drive sale, we also believe that 2U's NFPCU partners generate truly incremental revenue with what they perceive to be good (or at least acceptable) incremental margins; as of the end of Q1-15, 2U's partner program total student enrollments have produced inception-to-date tuition bookings of $795 million for its University partners. Finally, the upfront capital outlay is borne by 2U, helping de-risk the decision from a financial standpoint to 2U's prospective university partners (some, or many universities may not be willing to invest that far ahead of revenue or have the funding to do so).

2) **Long-term contracts, high net promoter scores, and non-renewal penalties for clients.** 2U enters into long-term contracts with its NFPCU partners, which typically include initial 10-15 year contract terms. Contracts do not include termination rights for convenience, and the company's 10-year contracts impose damages should the NFPCU partner decide to not renew (typically two years revenue). 2U also regularly conducts a Net Promoter Score survey to gauge customer loyalty and satisfaction, and student responses have reflected very impressive results that are on par with other leading consumer tech services companies. The company's student retention metrics have also been impressive, rivaling on-ground programs at leading non-profit universities and colleges, with 83% of enrolled students to date still enrolled or graduated from their respective program. We believe this puts 2U in a strong negotiating position at (or ahead of) contract renewal given that the NFPCU partner would have both a financial penalty and arguably even more importantly, significant disruption and risk should they consider attempting to transition their online programs from 2U to another third-party enabler partner, or bring them fully in house. We have also spoken to several 2U NFPCU partners, and believe they hold 2U in high regard and view the relationship as a good partnership. Finally, while early given the current stage of its business lifecycle, we believe that the early extension of the UNC MBA program for 10 years through 2030 is a notable data point regarding client retention.

3) **Early mover advantage and brand halo from established position partnering with prestigious colleges and universities.** 2U has a notably prestigious client base, especially considering the historical risk appetite in its market served, especially for the types of solutions that it provides. Simply put, there has historically been significant resistance at NFPCUs to offering fully online degrees, and we believe that historical resistance has typically been especially prevalent at more prestigious NFPCUs. Hence, 2U's initial in-roads into this market are significant, and we believe the importance of its in-roads is not fully appreciated by some members of the investment community, given a lack of understanding of the selling process in this

market. Namely, 2U sells into a shared governance environment, in what we would generally describe as a risk averse “industry.” Consequently, 2U’s position in the market including its impressive list of prestigious NFPCUs and their positive view of 2U as a partner are a tremendous advantage for penetrating net new NFPCUs.

4) **Superior capabilities and ability to continue to invest at scale.** We believe that 2U helps enable some of the world’s best online programs, while leveraging some of the world’s best educational brands, both of which we view as significant differentiators relative to for-profit colleges and universities, as well as NFPCUs that seek to offer fully online degrees without a third-party enabler but rather through in-house capabilities. We also believe that 2U has sophisticated and differentiated capabilities in areas such as marketing, its placement network (for degrees requiring practical experience such as clinical rotations), and technology. That said, we expect competition to 2U from other credible third-party enablers, but believe 2U’s current prestigious partner list is a notable competitive differentiator given the selling process in the industry, and believe that its early mover advantage and considerable investments to date, and generally the capabilities that it has developed are notable barriers to entry to would be new market entrants. Further, given its ongoing investments as a scaled provider, the improving effectiveness of its capabilities (including marketing effectiveness and efficiency), and its ability to recruit and retain high caliber human capital (especially relative to the vast majority of “for-profit” colleges with only limited exceptions), we believe 2U’s capability lead over many market participants will widen over time if it executes well (we expect there will be other “winners” in the third-party enabler market [which we expect to be a strong secular growth market], but we think the premium suite solution market will narrow to a handful of “winners” with an even more limited viable competitive set in the part of the market that 2U occupies).

5) **Serves and enables potentially large TAM.** Post-secondary education is a very large market. There are an estimated 160 million+ students currently enrolled in higher education institutions globally, and the U.S. post-secondary market generates roughly $550 billion in annual revenue according to NCES. Near-to-intermediate term we expect 2U to remain focused primarily on the U.S. graduate degree market, which as of 2013 included ~2.9 million students enrolled at both non-profit and for-profit institutions. Based on estimates from the National Center for Education Statistics (NCES), ~639,000 (~22%) graduate students are enrolled exclusively in online courses, with an additional ~227,000 (~8%) enrolled in some but not all distance education. Those estimates combined with an average graduate degree tuition amount of ~$16,400 (also based on NCES data) would imply a total graduate degree online TAM of ~$14.2 billion. For perspective, assuming a similar average annual graduate degree tuition, but assuming a 100% online market for all graduate enrollments (based on current enrollments) would imply a total potential market of more than $48 billion, of which 2U currently accounts for approximately 0.2% (based on 2014 revenue). We expect both secular growth of online enrollments, and believe that fully online degrees at not-for-profit institutions will continue to gain share from for-profit universities. We also believe that it is notable that some 2U-enabled online programs actually have enrollment that is multiples of size of the on ground enrollment in the same programs at the same university. Hence, we believe 2U may actually enable broader market growth. Stated another way, 2U has identified over 100 graduate-level academic disciplines with more than 1,000 graduates per year, and believes that it can implement its MPV strategy in at least 50 of those disciplines. It also believes there are 10+ net new/developing disciplines that it may be able to target over time (e.g., data science). TWOU assumes this equates to 180+ potential programs, which could generate $3 billion ($16.7 million average per program) in steady-state annual revenue to 2U. Intermediate- to long-term we would also expect 2U to more aggressively pursue opportunities to enable online degrees at institutions based outside of the U.S., potentially recruit more non-U.S. based students to attend online degrees at programs that it enables for U.S.-based universities, and potentially enable select additional bachelor level online degrees.

6) **We expect progress toward and increased investor confidence in management’s long-term margin targets.** 2U currently generates adj. EBITDA losses. However, its adj. EBITDA losses are narrowing, and management has recently been articulating that they expect the company to achieve adj. EBITDA

profitability in 2017. We believe that 2U's losses are a function of its business life cycle, number of programs that it is onboarding, and upfront "investment"/losses associated with launching a new program. Further, management estimates that if the first four cohort programs had all launched at the same time in 2009, that they would have a 2014 combined adj. EBITDA margin in the mid-to-high 20%s.

Longer term, management has targeted strong steady-state margins with adj. EBITDA margin projected in the mid-30%s, which is expected to be driven by improved operating leverage across the majority of cost line items. Program servicing and support, technology and content development, and G&A are all expected to drive solid margin expansion from current levels (range of ~300-1200bps by line item), but the largest opportunity for efficiency savings exists within program marketing and sales expense, which management estimates will account for ~31-33% of revenue at steady-state levels, a significant opportunity for improvement from ~57% as of 2014 (while these percentages may strike some investors as high, we would observe that they are calculated relative to 2U's revenue share, not relative to total tuition expense). While seemingly ambitious given the magnitude of improvement implied, we believe that the materially reduced marketing expense as a percentage of revenue should be achievable, and may even potentially be conservative over the very long term for several reasons.

- First, 2U leverages some of the world's best consumer (generally) and education (specifically) brands. Second, we believe 2U operates at a world class level of marketing sophistication relative to potential competitors. Third, efficiency of marketing spend should improve as programs scale. Fourth, 2U invests in its marketing/prospecting funnel well ahead of revenue generation given the relatively long lead times for recruiting students (especially for 2U-type programs). Fifth, 2U heavily leverages organic prospecting sources that require investment even further ahead of revenue, and has made many related investments that have not yet been fully leveraged/harvested. Sixth, we expect prospective student and broader stakeholder/societal perceptions regarding fully online degree programs to improve intermediate to long term, as prestigious schools increasingly offer fully online degrees, and as online degree quality continues to improve (halo effect from the intersection of Ivy League schools and respected Silicon Valley institutions partnering behind some MOOCs, etc.).

Another factor that we view both as a significant driver of EBITDA margins generally, and the contribution from improved marketing expense specifically, is the company's MPV, or Multiple Program Vertical strategy, whereby it has begun enabling multiple degrees in conjunction with partner universities in the same "vertical" (e.g., enables online MBAs for UNC, Syracuse, and American University, and will also enable an online MBA through its Enterprise Program Model with Simmons College). 2U generates marketing and general operating efficiencies by operating programs at multiple universities in the same degree vertical (a departure from its original strategy) by leveraging its prospective student funnel, including from its organic marketing efforts. While university partner satisfaction/delight is paramount to 2U's long term success (perhaps behind only the highly-related factor of student outcomes and satisfaction), operating multiple programs both in the same vertical and generally can provide some opportunity for 2U to differentially invest in/market its higher ROIC/incremental margin programs. Further, given regional higher education brand affiliation common among prospective students, 2U can actually execute its MPV strategy to the benefit of, not the detriment of, its university partners, in our view. Given the long lead time from marketing spend/prospecting to related revenue recognition over the life of the academic program, 2U management provides investors with an estimate of the ratio of attrition adjusted lifetime revenue of a student, or LTR, to the total cost to acquire that student, or TCA. Its steady state financial models assume a long-term target of 3.2x or better (to achieve its targeted adj. EBITDA margin of mid-30%s). The company materially improved its LTR/TCA ratio from an estimated 2.4x at the end of 2013 to nearly 3.0x at the end of 2014.

**Our $35 price target** reflects 8.2x EV/our 2016 revenue estimate, including a share count that takes into account our estimate from the effect of anti-dilutive shares. Our comp group of SaaS companies with market caps >$500 million and revenue growth rates of 20%+ currently trade at a mean EV/2015E revenue multiple of 7.5x (with a wide range on a stock-by-stock basis). Our price target is further supported by our multi-year revenue CAGR framework and EV/revenue matrix. We believe a 25-30%+ revenue CAGR is sustainable the next 5+ years, which if achieved, implies that shares could achieve solid returns even should somewhat meaningful EV/revenue multiple contraction occur. Please see the valuation section of this research note for additional discussion, and several valuation frameworks. As noted, we believe TWOU is a difficult business/stock to value (which helps inform our Speculative Risk suitability ranking). While we believe it has substantial long-term revenue growth potential, and believe the business should generate good margins and returns on capital at scale with a largely recurring revenue base, it is currently a loss-generating business and given upfront losses associated with onboarding new programs and the number of programs that it plans to onboard, we do not expect material profitability for the next several years. Further, there is a lack of pure play third-party enabler comparable companies. TWOU shares also have limited trading history. Hence, our price target is based on a "comp group" consisting of SaaS companies that we believe have similar long-term organic revenue growth potential, recurring revenue growth profiles, and margin potential to 2U (at scale), and our valuation framework is further supported by TWOU's historical trading multiples, comparable company historical M&A multiples, and a long-term revenue growth and EV/revenue multiple matrix.

**What surprised us during our initiation process (and hence in our view may not be fully appreciated by some investors)?** We have known 2U and its management for several years (back to the 2tor days), and have long believed that a sea change has occurred, with a material share shift of fully online degreed students away from private sector/for-profit providers and toward "traditional" colleges/universities, and we believe that 2U/2tor was (and is) one of the providers that was positioned to benefit from that secular trend. 2U's impressive client list was also notable early on, and became more pronounced as the market began to mature. Hence we have long believed that 2U was well positioned in a secular growth market. However, as our 2U specific research efforts intensified prior to our initiation of coverage, there were also several areas that came as notable positive surprises to us, including: (1) by far the most notable positive surprise was how positively 2U's University partners that we have spoken with or seen present speak of 2U; (2) we have been highly impressed by 2U's marketing sophistication led by Jeff Rinehart, and the improvement to its data-driven marketing process and general marketing efficiency since Mr. Rinehart became chief marketing officer (we were a bit underwhelmed by the company's marketing efficiency at the time when CEO Chip Paucek presented at Baird's Business Solutions Conference in February 2013); and (3) the professionally produced academic content that 2U enables stands out as superior to much of what we have seen broadly across the post-secondary education landscape.

**Speculative Risk suitability rating and speculative investment, in our view.** Initiating coverage with a "Risk Rating" of "Speculative Risk," which under Baird's criteria is defined as "High-growth situations appropriate only for investors willing to accept a high degree of volatility and risk. Company characteristics may include: unpredictable earnings, small capitalization, aggressive growth strategies, rapidly changing market dynamics, high leverage, extreme price volatility and unknown competitive challenges." The primary driver of our current Speculative Risk rating is 2U's current operating losses, early stage growth profile (including operating losses associated with onboarding new programs), changing market dynamics in higher education and competition in the third-party enabler market, and what we expect to be above-average volatility in TWOU shares. We also view our Outperform "Investment Rating" as being speculative in nature around the current share price given that it is based on an elevated revenue multiple for currently a loss generating business.

# Valuation

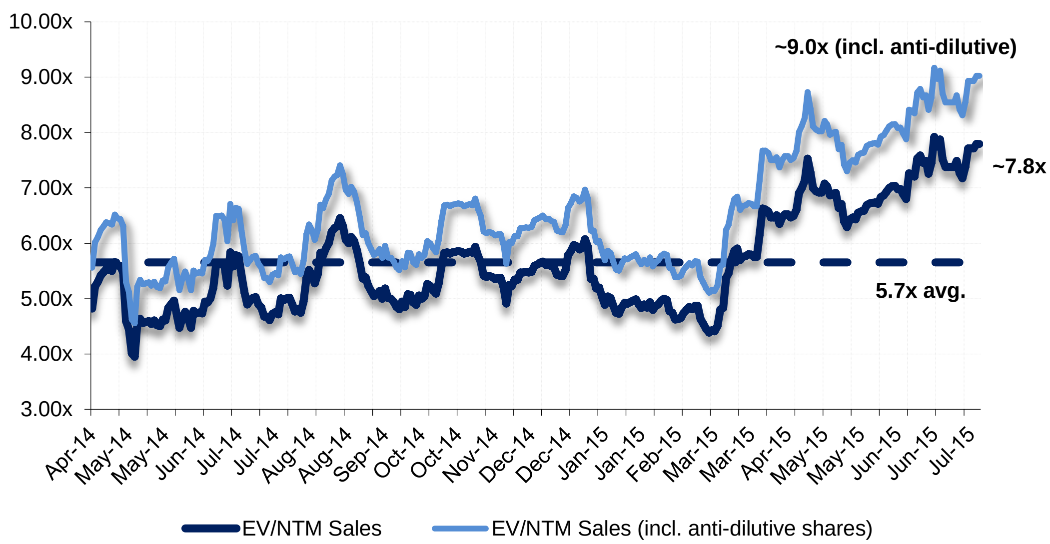
We believe TWOU is a difficult business/stock to value. While we believe it has substantial long-term revenue growth potential, and believe the business should generate good margins and returns on capital at scale with a largely recurring revenue base, it is currently a loss-generating business and given upfront losses associated with onboarding new programs and the number of programs that it plans to onboard, we do not expect material profitability for the next several years. Further, there is a lack of pure play third-party enabler comparable companies. TWOU shares also have limited trading history. Hence, our price target is based on a "comp group" consisting of SaaS companies that we believe have similar long-term organic revenue growth potential, recurring revenue growth profiles, and margin potential to 2U (at scale), and our valuation framework is further supported by TWOU's historical trading multiples, comparable company historical M&A multiples, and a long-term revenue growth and EV/revenue multiple matrix.

### TWOU Historical EV/NTM (est.) Revenue Multiple

Since its IPO in March 2014, 2U has traded in a wide range on an EV/NTM revenue basis, with a low of 3.95x in May 2014, and a high of 7.92x at the end of June. Currently, the stock is trading at ~7.8x EV/NTM revenue, well above its 5.7x average since the IPO, and near the high end of its range, albeit with a limited time horizon and following very strong performance since the company's IPO.

2U's current multiple is near the high end of its range to date; however, the company continues to post strong quarterly results, beating consensus revenue and adj. EBITDA estimates for all five quarters to date (average 3.4% and 31.3% beat, respectively). In addition to better-than-expected financial results, we believe recent multiple expansion has also been favorably impacted by better-than-expected margin progress, continued strong new partner signings (and bullish commentary regarding the current pipeline), including its first with an Ivy League University (Yale), the early renewal of MBA@UNC for an additional 10 years with a sustained revenue share, and increased investor awareness regarding TWOU and its market.

**TWOU HISTORICAL EV/NTM REVENUE MULTIPLE**




*Source: FactSet, Baird Estimates*

### SaaS Company Valuation Multiples

While 2U's absolute current multiple is near its historical high, its multiples appear more similar to median/average multiples of what we view as comparable SaaS companies as a proxy for a high-growth company (i.e., those with a $500 million+ market cap and expected revenue growth rates of 20%+ in both F'15 and F'16). Relative to this set of comparables, TWOU trades closer to in line with the median EV/Sales multiple in both 2015 (8.3x vs. SaaS median of 7.5x), and 2016 (6.4x vs. 5.6x for SaaS companies).

2U's strong expected growth rates are also slightly above the median growth expected across other SaaS companies in both 2015 (~34% vs. 30% SaaS median), and 2016 (~29% vs. 27%). Additionally, we believe that 2U's growth rate can largely be sustainable over the next five to six years as the company rolls-out new university partnerships and continues to scale its existing programs, with largely acyclical organic revenue growth potential of 25-30%+ per year.

Below we highlight a list of SaaS companies that we believe provide a reasonable proxy for 2U with a market cap of greater than $500 million and revenue growth rates above 20% in both 2015E and 2016E (we expect similar growth rates and margins at scale, although we believe TWOU has a lower probability of being acquired by a strategic buyer than do many SaaS companies).

**SaaS Comps ($500 million+ Market Cap and 20%+ Revenue Growth)**

| | | | C2015E | | | C2016E | | |
|---|---|---|---|---|---|---|---|---|
| **Ticker** | **Company Name** | **FYE** | **EV/Sales** | **P/Sales** | **Rev Gth** | **EV/Sales** | **P/Sales** | **Rev Gth** |
| ATHN* | Athenahealth Inc. | Dec | 5.0x | 4.8x | 22% | 4.2x | 4.0x | 21% |
| BNFT | Benefitfocus, Inc. | Dec | 6.6x | 7.1x | 27% | 5.3x | 5.7x | 24% |
| BOX | Box, Inc. Class A | Jan | 6.3x | 7.2x | N/A | 4.8x | 5.6x | 30% |
| CRM* | salesforce.com, inc. | Jan | 7.4x | 7.2x | 23% | 6.1x | 6.0x | 21% |
| CRTO | Criteo SA Sponsored ADR | Dec | 5.5x | 6.2x | 40% | 4.3x | 4.8x | 29% |
| CSOD | Cornerstone Ondemand, Inc. | Dec | 5.6x | 5.7x | 29% | 4.5x | 4.5x | 26% |
| CVT | Cvent, Inc. | Dec | 5.1x | 6.1x | 28% | 4.1x | 5.0x | 23% |
| DWRE | Demandware, Inc. | Dec | 10.2x | 11.3x | 46% | 7.7x | 8.5x | 34% |
| FLTX | FleetMatics Group Ltd. | Dec | 5.7x | 6.3x | 22% | 4.7x | 5.2x | 20% |
| HUBS | HubSpot, Inc. | Dec | 9.2x | 10.1x | 44% | 7.2x | 7.9x | 28% |
| MKTO | Marketo, Inc. | Dec | 4.5x | 5.0x | 40% | 3.4x | 3.7x | 33% |
| N | NetSuite Inc. | Dec | 9.3x | 9.7x | 32% | 7.1x | 7.5x | 30% |
| NEWR | New Relic, Inc. | Mar | 9.6x | 10.9x | N/A | 7.2x | 8.1x | 35% |
| NOW* | ServiceNow, Inc. | Dec | 11.6x | 11.9x | 45% | 8.6x | 8.8x | 36% |
| PCTY | Paylocity Holding Corp. | Jun | 9.9x | 10.5x | 32% | 7.8x | 8.2x | 27% |
| PFPT | Proofpoint, Inc. | Dec | 10.0x | 10.1x | 29% | 7.9x | 8.0x | 26% |
| QLYS* | Qualys, Inc. | Dec | 6.8x | 8.1x | 24% | 5.4x | 6.5x | 24% |
| RNG | RingCentral, Inc. Class A | Dec | 3.9x | 4.2x | 30% | 3.1x | 3.4x | 25% |
| TXTR | Textura Corp. | Dec | 7.5x | 8.3x | 79% | 5.4x | 6.0x | 40% |
| ULTI* | Ultimate Software Group, Inc. | Dec | 7.6x | 7.8x | 22% | 6.2x | 6.4x | 22% |
| VEEV | Veeva Systems Inc Class A | Jan | 8.4x | 9.6x | 28% | 6.8x | 7.8x | 24% |
| WDAY* | Workday, Inc. Class A | Jan | 12.4x | 13.6x | 46% | 8.9x | 9.8x | 39% |
| WK* | Workiva, Inc. Class A | Dec | 3.7x | 4.3x | 25% | 2.9x | 3.4x | 28% |
| ZEN | Zendesk, Inc. | Dec | 8.0x | 9.5x | 53% | 5.8x | 7.0x | 37% |
| **Equal-Weighted Average** | | | **7.5x** | **8.1x** | **35%** | **5.8x** | **6.3x** | **28%** |
| **Median** | | | **7.5x** | **7.9x** | **30%** | **5.6x** | **6.2x** | **27%** |
| **TWOU** | **2U, Inc.** | **Dec** | **8.3x** | **8.9x** | **34%** | **6.4x** | **6.8x** | **29%** |

Based on FactSet estimates. Estimates are as of 07/13/2015
*Covered by Baird analysts (ATHN covered by Eric Coldwell; CRM, NOW, QLYS, WKAY, WK covered by Steve Ashley; ULTI coverd by Mark Marcon); all estimates other than TWOU estimates are based on consensus estimates per FactSet, not Baird estimates

## Acquisition Multiples of Third-Party Enabler Comps

While there has been limited M&A within the "third-party" enabler market, there have been two larger transactions that we believe provide a rough comp for 2U.

In October 2012, Embanet Compass and Deltak.edu, LLC were both acquired by public companies, with Pearson (LON:PSOL; not covered) acquiring Embanet for $650 million (~5x F'12 revenue), and John Wiley & Sons Inc. (JW.A; not covered) acquiring Deltak for $220 million (~4x F'12 revenue); please note, both multiples are roughly cited on a trailing basis. Additional financial details were not disclosed for either transaction.

However, in our view, these transactions provide a baseline/lower bound potential comp multiple given: (1) some maturation of the industry in terms of acceptance and margin progress (still remains early stage relative to secular growth opportunity, in our view); (2) our view of 2U's superior positioning relative to other third-party enablers; and (3) valuation multiple expansion for the market broadly and relative multiple expansion by many measures for SaaS companies since these acquisitions were executed.

### Valuation Matrix

Finally, below we have broken out a matrix of potential valuations and share price returns, coinciding with different levels of intermediate-term revenue growth and associated valuations. Given the time frame assumed, we assume a wide range of potential valuation multiples. Our potential valuation ranges from a low of 4.0x, given previous acquisitions that we believe provide a baseline/lower bound for potential 2U comp multiples, to a high of 8.0x that is roughly in line with 2U's recent EV/NTM sales multiple, and other faster growth SaaS comps.

While we do not use it as our primary methodology to support our price target, we do believe that the below matrix is supportive of our view that TWOU shares have the potential for strong multi-year performance from current levels (assuming we are right regarding our view of its growth rate potential), and even have the potential for reasonable return even assuming fairly material multiple contraction from where it is currently trading over a multi-year horizon.

**REVENUE GROWTH VALUATION MATRIX**

| Revenue CAGR: | 25% | 27% | 30% |
|---|---|---|---|
| **2020E Revenue** | 465,972 | 496,518 | 545,122 |
| **Share Count**[1] | 43,069 | | |
| **Net Cash (Debt)** | 61,528 | | |

**Enterprise Value Matrix**

| Target EV/NTM Rev Multiple ($M) | 25% | 27% | 30% |
|---|---|---|---|
| 4.0x | $ 1,864 | $ 1,986 | $ 2,180 |
| 5.0x | $ 2,330 | $ 2,483 | $ 2,726 |
| 6.0x | $ 2,796 | $ 2,979 | $ 3,271 |
| 7.0x | $ 3,262 | $ 3,476 | $ 3,816 |
| 8.0x | $ 3,728 | $ 3,972 | $ 4,361 |

**Share Price Matrix**

| Target EV/NTM Rev Multiple | 25% | 27% | 30% |
|---|---|---|---|
| 4.0x | $ 41.85 | $ 44.69 | $ 49.20 |
| 5.0x | $ 52.67 | $ 56.21 | $ 61.86 |
| 6.0x | $ 63.49 | $ 67.74 | $ 74.51 |
| 7.0x | $ 74.31 | $ 79.27 | $ 87.17 |
| 8.0x | $ 85.12 | $ 90.80 | $ 99.83 |

| ~4.5-year return CAGR[2] | 25% | 27% | 30% |
|---|---|---|---|
| 4.0x | 6.2% | 7.8% | 10.1% |
| 5.0x | 11.8% | 13.4% | 15.9% |
| 6.0x | 16.5% | 18.2% | 20.8% |
| 7.0x | 20.7% | 22.4% | 25.0% |
| 8.0x | 24.4% | 26.2% | 28.9% |

*[1]Reflects ~1% annual dilution due to stock comp issuance, partially offset by net FCF over next five years*
*[2]4.5-year CAGR reflects publication date through 12/31/19*
*Source: Company Reports, Baird Estimates*

**Anti-dilutive shares.** 2U currently excludes the impact from stock options and restricted stock units from the calculation of its weighted average share count, given that the equity awards would have an anti-dilutive effect on the company's shares, consistent with GAAP accounting rules. The company does not currently provide an estimated non-GAAP share count that estimates the dilutive share count assuming it were profitable in the current period.

Below we outline our estimate for the expected impact and dilution from additional stock-options and RSUs assuming 2U were profitable currently, and also provide additional valuation support based on the increased share count. We believe our calculation is accurate under the treasury method (reflecting 2U's share price as of 7/13/15), but would note that the below calculations solely reflect Baird estimates, and are not 2U management/company estimates. In our view, investors should consider the impact of anti-dilutive shares on the company's implied market cap and enterprise value.

| | |
|---|---|
| Current share price (as of 7/13/15) | $ 31.89 |
| **Current avg. diluted share count (as of 1Q15)** | **40,978,741** |
| Outstanding stock options (as of 3/31/15) | 5,597,062 |
| Weighted-avg. exercise price | $ 5.47 |
| Net inflow from options | $ 30,615,929.14 |
| Assumed repurchase of shares @ $31.89 | 960,048 |
| ***Net dilution from options (outstanding - cash inflow)*** | **4,637,014** |
| Additional options granted 4/1/15 | 608,746 |
| Weighted-avg. exercise price | $ 25.52 |
| Net inflow from options | $ 15,535,197.92 |
| Assumed repurchase of shares @ $31.89 | 487,150 |
| ***Net dilution from options (outstanding - cash inflow)*** | **121,596** |
| **Total net impact from outstanding options** | **4,758,611** |
| Outstanding restricted stock units (as of 3/31/15) | 767,918 |
| Additional RSUs granted 4/1/15 | 507,394 |
| **Total RSUs** | **1,275,312** |
| ***Options net impact + RSUs*** | ***6,033,923*** |
| **Additional dilution** | **14.7%** |

*Source: Company Reports, Baird Estimates*

While we believe that some investors may not fully be aware of the currently excluded anti-dilutive shares, and their impact on 2U's enterprise value and current valuation, we also continue to believe that the stock appears attractive around current levels, and that the potential for multi-year outperformance remains.

Highlighted below is a separate valuation table that accounts for the additional anti-dilutive shares within our enterprise value and valuation metrics. Notably, even including the approximate 6.0 million in current outstanding options and restricted stock units, in our view 2U is in position to post several years of solid returns. Assuming the low end of our +25-30% revenue growth targets and significant multiple contraction, the stock would still post a 3.0% CAGR through 2019, while the higher end of our revenue range and maintaining its current valuation multiple would result in a ~25% CAGR over the next four and a half years.

**REVENUE GROWTH VALUATION MATRIX (INCL. ANTI-DILUTIVE SHARES)**

| Revenue CAGR: | 25% | 27% | 30% |
|---|---|---|---|
| **2020E Revenue** | 465,972 | 496,518 | 545,122 |
| **Share Count (incl. anti-dilutive shares)**[1] | 49,411 | | |
| **Net Cash (Debt)** | 61,528 | | |

**Enterprise Value Matrix**

| Target EV/NTM Rev Multiple ($M) | 25% | 27% | 30% |
|---|---|---|---|
| 4.0x | $ 1,864 | $ 1,986 | $ 2,180 |
| 5.0x | $ 2,330 | $ 2,483 | $ 2,726 |
| 6.0x | $ 2,796 | $ 2,979 | $ 3,271 |
| 7.0x | $ 3,262 | $ 3,476 | $ 3,816 |
| 8.0x | $ 3,728 | $ 3,972 | $ 4,361 |

**Share Price Matrix**

| Target EV/NTM Rev Multiple | 25% | 27% | 30% |
|---|---|---|---|
| 4.0x | $ 36.48 | $ 38.95 | $ 42.88 |
| 5.0x | $ 45.91 | $ 49.00 | $ 53.92 |
| 6.0x | $ 55.34 | $ 59.05 | $ 64.95 |
| 7.0x | $ 64.77 | $ 69.10 | $ 75.98 |
| 8.0x | $ 74.20 | $ 79.14 | $ 87.01 |

| ~4.5-year return CAGR[2] | 25% | 27% | 30% |
|---|---|---|---|
| 4.0x | 3.0% | 4.5% | 6.8% |
| 5.0x | 8.4% | 10.0% | 12.4% |
| 6.0x | 13.0% | 14.7% | 17.1% |
| 7.0x | 17.1% | 18.7% | 21.3% |
| 8.0x | 20.6% | 22.4% | 25.0% |

*[1]Reflects ~1% annual dilution due to stock comp issuance, partially offset by net FCF over next five years*
*[2]4.5-year CAGR reflects publication date through 12/31/19*
*Source: Company Reports, Baird Estimates*

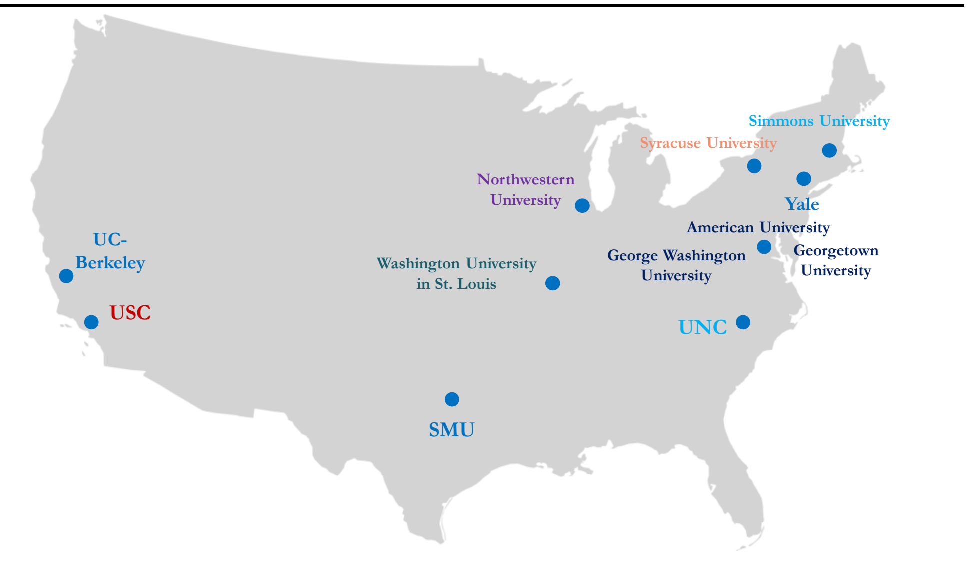
# Business Overview

**Overview.** TWOU is a leading provider of cloud-based SaaS technology and services that enable not-for-profit colleges and universities (NFPCUs) to deliver high quality fully online degrees. The company partners with top-tier universities throughout the U.S. and internationally, and provides a suite solution for colleges to attract, enroll, educate, and graduate their students. The company typically partners with universities via long-term contracts (~10-15 years), and revenue is derived from tuition share agreements that typically range between 60% and 65% of tuition and fees. 2U's online programs (primarily graduate degrees to date) are considered equivalent to schools' on-ground degrees in all regards, and notably are offered at the same price point. In addition to its core cloud-based platform, TWOU also provides a suite of additional services for students and universities, including student and faculty support, in-program placement, job placement, content creation, and student acquisition assistance.

**Brief History.** 2U was initially founded as 2tor in 2008 by Jeremy Johnson, John Katzman (founder of the Princeton Review), and current CEO Chip Paucek. The company launched its first university client partnership in 2009 with the University of Southern California (USC), and later changed its name to 2U in 2012 before successfully completing an IPO on March 28, 2014, receiving net proceeds of $100.3 million after deducting underwriting discounts, commissions, and offering expense of ~$11.8 million. Despite its brief history, 2U has shown impressive client traction to date, expanding to 13 university partners (incl. one school yet to launch), and with a stated goal of opening at least five new programs per year going forward (which seems highly achievable, in our view, and which 2U is considering accelerating).

**Partnerships with Leading U.S. Universities.** 2U partners with top-tier nonprofit universities and colleges, including six of the top 25, and 10 ranked within the top 75 of U.S. News and World Report's 2015 National University Rankings. The company initially started with four "core" partners consisting of the University of Southern California (USC), University of North Carolina at Chapel Hill (UNC), Georgetown University, and the University of California, Berkeley, but has since expanded and currently partners with 13 institutions to offer 20 online programs across 15 program verticals, with four programs yet to launch, including the company's first Ivy League partnership (Yale University). Total student enrollment has also continued to show strong growth with more than 12,300 total unique students enrolled to date, and full course equivalents (defined as total courses taken) increasing at an approximate 43% CAGR from ~14,000 in 2011 to more than 41,000 at the end of 2014.

**2U UNIVERSITY PARTNERS**



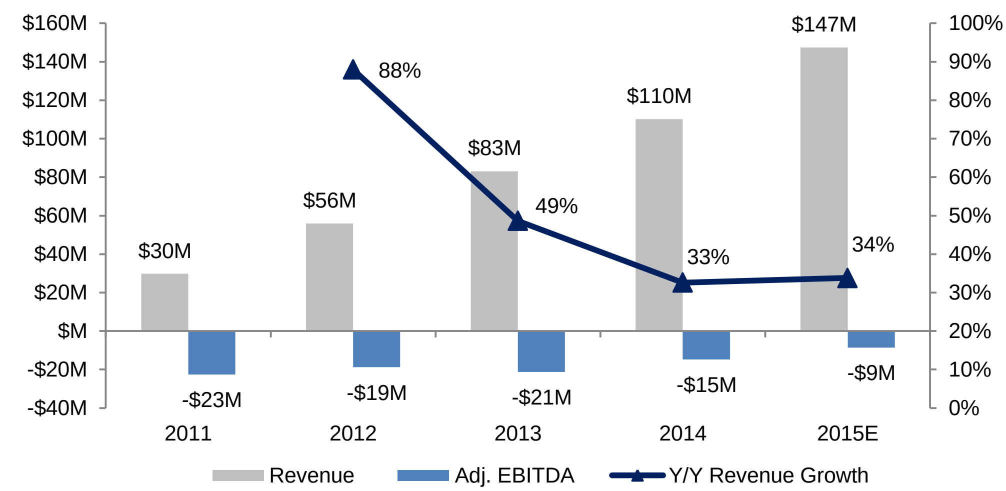

**2U also partners with Tecnologico de Monterrey (Mexico) via its online dual Master of Laws degree with Washington University in St. Louis*
*Source: Company Reports*

**Strong Growth Track Record and Outlook.** Since signing the company's first university partnership in 2008, 2U has shown consistently strong growth, driven by continued enrollment growth within its existing programs, as well as the launch of new university partners and programs. Since 2009, 2U has grown its list of program offerings from one to 13 as of the end of 2014, with nine programs launched within the past two years alone (five in 2013 and four in 2014), and plans for an additional five programs in 2015. The ongoing launch of new universities and offerings has helped drive strong revenue growth (~55% CAGR 2011-2014), which management expects to continue in 2015 with the mid-point of current formal guidance reflecting ~33% y/y growth (increased from initial guidance of ~28-31% y/y).

**Margin Outlook**. 2U currently operates at an adj. EBITDA loss; however, the company has shown significant relative improvement in losses every year, and we remain confident in the margin outlook for TWOU, and expect continued progress toward management's longer-term goals, driven by individual programs maturation, mix-shift toward a greater percentage of relatively scaled programs, MPV strategy, and further leverage of corporate expenses.

Specifically, we believe the company's ability to leverage its prestigious list of university partner brands, and also continue to build out its program base within existing verticals, should be a source of significant marketing efficiencies going forward, which to date have by far been the company's most significant cost (~57% of revenue in 2014, although down from ~80% in 2012). Notably, 2U's first launch cohort of universities (incl. two programs at USC, Georgetown Nursing, and MBA@UNC) became adj. EBITDA positive as of 2013, and management has stated that if all first cohort programs had been launched at the same time in 2009, they would currently have an estimated combined adj. EBITDA margin in the mid- to high-20 percentage range. We believe this is a strong example of the underlying potential profitability inherent in the business model, which should become more apparent to investors as additional programs currently in ramp mode reach sufficient scale.

**TWOU REVENUE AND ADJ EBITDA**

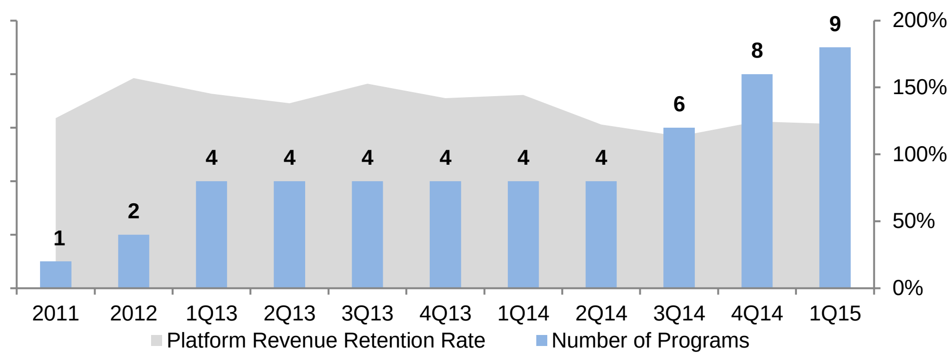



*Source: Company Reports, Baird Estimates*

**Recurring Revenue Model Provides Solid Visibility.** In addition to its solid growth prospects, 2U's long-term university contracts and solid student outcomes create a strong business model, with high levels of recurring revenue and solid visibility to both revenue growth and quarterly performance. During 2014 specifically, ~62% of the company's revenue was related to students who completed their first semester prior to the start of the year, and by February the company typically has visibility into greater than 75% of full-year revenue.

**Long-Term Partnerships with Solid Client Retention.** 2U's client contracts with university partners typically involve initial contract lengths of 10-15 years (one client is longer), and are non-cancelable. Additionally, the company's 10-year contracts also impose liquidation damages in the case of a client non-renewal, typically equal to two years of program revenue (ex. breach of contract). Since the company was founded in 2008 all of its university partners have remained active, and notably, its third client (UNC), which initially joined in 2009, recently agreed to extend the initial term of its contract for an additional 10 years through 2030. Further, while 2U's first few contracts did include exclusivity agreements in regard to program and degree offerings, more recent agreements have been less restrictive, opening up a broader market to the company and allowing it to gain leverage across its platform, particularly with regard to marketing and student acquisition costs.

**HISTORICAL CLIENT RETENTION**

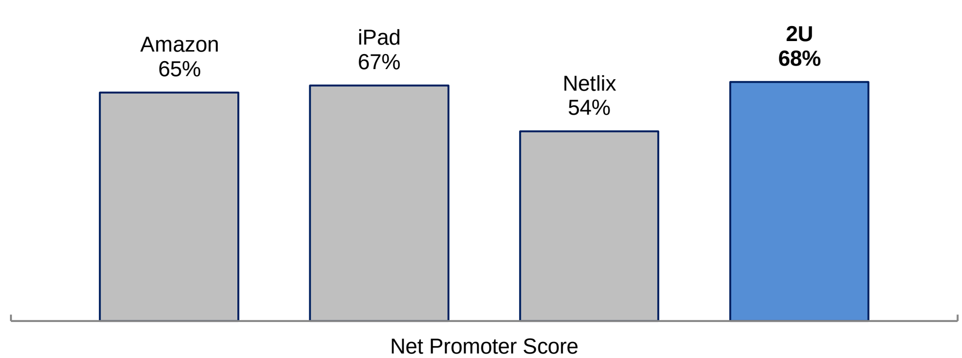



*Source: Company Reports*

**Growth Drivers, TAM, and Reasons FPCUs Partner with 2U.** Importantly, 2U generates good academic outcomes by many measures. While part of the success is undoubtedly attributable to the caliber of incoming students at its partner universities (which has historically been one of the issues/challenges at some of the proprietary online universities), we also believe that 2U's technology and academic model ("No Back Row"), and the faculty and pedagogy that it enables are effective at delivering learning outcomes.

**Focus on Quality and Education Outcomes.** We believe that 2U's proprietary cloud-based SaaS platform (Online Campus), as well as its low 10.5-to-1 student-to-teacher ratio (based on live session attendance) have helped to drive impressive educational gains data and retention metrics to date, which rival on-ground programs at many leading nonprofit universities and colleges. The company regularly conducts a Net Promoter Score survey to gauge customer loyalty and satisfaction, and student responses have reflected very impressive results that are on par with other leading tech services companies, and highlight, in our view, the benefits of 2U's "white-glove" approach. The company's student retention metrics have also been impressive with 83% of enrolled students to date still enrolled or graduated from their respective program.

**2U NET PROMOTER SCORE COMPARISON**




*Source: Company Reports*

In our view, 2U's overall program quality is a key differentiator for the company, and has been a main takeaway from our conversations with university partners to date. Below we highlight several additional tidbits that we believe are particularly noteworthy, and representative of the company's mission to deliver an online education that is truly on par with on-ground courses in all respects.

- Student and faculty services – 2U provides significant support for both students and faculty at its university partners, with some examples including 24/7 tech support, monitoring and advising potentially at-risk students, career services for students both throughout their program and after graduation, and disability services to ensure that all essential elements of a program are accessible to all students. The company also provides faculty recruiting to assist its university partners and help scale programs.

- Student and faculty approval – Both students and faculty have shown their support for 2U's program offerings, highlighted by its impressive Net Promoter Scores and strong approval ratings. According to the company's 2015 Impact Report, 93% of faculty teaching in 2U-supported programs believe online courses can achieve student learning outcomes at least equivalent to in-person classes that they teach. Additionally, we believe that students enrolled in 2U's programs fully embrace the university's culture and feel like true alumni, evidenced by a donation from the first graduating class of 2U's MBA@UNC that was the single largest class gift in Kenan-Flagler's history.

- Impressive outcomes data – Students to date have also shown impressive outcomes metrics post graduating from 2U programs, aided in our view by the company's hands-on approach to career assistance, including assisting with more than 20,000 successful student field placements to date. Students in some 2U sponsored programs have also seen an even faster return on their educational investment, including 74% of MBA@UNC students that received a promotion or changed jobs while enrolled in the program.

**Top Ranked Online MBA.** 2U's online MBA at UNC's Kenan-Flagler Business School (MBA@UNC) was recently ranked number one on a list of the top 25 online MBAs by the *Princeton Review.* We believe the ranking is particularly impressive given that the program was started only four years ago, and it's one of two of the company's programs to be included, with the University of Syracuse also ranked within the top 25 (18).

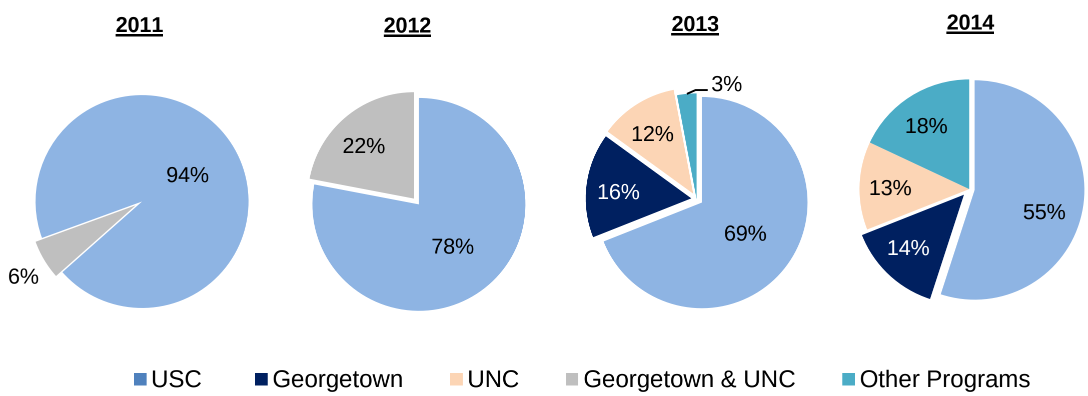
**TOP 10 ONLINE MBA PROGRAMS (2015)**

| Rank | University | Started | Enrollment | Avg. Acceptance Rate |
|---|---|---|---|---|
| **1** | **UNC Kenan-Flagler Business School** | **2011** | **569** | **64%** |
| 2 | Indiana University | 1999 | 657 | 85% |
| 3 | IE University (Madrid, Spain) | 2006 | 172 | 80% |
| 4 | Arizona State University | 2004 | 343 | 56% |
| 5 | Temple University | 2009 | 93 | 72% |
| 6 | University of Florida | 1999 | 250 | 65% |
| 7 | Rochester Institute of Technology | 2009 | 17 | 87% |
| 8 | Thunderbird | 2005 | 165 | 62% |
| 9 | University of Texas at Dallas | 1999 | 318 | 43% |
| 10 | Northeastern University | 2006 | 1,113 | 85% |

*Source: Princeton Review*

**Continued Diversification.** While the overall majority of 2U's revenue continues to be driven by its legacy programs with USC, the contribution mix has continued to decline at a significant rate over the past several years. As of 2014, approximately 55% of total revenue was derived from its two programs with the university, although that is down substantially from ~69% in 2013 and ~94% as of 2011. Combined with its Georgetown Nursing program and UNC MBA, the majority of revenue (~82%) remains concentrated within its initial set of "core four" programs; however, we expect 2U to continue to diversify its revenue mix as a significant number of newer programs launched in 2013 and 2014 (five and four, respectively) continue to scale and account for a greater percentage of overall revenue.

**REVENUE CONCENTRATION BY UNIVERSITY**




*Source: Company Reports*

# Platforms and Services, and Business Model

**Business Model.** 2U derives its revenue predominantly via revenue share agreements with its university partners, which on average range between 60% and 65% of tuition payments. The company provides the software and systems for universities to offer online classes via 2U's cloud-based SaaS platform, as well as additional services that help its university partners attract, enroll, retain, educate, and graduate students (e.g., student and faculty support, in-program placement, job placement, content creation and student acquisition assistance). Partnerships are structured via long-term contracts (~10-15 years on average), and are considered equivalent to schools' on-ground degrees in all regards, including price.

**Online Campus.** 2U enables a "flipped classroom" education model for its university partners. The online students watch/interact with professionally produced content, and then attend synchronous/live, small-group class sessions. 2U's proprietary cloud-based SaaS learning platform enables universities to offer synchronous, small-group class sessions (10.5-to-1 average student/teacher ratio in live sessions) that provide immersive and interactive discussions between students and teachers. The technology provides a platform that promotes face-to-face interaction and discussion. Additionally, Online Campus records and stores each class session on the platform making recordings available for students to review at any time, and the platform also provides the opportunity for student groups to set up private interactive study sessions at any day or time. To date, Online Campus (pictured below) has hosted more than 153,000 live class sessions.

**2U ONLINE CAMPUS PLATFORM**


*Source: Company Website*

**High Quality Asynchronous Content***.* Through Online Campus, 2U also provides a platform for universities and students to create, publish and deliver video and other asynchronous content, interactive course lectures, and both individual and group assignments and assessments. The company has developed technology solutions to augment its content delivery capabilities, including a Bi-Directional Learning Tool technology that is modeled after the Socratic method of teaching law, and blends asynchronous content with real-time student responses to enhance interaction between a faculty member and students.

**Social Networking Platform.** In addition to its synchronous and asynchronous content, Online Campus also provides a social interface that connects students to an extended network of faculty, other students, researchers, and administrators who are a part of their university community. Users are provided with fully customizable social profiles, multimedia postings and dynamic communication and notification tools designed to supplement the live classroom experience and promote meaningful interactions. University partners can choose to grant extended or lifelong access to Online Campus, providing students with the ability to review course content and recorded class sessions from previous courses.

**Benefits to University Partners**. Beyond the incremental revenue that universities receive through their partnership with 2U, we believe that the Online Campus platform provides several additional benefits that schools attribute value to, including expanding their brand and student reach, providing analytics on student outcomes and engagement, and creating a differentiated and engaging online platform, which leverages 2U's existing scale and infrastructure investment.

**Technology-Enabled Services.** Beyond its proprietary cloud-based SaaS learning platform, 2U also provides a suite of additional technology-enabled services that span the lifecycle of a student's enrollment, and help its university partners attract, enroll, retain, educate, and graduate students. Highlighted below is a summary of support services comparing TWOU's typical responsibilities with the services that remain the responsibility of its university partners.

**COMPARISON OF 2U VS. UNIVERSITY SERVICES**

| 2U | Universities |
|---|---|
| • Program marketing and student acquisition<br>• Content development assistance<br>• Admissions application advising<br>• Student and faculty support<br>• In-Program student field placement (incl. ~20k placements in ~14,000 organizations)<br>• Distance education state authorization services | • Delivery of core academic services - (e.g., teaching, grading, and assessment)<br>• Responsibility for program accreditation<br>• Admissions criteria<br>• Financial aid<br>• Faculty<br>• Curriculum |

*Source: Company Reports*

**Enterprise Program.** Recently introduced on the company's 1Q15 earnings call, 2U's Enterprise Program model combines several smaller individual degree programs at a university into the revenue expectations of one typical program. The model leverages cost efficiencies to improve scale and profitability, and will allow the company to further penetrate its target market. The cost structure of the enterprise program model is expected to look very much like a first program within a new degree vertical, with a similar amount of net negative cash investment (range of ~9-10 million over the first three to four years). It will likely reach adjusted EBITDA and cash flow breakeven around the end of year three or the beginning of year four, and should have steady-state margins at the lower end of 2U's mid-30%s target.

- 2U has partnered with Simmons College for its first Enterprise Program that will include five separate degrees expected to be rolled out during 2016 and 2017. The degrees include an MBA, a health-care focused MBA, a Master of Science in Communications Management, a Master of Public Health, and a Master of Science in Behavior Analysis.

**Campus Scaffold.** 2U's newest service offering leverages the company's existing infrastructure and services investments, and looks to further blend the definitions of online and on-ground students. The offering provides the opportunity for on-ground students to also take online courses, and similarly opens up the opportunity for online students to attend physical classes when on campus. Additionally, via the service 2U will look to leverage its marketing and recruitment services to assist universities with on-ground student demand generation, with both services provided at little or no cost to the universities. Campus Scaffold is scheduled to be piloted this fall at George Washington's Public School of Health, and in our view, the offering should help to further differentiate and entrench the company as a preferred provider of online course delivery and services to top-tier colleges and universities.

# University Partners, Verticals, and Degrees

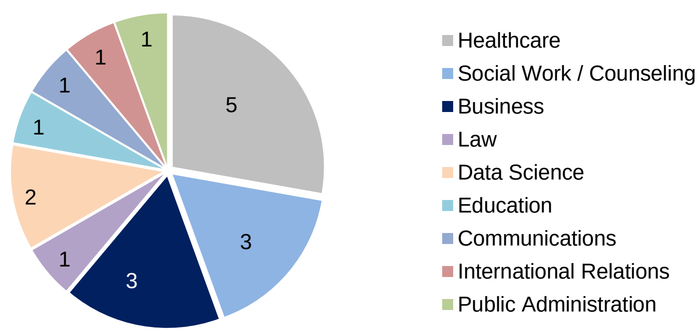
**Verticals.** While international and undergraduate degrees remain a long-term growth opportunity for the company, 2U's online programs to date have primarily focused on the U.S. graduate student market. Of the 19 total programs expected by year-end 2015, 18 are graduate degrees, with only one undergraduate program recently launched in October 2014 at Simmons College.

- Graduate Degree Programs*:* focused primarily at the Master's degree level, 2U currently offers 15 graduate degree programs covering the healthcare, law, business, education, social work and data science verticals. In addition to its existing courses, the company has plans to launch two additional offerings over the remainder of 2015, including an MBA and a Master of Science in Analytics with the Kogod School of Business at American University (estimated in October), and a Master's in Communications at the Syracuse University Newhouse School of Public Communications (late 2015)

- Undergrad Programs: 2U recently launched its first and only undergraduate degree program in October 2014, a Residential Nurse to Bachelor of Science in Nursing (RN-to-BSN) degree at Simmons College.

- International Degrees: 2U also currently offers one international degree, which is a Dual Master of Laws program offered by the Tecnológico de Monterrey, in conjunction with Washington University in St. Louis. The program was launched in September 2014.

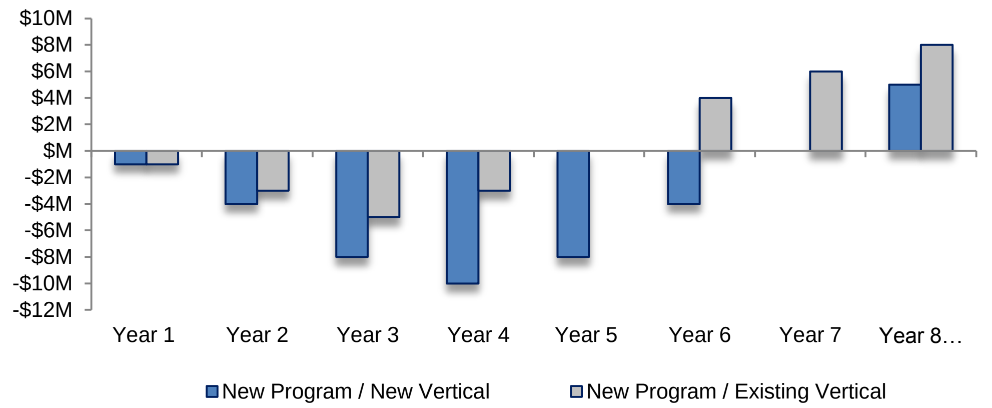
**TWOU PROGRAM MIX BY VERTICAL (18 as of '15E)**




*Source: Company Reports*

**Program Funding Model.** Under the company's model, 2U covers the content generation expenses associated with standing up a program, as well as the ongoing servicing and support costs, and the marketing and sales requirements to generate enrollments. Given the front-end expense required, coupled with a lag until enrollments and revenue reach peak periods, new programs operate at a loss over the early years of a contract with peak net negative investment spend around year three or four; however, overall programs maintain strong economics becoming profitable on average around year five and remaining net cash positive for the remainder of a program's life. Typically, first time programs within a new vertical require approximately \$9 million to \$10 million in investment for launch and sufficient scaling, with approximately \$2 million spent on content and tech development, but the remaining vast majority spent on marketing and enrollment services. Notably, when a second program is launched under an existing vertical, 2U is able to leverage its existing pipeline of potential students, and as a result program economics become even more favorable with net negative cash at its low point typically closer to approximately \$5 million, and a program's steady state achieved approximately one year earlier.

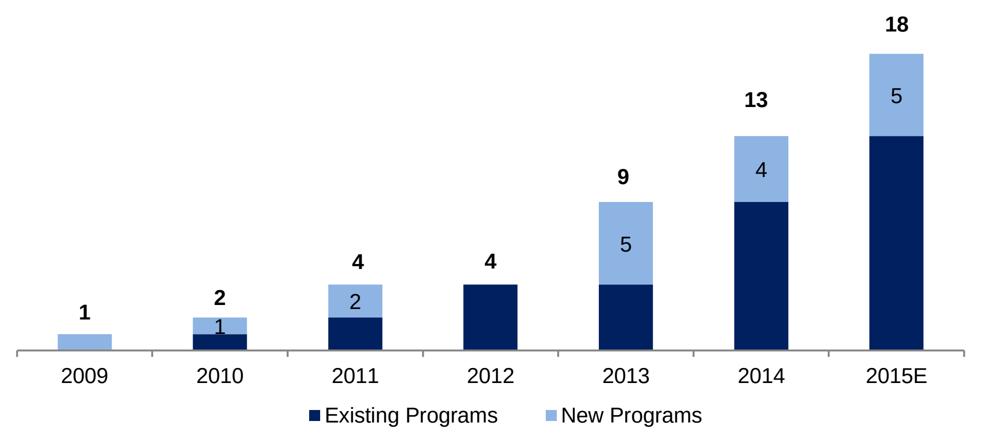
**2U TYPICAL PROGRAM INVESTMENT AND CUMULATIVE PROFITABILITY**




*Source: Company Reports, Baird Estimates*

**Program Expansion.** Since its first university partner launched in 2009 (USC Rossier School of Education), 2U has consistently shown solid signs of traction with business development efforts driving the company's partnership to a total of 13 programs as of 2014, with plans for five additional new programs in 2015, and the school's first Ivy League partnership with Yale University (program launch TBD). We believe that 2U's track record of continued new client and program growth is very impressive, particularly given that the company does not participate in RFPs and instead focuses on leveraging its brand and past partnerships to drive client growth. Additionally, 2U employs a proprietary program-selection algorithm that forecasts enrollments by program for every school in the country, enabling the company to systematically identify universities and programs that it believes have the highest probability of success with the platform, thus deploying capital with greater efficiency and confidence.

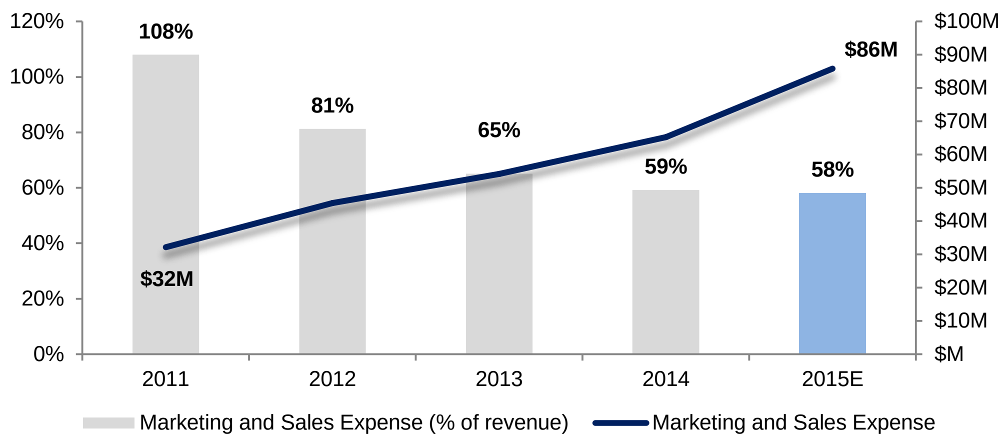
**2U PROGRAM EXPANSION**




*Source: Company Reports*

**Marketing.** 2U's largest cost line item by far has been its annual marketing and student recruitment costs, which accounts for the vast majority of new program expenses, especially within new verticals where 2U has not previously developed a demand pipeline. Over the past four years, marketing and sales expense has more than doubled from ~$32 million in 2011 to ~$65 million in 2014 (26.6% CAGR); however, as a percentage of revenue marketing and sales expense has notably declined over recent years from 108% in 2011 to just less than 60% in 2014, with existing programs continuing to ramp and partially offsetting prior front-end loaded investments. Notably, as the company continues to build out its program base with additional partnerships, particularly within existing verticals, we believe 2U will be able to even further leverage its existing marketing and sales infrastructure providing greater future savings.

MARKETING AND SALES EXPENSE




*Source: Company Reports*

**University Partners.** 2U partners with top-tier nonprofit universities and colleges, including 10 ranked within the top 75 of U.S. News and World Report's 2015 National University Rankings. The company initially started with four "core" programs consisting of the Rossier School of Education and School of Social Work at the University of Southern California (USC), as well as the University of North Carolina at Chapel Hill (UNC), and Georgetown University, but has since expanded and currently partners with 13 institutions to offer 20 online programs, including four programs yet to launch. 2U's most recent new school partnership was with Yale University's School of Medicine, 2U's first Ivy League partner (launch date TBD). Driven by the continued ramp in new programs and strong organic program growth, total student enrollment has also continued to show strong growth, with greater than 12,300 unique students enrolled as of year-end 2014, and full course equivalent enrollments increasing at a 43% CAGR from ~14,000 in 2011 to more than 41,000 at the end of 2014.

2U UNIVERSITY PARTNERS AND PROGRAMS

| University | School | Degrees | Launch Date |
|---|---|---|---|
| USC | Rossier School of Education | Master's (2), Doctorate (1) | April 2009 |
| | School of Social Work | Master of Social Work | October 2010 |
| Georgetown University | School of Nursing & Health Studies | MS in Nursing | March 2011 |
| University of North Carolina | Kenan-Flagler Business School | MBA | July 2011 |
| | School of Government | Master of Public Administration | January 2013 |
| Washington University in St. Louis | School of Law | Master of Laws in U.S. Law, Master of Legal Studies, and Dual Master of Laws | January 2013 |

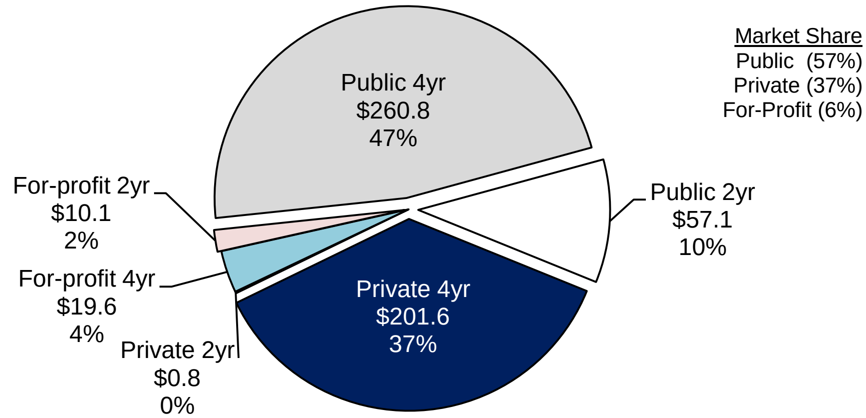
| | | | |
|---|---|---|---|
| **American University** | School of International Service | MA in International Relations | May 2013 |
| **George Washington University** | Milken Institute School of Public Health | Master of Public Health | June 2013 |
| **Simmons University** | School of Nursing and Health Sciences | MS in Nursing | October 2013 |
| **University of California Berkeley** | School of Information | Master of Information and Data Science | January 2014 |
| **George Washington University** | Milken Institute School of Public Health | Executive Master of Health Administration | April 2014 |
| **Simmons University** | School of Social Work | MS of Social Work | July 2014 |
| | School of Nursing and Health Sciences | RN to BSN | October 2014 |
| | | RN to MSN | October 2014 |
| **Syracuse University** | Whitman School of Management | MBA / MS in Accounting | January 2015 / Mid-2015 |
| | S.I. Newhouse School of Public Communications | Master of Communication | 2015 |
| **Southern Methodist University** | Interdisciplinary study: Dedman College of Humanities and Sciences, Lyle School of Engineering, and Meadows School of the Arts | Master of Science in Data Science | January 2015 |
| **Northwestern University** | The Family Institute at Northwestern | Master of Arts in Counseling | Spring 2015 |
| **American University** | Kogod School of Business | MBA and Master of Science in Analytics | October 2015 |
| **Simmons University** | Multi-School Enterprise Program Model | Enterprise Program MBA; Healthcare MBA; MS Communications; MPH; MS in Behavior Analysis | 2016 |
| **Yale** | Yale School of Medicine | Master of Medical Science | TBD |

*Source: Company Data*

# U.S. Education End Market

**~$550B U.S. Post-Secondary Education Market.** According to the National Center for Education Statistics, the U.S. post-secondary education market accounted for ~$550 billion in spending during 2013. Non-profit colleges and universities accounted for the vast majority of that spend (~94%) with public colleges making up ~57% and private schools accounting for ~37%.

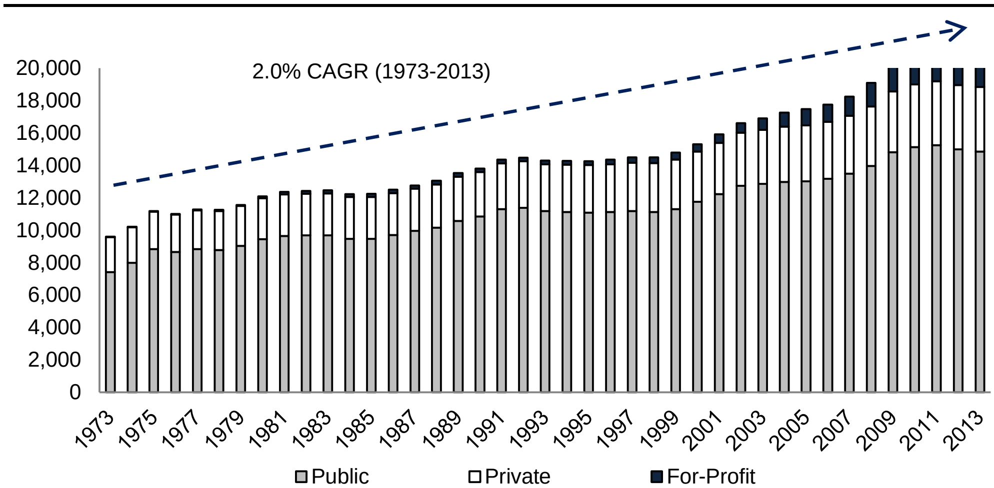
**~$550 BILLION U.S. EDUCATION MARKET**




*Source: National Center for Education Statistics (NCES)*

**~21 Million U.S. Post-Secondary Students.** Total enrollment in U.S. post-secondary institutions has grown at a 2.0% CAGR over the past forty years, increasing from approximately 9.6 million students in 1973 to 20.8 million students in 2013. The growth has been driven by both total population growth, as well as increased penetration of bachelor's degrees, with the total population increasing at a 1.0% CAGR between that time (18-34 year olds +0.7% CAGR), and the percentage of 25 year olds and over with four or more years of college recently reaching ~32% of the total U.S. population, compared to approximately 12% as of 1973.

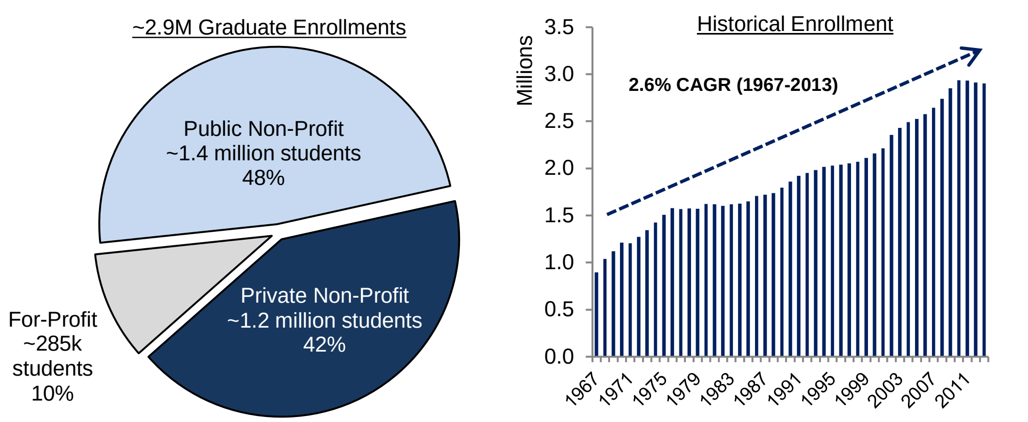
**U.S. POST-SECONDARY ENROLLMENT**




*Source: National Center for Education Statistics (NCES)*

**~2.9 Million Student U.S. Graduate Degree Market.** To date, 2U's programs have primarily focused on the U.S. graduate student market, with 12 of 13 degree offerings as of 2014 covering Master's or Doctoral programs. As of 2013, the U.S. graduate market included approximately 2.9 million students enrolled at both non-profit and for-profit institutions, with non-profit schools accounting for ~90% of total graduate enrollment (~48% public and ~42% private), and for-profit programs enrolling the remaining ~10%. While historically for-profit institutions have offered a much larger share of online graduate programs, we believe that the online environment is currently in the midst of a sea change with non-profit universities in the early innings of an effort to expand their online offerings. That dynamic coupled with the fact that 2U's targeted program characteristics are more aligned with the student demographics at non-profit programs, leads us to believe that the ~2.6 million non-profit graduate enrollments is a much better proxy for 2U's current addressable market opportunity.

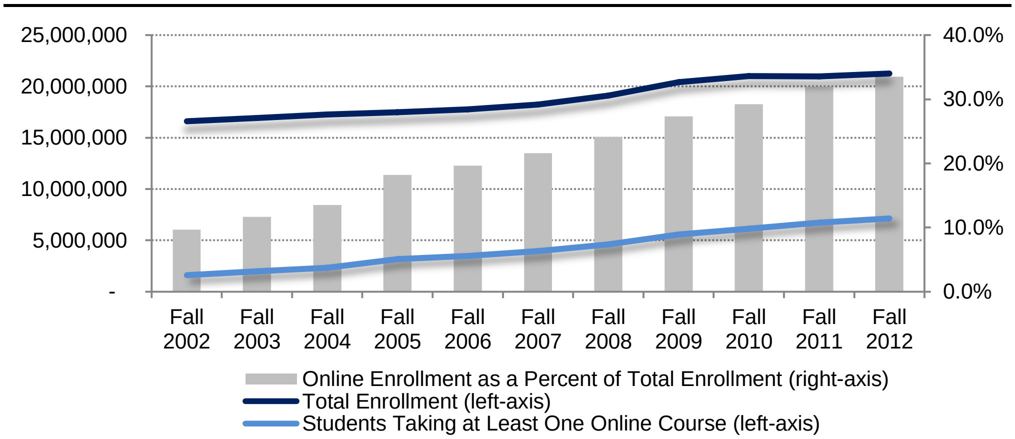
**U.S. GRADUATE DEGREE ENROLLMENTS**




*Source: National Center for Education Statistics (October 2014)*

**U.S. Online Post-Secondary Market.** Over the past 10+ years online education throughout the U.S. has experienced rapid growth with the number of students taking at least one online course increasing from ~1.6 million students as of 2002 to ~7.1 million students as of 2012 (16.1% CAGR). Online growth has solidly outpaced that of overall post-secondary enrollment, which has increased at a 2.5% CAGR between 2002 and 2012, with the number of online enrollments as a percentage of overall post-secondary enrollment increasing from ~9.6% in 2002 to 33.5% as of 2012. We believe that improving technological capabilities, an increase in the number of older students (25+) returning to school or attending for the first time, and finally the increased number of for-profit programs are all drivers of the strong growth.

**POST-SECONDARY ONLINE ENROLLMENT**




*Source: Babson Survey Research Group "Tracking Online Education in the United States" (January 2014)*

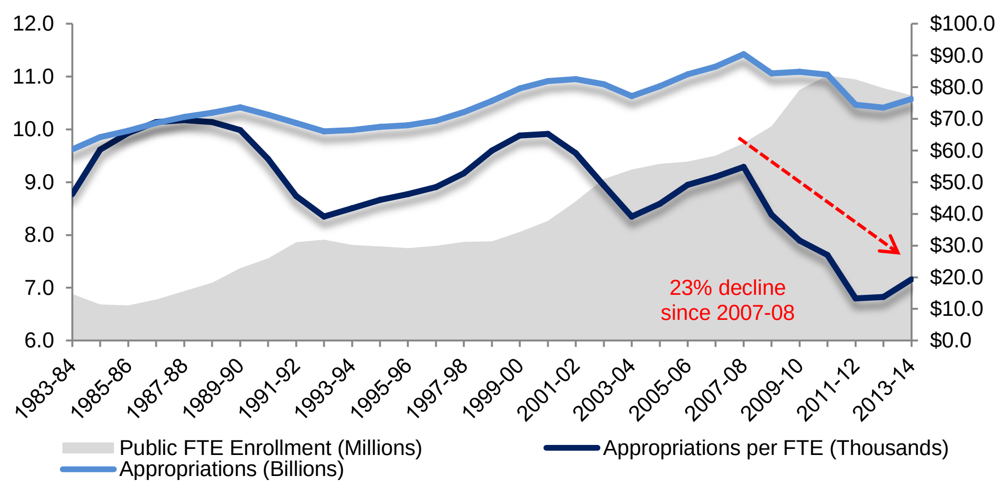
# Third-Party Enablers: Non-Profits' Push Toward Online Education

The U.S. higher education landscape has changed drastically over recent years, including continued growth of fully online degrees, and the emergence of the third-party enabler market.

In our view, one of the factors that helped enable this change was universities seeking alternative revenue sources due to funding challenges during the "Great Recession." Specifically, since 2007-2008 state funding to higher education has declined by approximately 16%, as state budgets overall have faced greater constraints following the Great Recession. The decline in state funding has coincided with a continued increase in the number of students attending higher education institutions, driving the cost of higher education even higher and resulting in an even more significant decline in aid on a per full-time equivalent (FTE) basis (down 23% since 2007-08), with students notably having to bare a greater proportion of costs. Similarly, we believe that many private not-for-profit universities had similar challenges during that period, due to lower donations and challenged investment returns in their endowments.

In addition to greater funding constraints that require universities to look for additional revenue streams, we believe that recent technological advances have improved the online learning experience drastically, and are contributing significantly to the ability for institutions to offer a high quality online learning platform. Specifically, higher rates of internet penetration, as well as improved data transfer speeds, coupled with the rapid proliferation of mobile devices and the growth in cloud-based services are contributing to the improved accessibility of educational content and services as well as the potential reach of educational institutions. As a result, colleges and universities are rethinking their operational and business models, determining how to incorporate technology-enabled offerings into their long-term growth strategies and seeking cost-effective ways to expand their academic reach. We also believe that more tech savvy (or at least tech comfortable) tenured faculty members have also made them less resistant to online education than a decade ago.

**STATE FUNDING TO HIGHER EDUCATION**

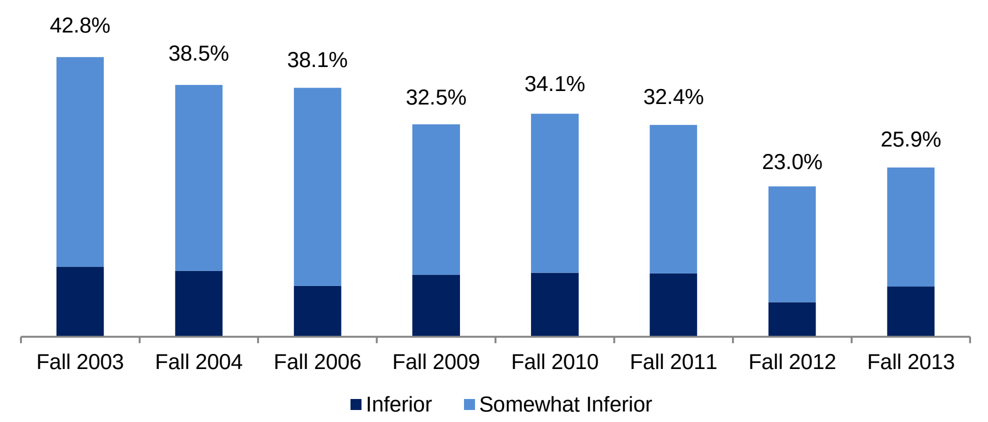



*Source: The College Board "Trends in College Pricing 2014"*

**Declining State Aid.** State funding to non-profit public universities (on a per-student basis) has declined substantially over the past two and a half decades, coinciding with a substantial increase in public school enrollments, which have grown by approximately 55% over the past thirty years. Since reaching a peak of $10,176 per full-time enrollment in 1987-1988, state aid to colleges and universities has declined by ~30% as of 2013-14 (to $7,161 per FTE). Overall, state aid has continued to grow over the past several decades (+26% since 1983-84); however, over recent years overall aid has also declined, down approximately 16% since 2007-2008, as state budgets have been severely constrained following the Great Recession. On a per-student basis, the recent declines have been even more pronounced with aid per full-time equivalent student down ~23% since 2007-08. While state funding per full-time enrollment has rebounded slightly over the past two years, and overall state aid also rebounded slightly during 2013-14 (first time in six years), we believe that the significant recent declines are a contributing factor in non-profit universities' increasing shift toward online education.

**Growing Acceptance of Online Education.** In addition to significant declines in state funding for non-profit colleges and universities, we also believe that both students' and universities' sentiment toward online education has improved drastically over recent years, providing a more ideal backdrop for the platform's recent and future growth. The chart below highlights the increased acceptance of online education by institutions across higher education, with approximately 74% of surveyed Chief Academic Officers viewing online education outcomes as the same or superior to those in face-to-face instruction, up from 57% in 2003.

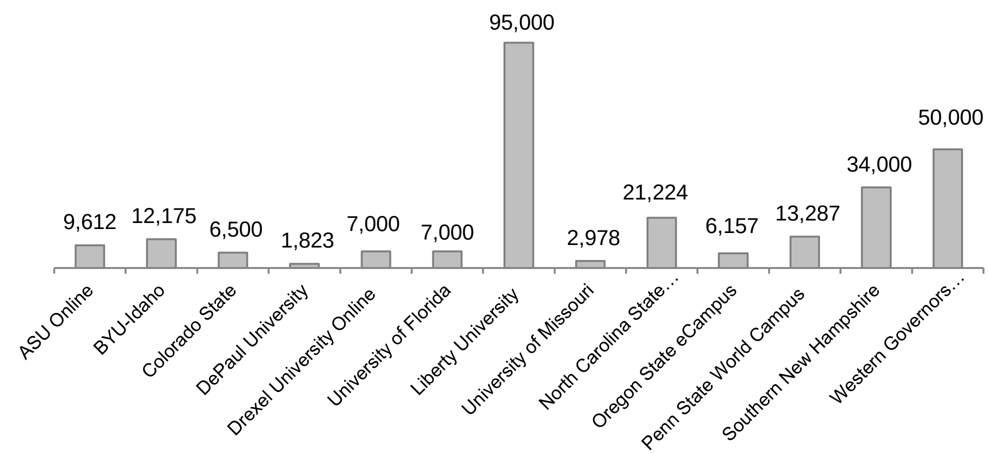
**HIGHER ED ACCEPTANCE of ONLINE EDUCATION**




*Source: Babson Survey Research Group "Tracking Online Education in the United States" (January 2014)*

**Growing Presence of Online Non-Profit Programs.** Over the past several years, both the number of non-profit programs and total online enrollment at non-profits has increased drastically, spurred on in our view by an increased number of "third-party enablers" that partner with non-profit institutions and provide expertise in developing online platforms. Below is a select list of non-profit universities that over recent years have expanded their online platforms and experienced significant growth, whether via internal initiatives or "third-party enabler" partnerships. Notably, several of the largest non-profit providers (e.g., Liberty University, Southern New Hampshire, and Western Governors) continue to experience strong growth, up 6%, 36%, and 25% y/y, respectively, over the past year.

**SELECT NON-PROFIT ONLINE ENROLLMENTS**




*Source: Company and University Websites, National Center for Education Statistics (NCES), Parthenon Perspectives "Are the Sleeping Giants Awake"*

While we highlight some of the larger not-for-profit universities above in terms of fully online enrollment as a way of highlighting the development of the fully online market at traditional colleges and universities, we believe it is worth noting that there are many fully online programs with a few hundred students. While 2U primarily targets programs that can and want to scale to a critical mass, it still targets individual programs that even over the intermediate term we would generally expect to enroll in the hundreds to a few thousand students per program (i.e., we believe it would be rare for a 2U enabled program to exceed several thousand students, even in the intermediate term).

**Third-Party Enablers.** The nonprofit online "third-party enabler" market is a nascent industry with no dominant industry provider. We believe that 2U is currently the provider of choice for online platform solutions at top-tier nonprofit universities; however, the company does face competition from other providers, specifically EmbanetCompass and Deltak, which were acquired in 2012 by Pearson (LON:PSON; not covered) and John Wiley & Sons (JW.A; not covered), respectively, and partner with some of the same universities as 2U. Additionally, a number of nonprofit universities have elected to develop their own in-house online learning solution.

**2U NON-PROFIT UNIVERSITY PARTNERS VS. PRIMARY COMPETITORS**

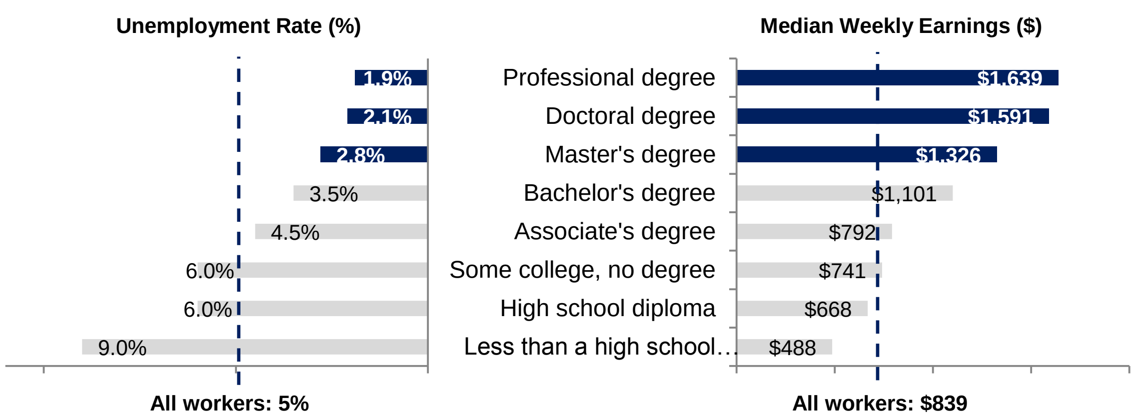
| "Third-Party Enablers" | Partners |
|---|---|
| **2U Inc. (TWOU)** | USC, UNC, Georgetown, Washington University in St. Louis, Tecnologico de Monterrey, Northwestern, George Washington, University of California-Berkeley, American University, Syracuse, Simmons, SMU, and Yale |
| **Pearson eCollege (LON:PSOL; not covered)**<br><br>(acquired Embanet Compass for $650 million in October 2012; ~5x F'12 revenue) | Arizona State, Boston University, Bradley University, Brandeis University, Case Western University, George Washington, Northeastern, Pepperdine, Rutgers, Ohio University, New England College, Hofstra University, U of Arizona, U of Florida, U of Maryland, U of San Francisco, USC, Vanderbilt, Villanova, Wake Forest… |
| **Deltak – (JW.A; not covered)**<br><br>(acquired by John Wiley for $220 million in October 2012; ~4x rev) | 38 partners and 200 degree programs under contract as of June '15 (F'15), including the University of Dayton, George Washington, Georgetown, the University of Texas, and Syracuse University… |
| **Bisk** | Villanova, Notre Dame, Florida Tech, Michigan State, U of Florida, USF, Valparaiso, New England College, U of St. Thomas, U of San Francisco, Jacksonville University, U of Vermont, U of Scranton, Dominican University |
| **Learning House** | 75+ schools, including ATA College, Bethany College, Concordia University, Fresno Pacific University… |
| **Academic Partnerships** | Florida International University, Lamar University, the University of Texas at Arlington, and University of Arizona |
| **HotChalk** | St. Thomas University, Wilkes University, Concordia Online Education… |
| **Colloquy** | The University of Adelaide, Alabama State University, Cal State Monterey Bay, The George Washington University, The University of Tulsa, Texas A&M University, University of California San Francisco, University of South Florida |
| **Additional New(er) Entrants:** | Everspring, Acatar, PlattForm, All Campus, Blackboard |

*Source: Company and University Websites, Parthenon Perspectives "Are the Sleeping Giants Awake"*

# Industry Outlook and Growth Strategy

**Attractive Student Value Proposition.** We believe that 2U's online programs provide an attractive value proposition for students, taking into account both the absolute value of increased educational attainment, as well as the total cost and coinciding relative value of the company's online degrees when compared to on-ground full-time and part-time degree offerings. As expected, both unemployment and median weekly earnings improve progressively as a person improves their level of educational attainment, with median weekly earnings for students with a Master's degree and a Doctoral degree approximately 20% above those for a Bachelor's degree, based on data from the U.S. Bureau of Labor Statistics. Additionally, students with a graduate degree face greater job security with significantly lower unemployment levels for students with a Master's, Doctoral, or Professional degree (2.8%, 2.1%, and 1.9%, respectively), compared to a median unemployment rate of ~5% for all levels.

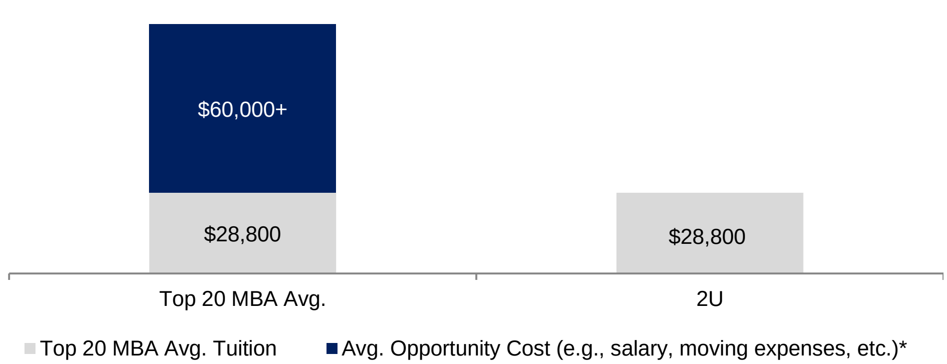
**EARNINGS AND UNEMPLOYMENT RATES BY EDUCATIONAL ATTAINMENT (2014)**




*Source: Current Population Survey, U.S. Bureau of Labor Statistics, U.S. Department of Labor*

Coupled with an improved employment and earnings outlook for each progressive degree, we also believe that online programs provide an attractive value proposition for students, particularly at the graduate degree level where the ability to both attend classes on a flexible time schedule, and also reduce transportation expenses as well as significant opportunity costs (e.g., potentially leaving full-time employment), provide significant value for older adult learners that are more likely to have significant responsibilities and less geographic mobility. Highlighted below we outline average tuition costs for a graduate degree at a public university, as well as additional expenses that can far surpass total tuition costs.

**SAMPLE AVERAGE FULL-TIME MBA DEGREE VS. ONLINE**




**Salary data reflects BLS median weekly earnings (bachelor's degree only)*
*Source: U.S. News, Bureau of Labor Statistics, U.S. Department of Labor*

**Existing U.S. Graduate Market Revenue Opportunity.** 2U currently has plans to launch 20 degree programs (including four yet to launch) across approximately 15 different verticals, but primarily derives revenue from four of its initial degree offerings (USC's Rossier School of Education and School of Social Work, Georgetown University's School of Nursing, and UNC's Kenan-Flagler Business School), which accounted for ~$90 million in revenue during 2014 (82% of total revenue). Given the vast U.S. higher education market and traction shown to date, we believe that 2U can achieve significant near- to intermediate-term growth of 25-30%+, driven by continued enrollment growth in existing programs, new programs at existing university partners, and additional new university partnerships. 2U has identified over 100 graduate-level academic disciplines with more than 1,000 graduates per year, and believes that it can implement its MPV strategy in at least 50 of those disciplines. It also believes there are 10+ net new/developing disciplines that it may be able to target over time (e.g., data science). TWOU assumes this equates to 180+ potential programs, which could generate $3 billion ($16.7 million average per program) in steady-state annual revenue to 2U.

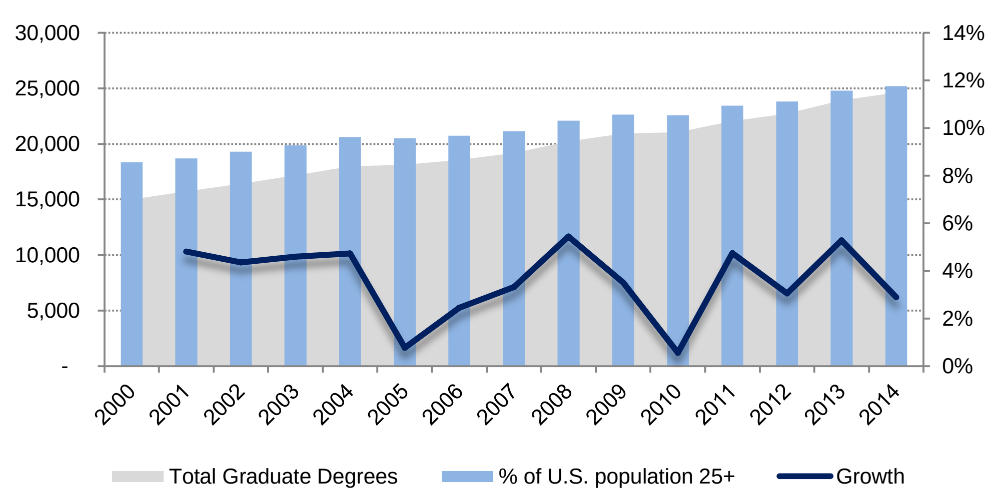
- **Growth in existing programs:** Over the past three years 2U has seen impressive enrollment and revenue growth with CAGRs of ~43% and 55%, respectively. The majority of growth has been driven by expanding enrollments within its core four programs, which increased their revenue contribution from ~$28 million in 2011 to ~$90 million as of 2014.

- **New programs at existing university partners:** As 2U continues to drive solid results for its university partners, we expect the company to leverage its existing relationships and infrastructure to introduce additional degree offerings at existing university partners. Notably, of the 12 current universities offering programs, nine partnerships involve more than one degree offering.

- **New university partners:** Since its initial core four programs were launched between 2009 and 2011 (Georgetown, UNC, and two with USC), the company has continued to sign additional university partnerships, including four in 2013 (Washington University in St. Louis, American University, The George Washington University, and Simmons College).

**Additional End-Market Growth.** In addition to the growth opportunity within the existing U.S. graduate market, we believe that the broader U.S. graduate degree market will continue to experience solid growth over the intermediate term, as the potential pool of bachelor degree recipients continues to increase, and job requirements continue to necessitate greater educational attainment and specialization. Notably, since 2000 graduate degree market penetration among U.S. adults 25 and older has continued to experience growth, with approximately 12% of total U.S. adults 25 and older currently holding a graduate degree as of 2014, up from approximately 9% as of 2000.

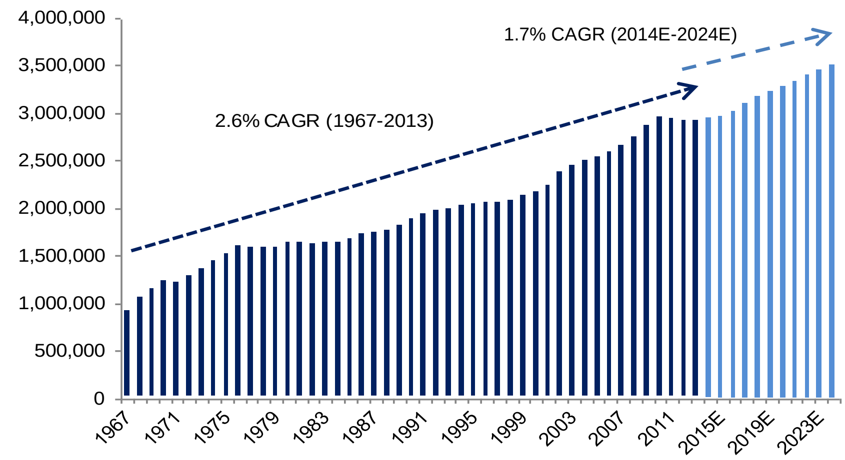
**U.S. HISTORICAL GRADUATE ENROLLMENT AND MARKET PENETRATION**




*Source: U.S. Census Bureau*

- Between 1967 and 2013 U.S. graduate degree enrollments grew at a 2.6% CAGR, increasing from 896,065 as of 1967 to 2,910,388 as of 2012. While growth over the next decade is expected to decelerate slightly, enrollments are expected to maintain solid modest growth with projections from the Department of Education and National Center for Education Statistics forecasting a ~1.7% CAGR between 2014 and 2023E.

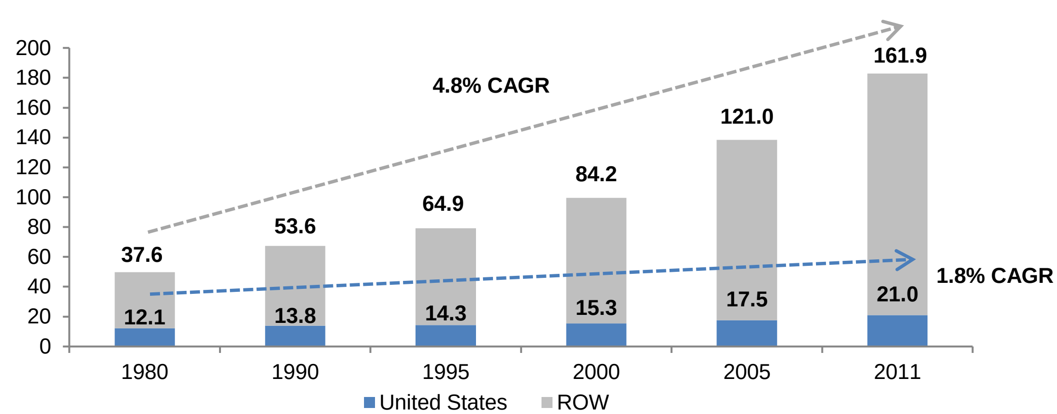
**U.S. HISTORICAL AND PROJECTED POST-SECONDARY GRADUATE ENROLLMENT**




*Source: U.S. Department of Education (ED), National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS)*

**International and Undergraduate Degree Opportunity.** In addition to a substantial market opportunity across U.S. graduate degree education, we believe 2U has the opportunity over the intermediate term to both (1) expand its service offering internationally, and (2) further penetrate the undergrad U.S. education market beyond its one current program with Simmons College. Within the U.S., undergrad enrollments account for the vast majority of the approximate 21 million total students (~86%), with non-profit public and private institutions accounting for ~90% of the 18 million undergrad students. Globally, higher education provides a much larger market opportunity (~$1.4 trillion based on company estimates), with a fragmented selection of providers typically varying by geography. We expect the broader global education market to continue to be a secular growth market over the intermediate-to-long term, driven primarily by further adoption of improved technological capabilities, and the continued expansion of the global middle class.

**GLOBAL HIGHER EDUCATION ENROLLMENT (millions)**




*Source: United Nations Educational, Scientific, and Cultural Organization (UNESCO), U.S. Department of Commerce, Census Bureau*

# Path to 2020

**Current Program Characteristics.** 2U partners with top-tier nonprofit universities and colleges, including six of the top 25, and 10 ranked within the top 75 of U.S. News and World Report's 2015 National University Rankings. The company currently partners with 13 institutions to offer 20 online programs across 15 program verticals, including four programs yet to launch. As of 1Q15, more than 12,300 total students have enrolled in a 2U program, with a global student base covering 79 different countries.

According to its 2015 Impact Report, the company had 736 active faculty as of 2014, including 500+ that were on-boarded in 2014 alone, with 109 new courses also launched during the year (average class size of 10.5 students). Currently, student enrollments are more heavily weighted toward females (~3:1 ratio vs. male), and ~12% of students are military affiliated. Below we highlight a few of the company's current average program characteristics, along with a summary table with characteristics and requirements by program offering.

- Students: 2U's average student age is 33 with a wide range between 18 and 77.
- Pricing: The average price of a graduate degree from a 2U client program is $67,575, with also a wide range depending on the area of study (between $36,630 and $124,325).
- Faculty: 2U's focus on "No Back Row" is exemplified by the low student/teacher ratios across all of its programs, with an average class size of 10.5 students, and typical maximum student/teacher enrollment ratios between 12:1 and 15:1.

**Student Placement Services and Solid Outcomes.** By year-end 2014, 2U had facilitated more than 20,000 in-program field placements in approximately 14,000 placement sites around the world. In client programs with the largest number of graduates, 83% of graduates were working in their field and 20% were offered full time employment at their placement site. For students and businesses looking to make a significant investment in graduate degree programs, job placement is a primary concern. 2U client programs offer students a quality education with many of the same faculty that teach on campus, and provide students with access to faculty and alumni networks at each school, resulting in higher job placement rates and a more attractive student value proposition.

**SUMMARY OF CURRENT PROGRAM CHARACTERISTICS**

| School | Average Price per Degree | Average Duration | Criteria | Typical Max Enrollment |
|---|---|---|---|---|
| USC Rossier School of Education | $67,679 | 2.5 years | • Bachelor's degree<br>• Typically above 3.0 GPA | 15:1 ratio |
| USC School of Social Work | $108,683 | 2.25 years | • Bachelor's degree<br>• Minimum GPA of 3.0 | 12:1 ratio |
| Georgetown School of Nursing & Health Studies | $76,677 | 3.1 years | • Bachelor's degree in nursing<br>• Current RN license | 12:1 ratio |
| UNC Kenan-Flagler Business School | $99,675 | 3 years | • Bachelor's degree<br>• 2+ years professional work experience | 15:1 ratio |

| | | | | |
|---|---|---|---|---|
| UNC School of Government | $52,900 | 2 years | • Bachelor's degree<br>• Typically over 3.0 GPA | 15:1 ratio |
| Washington University in St. Louis School of Law | $54,870 | 2.17 years | • Bachelor's degree<br>• Law degree required for Master of Laws | 13:1 ratio |
| American University School of International Service | $61,734 | 1.67 years | • Bachelor's degree | 13:1 ratio |
| George Washington University Milken Institute School of Public Health | $63,900 | 2 years | • Bachelor's degree<br>• B or better in Financial Accounting and Intro to Statistics | 12:1 ratio |
| Simmons University School of Nursing and Health Sciences | $40,904 | 1.5 years | • Associate degree in Nursing<br>• Current RN license | 12:1 ratio |
| University of California Berkeley School of Information | $59,999 | 1.5 years | • Bachelor's degree<br>• Knowledge of fundamental computer science concepts | N/A |
| Simmons University School of Social Work | $36,630 | 1.75 years | • Bachelor's degree in social work (BSW)<br>• B or better in each BSW course<br>• Overall GPA of 3.3 of higher | 12:1 ratio |
| Syracuse University Whitman School of Management | $74,962 | 2.5 years | • Bachelor's degree<br>• At least 1 year of full-time work experience | N/A |
| Syracuse University S.I. Newhouse School of Public Communications | $59,994 | 1.5 years | • Bachelor's degree | 15:1 ratio |
| Southern Methodist University (interdisciplinary study): College of Humanities and Sciences, School of Engineering, and School of the Arts | $52,824 | 1.25 years | • Bachelor's degree in a quantitative discipline<br>• Basic understanding of programming language<br>• 2 or more calculus courses excluding business calculus | N/A |
| American University Kogod School of Business | $61,236 | 1.63 years | • Bachelor's degree | N/A |

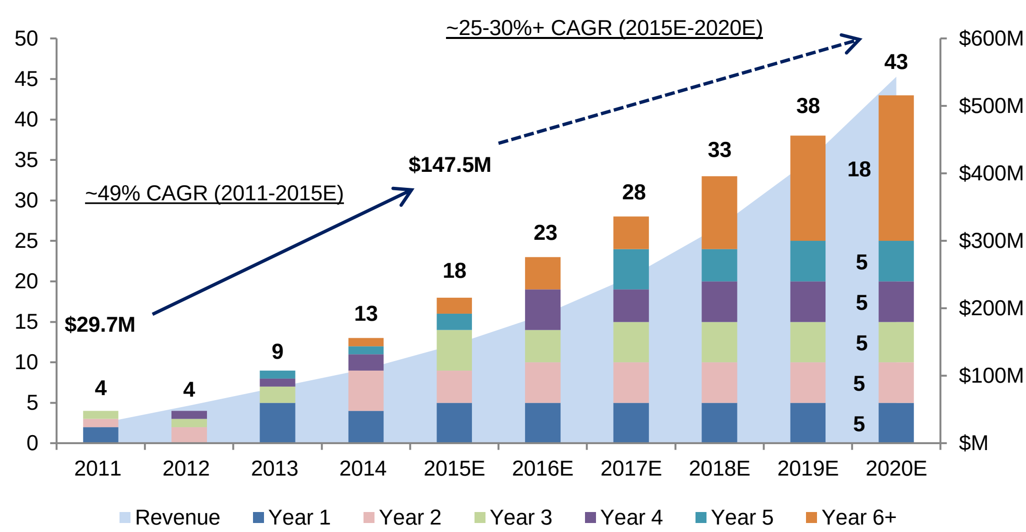
| | | | | |
|---|---|---|---|---|
| The Family Institute at Northwestern | $93,672 | 2 years | • Bachelor's degree<br>• Degree in psychology or human services preferred | 15:1 ratio |
| Simmons University School of Nursing and Health Sciences | $96,149 | 3 years | • Associate degree for BSN and MSN<br>• Bachelor's degree for FNP<br>• Current U.S. RN license<br>• 83 or better in statistics and health assessment | 15:1 ratio |
| Yale School of Medicine | TBD | TBD | TBD | TBD |

*Source: Company Reports, University Websites, Baird Estimates*

**Five-Year +25-30% Acyclical Organic Revenue CAGR.** Based on continued growth at existing partners, and a new client run-rate of at least five additional partners signed annually (consistent with the company's past three years), we believe 2U can sustain a 25-30%+ acyclical organic revenue CAGR over the next 5+ years. Further, while our growth estimates would reflect very strong fundamental improvement from current levels, overall 2U would remain a very small portion of the broader graduate degree market, with 2020 estimates reflecting approximately 30,000 unique students, less than 1% of total U.S. projected graduate degree enrollment.

- Assuming 40+ total programs, ~750+ students in an average program, and ~$20k of annual revenue per student to TWOU, we believe $600 million+ in annual revenue run-rate is achievable over the next five to six years. Below we project both the program and revenue potential for 2U assuming a growth trajectory of five additional programs over each of the next five years.

**BAIRD PROGRAM ESTIMATES AND 2020E POTENTIAL REVENUE**




*Source: Company Report, Baird Estimates*

# Margin Roadmap

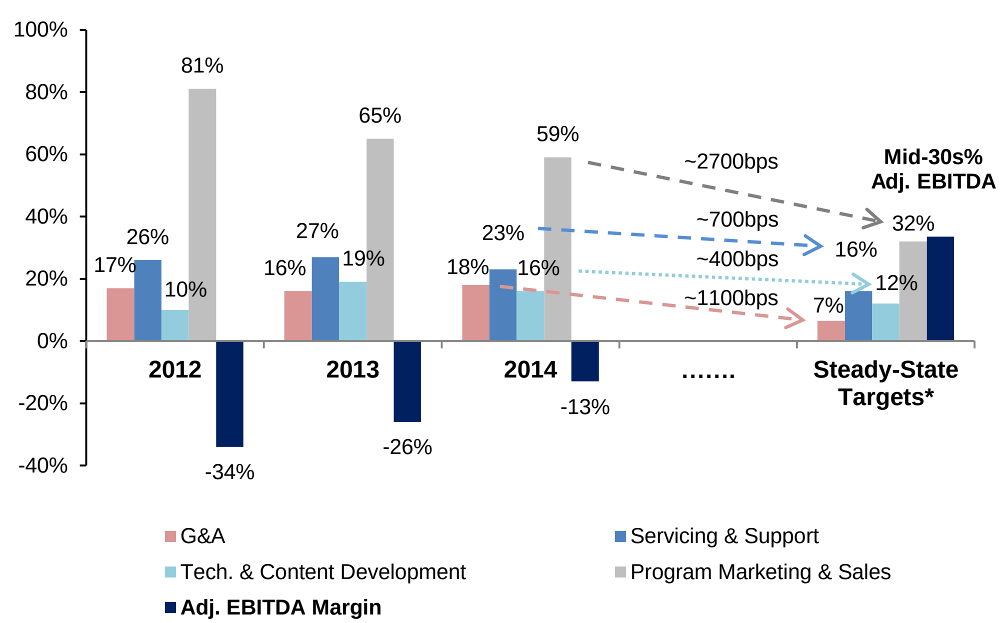
In addition to 2U's long-term runway for sustained strong revenue growth, we also believe that the company has significant opportunity to significantly improve margins. 2U currently generates adj. EBITDA losses; however, its adj. EBITDA losses are narrowing, and management has recently been articulating that they expect the company to achieve adj. EBITDA profitability in 2017. We believe that 2U's losses are a function of its business life cycle, number of programs that it is onboarding, and upfront "investment"/losses associated with launching a new program.

Longer term, management has targeted strong steady-state margins with adj. EBITDA margin projected in the mid-30s as a percentage of revenue, expected to be driven by improved operating leverage across the majority of cost line items. To date, 2U has shown significant relative improvement in losses every year, and we remain confident in the margin outlook for TWOU and expect continued progress toward management's longer-term goals, driven by individual programs maturation, mix-shift toward a greater percentage of relatively scaled programs, MPV strategy, and further leverage of corporate expenses.

- Specifically, we believe the company's ability to leverage its prestigious list of university partner brands, and also continue to build out its program base within existing verticals, should be a source of significant marketing efficiencies going forward, which to date have by far been 2U's most significant expense (~59% of revenue in 2014, although down from ~80% in 2012).

Below we highlight 2U's long-term steady-state expense and margin targets as a percentage of revenue, relative to levels as of year-end 2014.

**2U CURRENT MARGINS vs. STEADY-STATE TARGETS**




**Reflects mid-point of management targets*
*Source: Company Reports*

# Management

**Experienced management team with in-depth education industry expertise.** 2U's management team consists of individuals with significant education industry experience, and knowledge specific to the U.S. higher education market. CEO and co-founder Christopher (Chip) Paucek has served as CEO of the company since it was founded in 2008, and is a veteran of the education industry with previous experience as CEO of Hooked on Phonics.

**Board of directors.** 2U's board of directors currently consists of nine members, eight of whom are independent, with CEO and co-founder Chip Paucek the only non-independent member. Directors are elected to serve staggered three-year terms with three members up for reelection each year.

**Equity interest.** Current insider ownership remains sizable with ~56% owned by PE firms, as well as associated with earlier stages of funding, including Redpoint Ventures, Highland Capital Partners, co-founder John Katzman & Family, and Novak Biddle Venture Partners. The top ten largest shareholders, including institutional shareholders account for ~72% of total outstanding shares, with Lord Abbett & Co. the largest institutional shareholder at approximately 7.6% of shares outstanding.

**KEY EXECUTIVES, DIRECTORS AND SHAREHOLDERS**

| Executive Officers | Age | Title | Yrs with TWOU |
|---|---|---|---|
| Christopher (Chip) J. Paucek | 43 | Co-founder, CEO and Director | 7 |
| Robert L. Cohen | 48 | President and Chief Operating Officer | 7 |
| Catherine A. Graham | 53 | Chief Financial Officer | 3 |
| Jeff C. Rinehart | 38 | Chief Marketing Officer | 4 |
| James Kenigsberg | 37 | Chief Technology Officer | 5 |
| **Directors** | **Age** | **Title** | **Yrs with TWOU** |
| Paul A. Maeder | 59 | Director and Chairman of the Board | 5 |
| Mark J. Chernis | 46 | Director | 6 |
| Timothy M. Haley | 46 | Director | 5 |
| John M. Larson | 62 | Director | 6 |
| Michael T. Moe | 51 | Director | 2 |
| Robert M. Stavis | 51 | Director | 4 |
| Sallie L. Krawcheck | 49 | Director | 1 |
| Earl Lewis | 58 | Director | 1 |
| **5% Shareholders** | | **Position** | **% O/S** |
| Redpoint Ventures | | 6,195,945 | 15.0% |
| Highland Capital Partners | | 3,543,165 | 8.6% |
| John Katzman & Family | | 3,536,809 | 8.5% |
| Novak Biddle Venture Partners | | 3,243,330 | 7.9% |
| Lord Abbett & Co. | | 3,123,679 | 7.6% |
| Deer Management | | 2,594,620 | 6.3% |
| Fidelity Management | | 2,474,376 | 6.0% |

*Source: Company Reports, FactSet*

# Balance Sheet & Cash Flow

**Balance Sheet.** 2U exited 2014 with no debt and cash and equivalents totaling $86.9 million. The company maintains solid financial liquidity with a sizable current net cash balance, as well as a revolving line of credit ($37.0 million) that we believe is sufficient to fund cash outlays required as the company continues to ramp new programs.

- Initial Public Offering: 2U completed its IPO on March 28, 2014. The company issued and sold 8,626,377 shares of its common stock, including a partial exercise of the underwriters' over-allotment option at $13.00 per share. 2U received net proceeds of $100.3 million after deducting underwriting discounts and commissions of $7.8 million and other offering expenses of approximately $4.0 million.

**Balance Sheet**

*All figures in $000s, except percentages*

| Balance Sheet | 2014 |
|---|---|
| **ASSETS** | |
| Current Assets | |
| Cash & cash equivalents | 86,929 |
| Accounts Receivable, net | 350 |
| Advance to clients, current | - |
| Prepaid expenses | 2,709 |
| Other assets | - |
| **Total Current Assets** | **89,988** |
| Non-Current Assets | |
| Property and equipment, net | 6,755 |
| Capitalized content development costs, net | 13,155 |
| Advance to clients, non-current | 1,675 |
| Other assets | 1,466 |
| **Total Non-Current Assets** | **23,051** |
| **TOTAL ASSETS** | **113,039** |

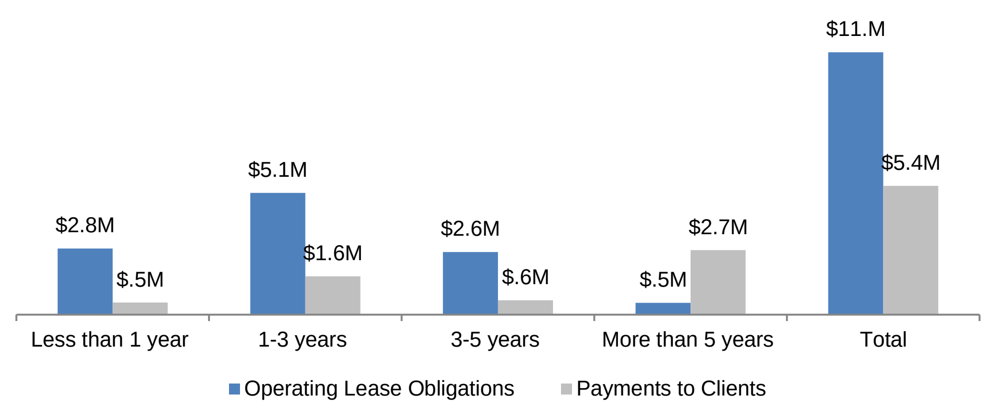
| Balance Sheet | 2014 |
|---|---|
| **LIABILITIES & STOCKHOLDERS' EQUITY** | |
| Current Liabilities | |
| Accounts Payable | 2,293 |
| Accrued expenses and other current liabilities | 17,138 |
| Current Deferred Revenue | 1,906 |
| Refunds Payable | 2,431 |
| **Total Current Liabilities** | **23,768** |
| Non-Current Liabilities | |
| Rebate Reserve | 639 |
| Other LT liabilities | 621 |
| **Total Non-Current Liabilities** | **1,260** |
| **Total Liabilities** | **25,028** |
| **Redeemable Noncontrolling Interests** | **-** |
| **Total Stockholders' Equity (Deficit)** | **88,011** |
| **TOTAL LIABILITIES & STOCKHOLDERS' EQUITY** | **113,039** |

*Source: Company Reports*

**Capital Obligations.** We expect 2U to continue to generate losses for the near-to-intermediate term, largely due to the continued expenses associated with ramping existing programs, coupled with a pipeline of potential new programs that we expect to remain robust. However, we believe the company remains in a solid financial position given its current cash balance of $83.1 million as of 1Q15, no debt, and relatively limited contractual obligations.

Highlighted below is a breakout of 2U's existing contracted obligations through 2020 and beyond, including ~$11 million in operating lease obligations (non-cancelable office space), and ~$5.4 million in payments to university clients in exchange for various IP and other rights.

**CONTRACTUAL OBLIGATIONS AND COMMITMENTS**

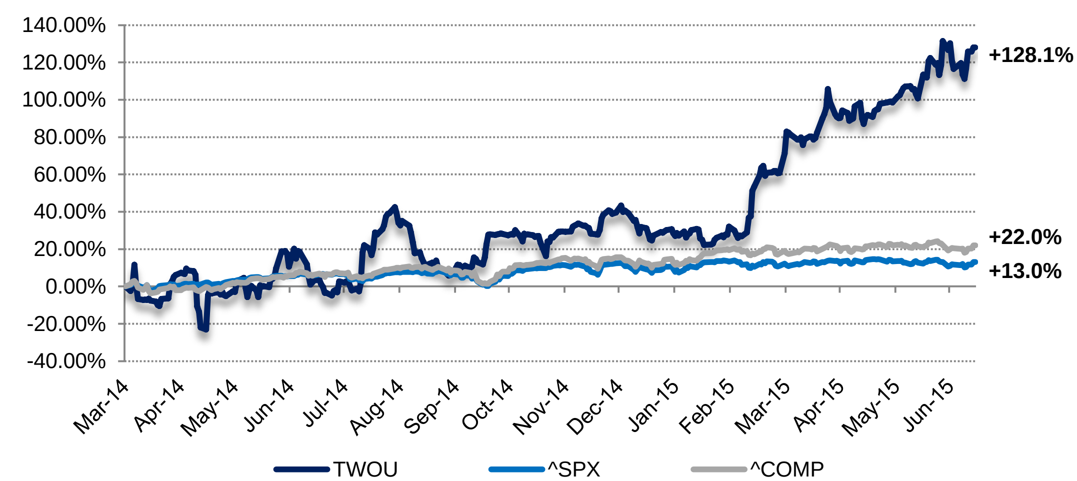



*Source: Company Reports*

# Recent Results

**Strong post IPO performance.** TWOU shares have substantially outperformed both the Nasdaq Composite index and the S&P 500 since its IPO, up 128% since March 28, 2014, compared to gains of 22% and 13%, respectively, for the Nasdaq and S&P 500. While 2U has posted solid stock performance for the large portion of the past year, the vast majority of stock outperformance (75%+) has occurred since the first week in March, which followed the announcement of the company's first Ivy League university partnership, via the launch of an online Master of Medical Science (MMSc) degree with Yale University.

**TWOU PERFORMANCE VS. S&P 500 SINCE IPO**




*Source: CapitalIQ*

**Solid Results and F'15 Setup.** Fundamental performance to date has also been strong, with five consecutive quarters of top- and bottom-line beats, and 1Q15 results that were once again above consensus, and included an upwardly revised full-year 2015 guidance range. Overall, revenue growth of 32.6% y/y during 2014 reflected deceleration from significantly stronger growth over recent years (+49% y/y in '13 and +88% y/y in '12), but was due largely to the difficult comps, coupled with a break from program launches during 2012 to focus on the strong growth and ramp of 2U's existing core programs. Notably, y/y growth reaccelerated during 1Q15 (+31.4% y/y vs. +24.0% y/y in 4Q14), and has shown strong signs of stability with 1Q15 results reflecting sequential acceleration to +31.4% y/y vs. +24.0% y/y in 4Q14, and '15 guidance reflecting ~33% revenue growth at the mid-point (increased as of 1Q15).

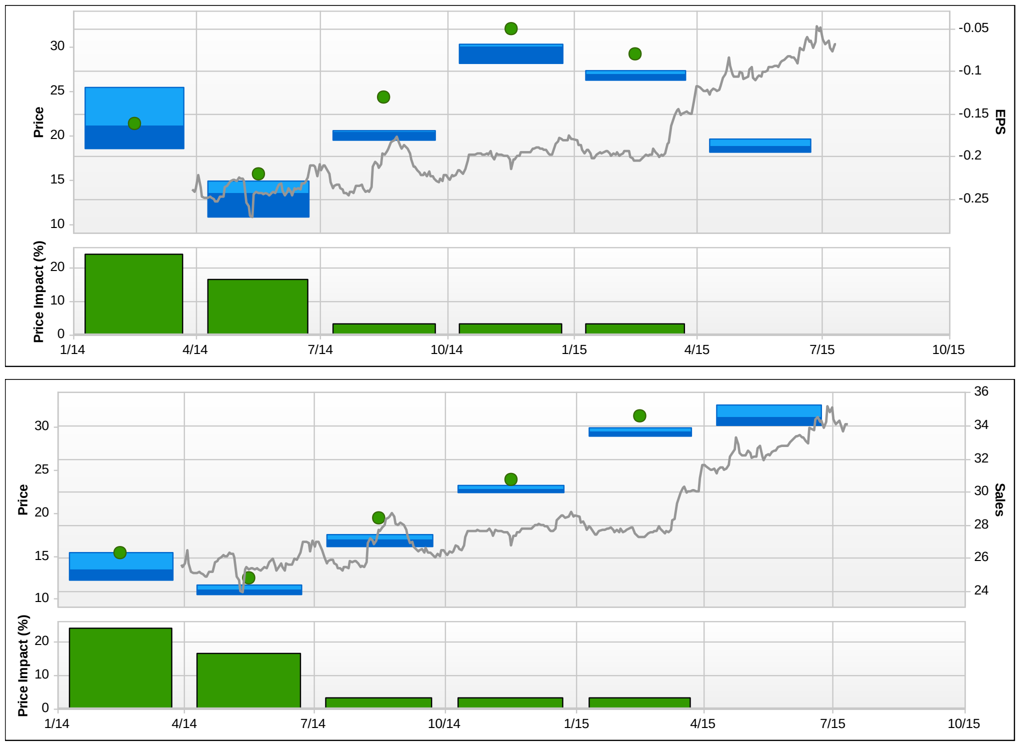
**TWOU RECENT FINANCIAL RESULTS**

| | 2012 | 2013 | | | | 2013 | 2014 | | | | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Q1-13 | Q2-12 | Q3-12 | Q4-13 | | Q1-14 | Q2-14 | Q3-14 | Q4-14 | | Q1-15 |
| Revenue | **55,879** | **19,134** | **18,691** | **20,499** | **24,803** | **83,127** | **26,332** | **24,744** | **28,407** | **30,756** | **110,239** | **34,612** |
| Y/Y Chg. | 87.9% | 46.0% | 39.8% | 57.9% | 51.1% | 48.8% | 37.6% | 32.4% | 38.6% | 24.0% | 32.6% | 31.4% |
| Servicing and Support | 14,926 | 5,018 | 5,656 | 5,842 | 6,202 | 22,718 | 6,248 | 7,000 | 6,598 | 7,012 | 26,858 | 7,550 |
| Technology and Content Development | 8,299 | 3,235 | 4,596 | 5,113 | 6,528 | 19,472 | 5,674 | 5,818 | 5,726 | 5,403 | 22,621 | 6,134 |
| Marketing and Sales | 45,390 | 11,770 | 13,695 | 15,412 | 13,226 | 54,103 | 15,241 | 16,710 | 16,971 | 16,296 | 65,218 | 19,587 |
| General and Administrative | 10,342 | 2,871 | 3,654 | 4,269 | 4,046 | 14,840 | 5,436 | 5,708 | 6,303 | 5,973 | 23,420 | 6,711 |
| EBIT | (23,078) | (3,760) | (8,910) | (10,137) | (5,199) | (28,006) | (6,267) | (10,492) | (7,191) | (3,928) | (27,878) | (5,370) |
| EBIT Margin | -41.3% | -19.7% | -47.7% | -49.5% | -21.0% | -33.7% | -23.8% | -42.4% | -25.3% | -12.8% | -25.3% | -15.5% |
| **Adj. EBITDA** | **(18,814)** | **(2,398)** | **(7,262)** | **(8,358)** | **(3,227)** | **(21,245)** | **(3,789)** | **(7,085)** | **(3,350)** | **(555)** | **(14,779)** | **(1,609)** |
| EBITDA Margin | -33.7% | -12.5% | -38.9% | -40.8% | -13.0% | -25.6% | -14.4% | -28.6% | -11.8% | -1.8% | -13.4% | -4.6% |
| Adj. Net Income | (22,057) | (3,397) | (8,268) | (9,500) | (4,475) | (25,640) | (5,942) | (8,544) | (5,090) | (1,976) | (21,552) | (3,420) |
| **Adj. EPS (ex. stock-comp)** | **$ (0.18)** | **$ (0.46)** | **$ (1.13)** | **$ (1.29)** | **$ (0.60)** | **$ (3.48)** | **$ (0.77)** | **$ (0.22)** | **$ (0.13)** | **$ (0.05)** | **$ (0.67)** | **$ (0.08)** |

*Source: Company Reports*

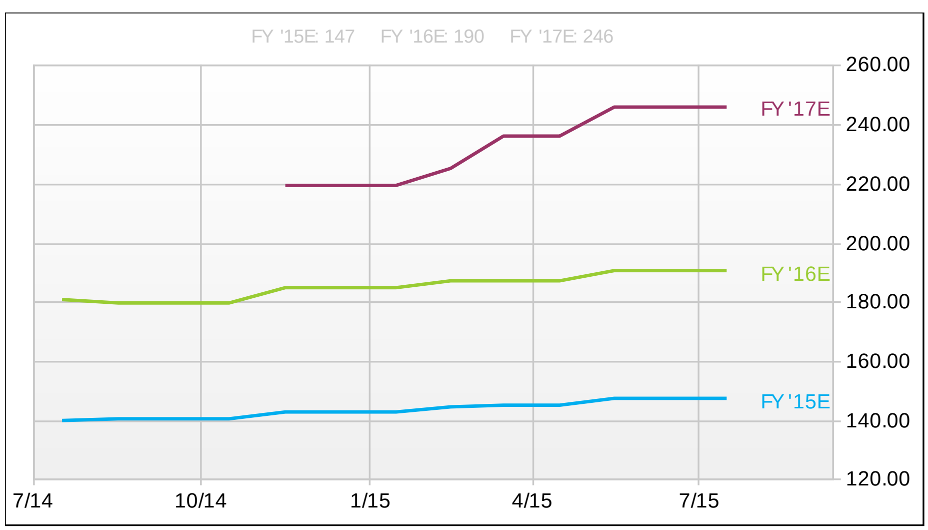
**Recent performance vs. consensus.** TWOU's performance vs. guidance since its IPO has been impressive with the company performing above the consensus estimates its first five quarters (revenue and EPS ~3.4% and 18.1% above consensus on average, respectively). Below we highlight TWOU's quarterly performance vs. consensus revenue and adj. EPS estimates over the past five quarters, as well as the consensus revenue estimate trends since the IPO.

**TWOU RECENT REVENUE (TOP) & EPS (BOTTOM) SURPRISE HISTORY VS. CONSENSUS**




*Source: FactSet*

**TWOU CONSENSUS REVENUE ESTIMATE TREND**




*Source: FactSet*

# Baird Estimates

**We are initiating coverage with estimates as follows (please see our attached model for more detailed assumptions).**

| Baird Estimates | 2015E Q2-15E | 2015E Q3-15E | 2015E Q4-15E | 2015E | 2016E |
|---|---|---|---|---|---|
| **Revenue** | **34,394** | **36,929** | **41,521** | **147,456** | **190,862** |
| *Y/Y Chg.* | *39%* | *30.0%* | *35.0%* | *33.8%* | *29.4%* |
| Servicing and Support | 9,000 | 9,250 | 9,650 | 35,450 | 44,650 |
| Technology and Content Development | 6,750 | 6,750 | 6,750 | 26,384 | 31,001 |
| Marketing and Sales | 22,883 | 21,693 | 21,591 | 85,754 | 109,139 |
| General and Administrative | 7,050 | 7,650 | 7,650 | 29,061 | 35,700 |
| **Adj. EBITDA** | **(5,789)** | **(2,564)** | **1,380** | **(8,582)** | **(2,811)** |
| **Adj. EBITDA Margin** | **-16.8%** | **-6.9%** | **3.3%** | **-5.8%** | **-1.5%** |
| Depreciation & Amortization | 1,800 | 1,900 | 2,000 | 7,413 | 9,000 |
| Stock-Comp | 3,700 | 3,950 | 3,500 | 13,198 | 17,817 |
| EBIT | (11,289) | (8,414) | (4,120) | (29,193) | (29,628) |
| GAAP Net Income | (11,389) | (8,514) | (4,220) | (29,591) | (30,028) |
| **GAAP EPS from Cont. Ops.** | **$ (0.27)** | **$ (0.20)** | **$ (0.10)** | **$ (0.71)** | **$ (0.69)** |
| Diluted shares outstanding - Avg. | 41,700 | 42,000 | 42,300 | 41,745 | 43,388 |
| **Adjusted Net Income** | (7,689) | (4,564) | (720) | (16,393) | (12,211) |
| **Adjusted EPS** | **$ (0.18)** | **$ (0.11)** | **$ (0.02)** | **$ (0.39)** | **$ (0.28)** |

*Source: Baird estimates*

**Baird estimates.** Our 2015 revenue, EBITDA, and adj. EPS estimates are $147.5 million, ($8.6) million, and ($0.39), respectively, and we are also introducing 2016 revenue, EBITDA, and adj. EPS estimates of $190.9 million, ($2.8) million, and ($0.28). Our initial revenue estimates are roughly consistent with the current consensus estimates and guidance, and adj. EBITDA and adj. EPS estimates are slightly better than the current consensus. That being said, we expect the stock to trade over the near-to-intermediate term based on the revenue growth trajectory and outlook, and we feel confident in 2U's ability to continue to generate strong growth near term, with a long runway for roughly 25-30%+ relatively acyclical growth as newer stage programs continue to ramp, and the pipeline for new university programs and partnerships remains robust.

| Consensus Estimates | 2015E 2Q15E | 2015E 3Q15E | 2015E 4Q15E | 2015E | 2016E |
|---|---|---|---|---|---|
| **Revenue** | **34,500** | **37,200** | **40,700** | **147,100** | **190,300** |
| *Y/Y Chg.* | *39.4%* | *31.0%* | *32.3%* | *33.4%* | *29.4%* |
| **Adj. EBITDA** | **(6,000)** | **(3,200)** | **1,000** | **(9,600)** | **(4,000)** |
| **Adj. EBITDA Margin (implied)** | **-17.4%** | **-8.6%** | **2.5%** | **-6.5%** | **-2.1%** |
| **Adjusted EPS** | **$ (0.19)** | **$ (0.12)** | **$ (0.03)** | **$ (0.42)** | **$ (0.30)** |

*Source: FactSet*

# Investment Thesis

**Strong positioning in secular growth market should drive strong long-term revenue growth.** We believe that NFPCUs, especially the “leading” institutions that 2U primarily targets today, are at the early stages of offering fully online degree programs. We view 2U as a highly attractive potential partner and expect it to materially grow its number of NFPCU partners and programs with a significant long-term growth opportunity. We also expect more recently signed programs to continue to grow enrollment, and believe that it is noteworthy that some of 2U’s partners’ online programs have generated enrollment that is orders of magnitude larger than their on ground enrollment in the same programs (at least in some instances based on the small sample size of 2U’s historical track record).

**Long-term contracts, high net promoter scores, and non-renewal penalties for clients.** 2U enters into long-term contracts with its NFPCU partners, which typically include initial 10-15 year contract terms. Contracts do not include termination rights for convenience, and the company’s 10-year contracts impose damages should the NFPCU partner decide to not renew (typically two years revenue). 2U also regularly conducts a Net Promoter Score survey to gauge customer loyalty and satisfaction, and student responses have reflected very impressive results that are on par with other leading consumer tech services companies. The company’s student retention metrics have also been impressive, rivaling on-ground programs at leading non-profit universities and colleges. We believe this puts 2U in a strong negotiating position at (or ahead of) contract renewal given that the NFPCU partner would have both a financial penalty and arguably even more importantly, significant disruption and risk should they consider attempting to transition their online programs from 2U to another third-party enabler partner, or bring them fully in house. Consequently, we believe that 2U’s revenue share percentage will be largely sustainable.

**Early mover advantage and brand halo from established position partnering with prestigious colleges and universities.** 2U has a notably prestigious client base, especially considering the historical risk appetite in its market served, especially for the types of solutions that it provides. Simply put, there has historically been significant resistance at NFPCUs to offering fully online degrees, and we believe that historical resistance has typically been especially prevalent at more prestigious NFPCUs. Hence, 2U’s initial in-roads into this market are significant, and we believe the importance of its in-roads is not fully appreciated by some members of the investment community, given a lack of understanding of the selling process in this market. Namely, 2U sells into a shared governance environment, in what we would generally describe as a risk averse “industry." Consequently, 2U’s position in the market including its impressive list of prestigious NFPCUs and their positive view of 2U as a partner are a tremendous advantage for penetrating net new NFPCUs.

**Serves and enables potentially large TAM.** Post-secondary education is a very large market. There are an estimated 160 million+ students currently enrolled in higher education institutions globally, and the U.S. post-secondary market generates roughly $550 billion in annual revenue, according to the National Center for Education Statistics (NCES). Near-to-intermediate term we expect 2U to remain focused primarily on the U.S. graduate degree market, which as of 2013 included ~2.9 million students enrolled at both non-profit and for-profit institutions. We expect both secular growth of online enrollments, and believe that fully online degrees at not-for-profit institutions will continue to gain share from for-profit universities. We also believe that it is notable that some 2U-enabled online programs actually have enrollment that is multiples of size of the on ground enrollment in the same programs at the same university. Hence, we believe 2U may actually enable broader market growth. Stated another way, 2U has identified over 100 graduate-level academic disciplines with more than 1,000 graduates per year, and believes that it can implement its MPV strategy in at least 50 of those disciplines. It also believes there are 10+ net new/developing disciplines that it may be able to target over time (e.g., data science). TWOU assumes this equates to 180+ potential programs, which could generate $3bn ($16.7 million average per program) in steady-state annual revenue to 2U.

Intermediate- to long-term we would also expect 2U to more aggressively pursue opportunities to enable online degrees at institutions based outside of the U.S., potentially recruit more non-U.S. based students to attend online degrees at programs that it enables for U.S.-based universities, and potentially enable select additional bachelor level online degrees.

**Superior capabilities and ability to continue to invest at scale.** We believe that 2U helps enable some of the world's best online programs, while leveraging some of the world's best educational brands, both of which we view as significant differentiators relative to for-profit colleges and universities, as well as NFPCUs that seek to offer fully online degrees without a third-party enabler but rather through in-house capabilities. We also believe that 2U has sophisticated and differentiated capabilities in areas such as marketing, its placement network (for degrees requiring practical experience such as clinical rotations), and technology. That said, we expect competition to 2U from other credible third-party enablers, but believe 2U's current prestigious partner list is a notable competitive differentiator given the selling process in the industry, and believe that its early mover advantage and considerable investments to date, and generally the capabilities that it has developed are notable barriers to entry to would be new market entrants.

**We expect progress toward and increased investor confidence in management's long-term margin targets.** 2U currently generates adj. EBITDA losses. However, its adj. EBITDA losses are narrowing, and management has recently been articulating that they expect the company to achieve adj. EBITDA profitability in 2017. We believe that 2U's losses are a function of its business life cycle, number of programs that it is onboarding, and upfront "investment"/losses associated with launching a new program. Further, management estimates that if the first four cohort programs had all launched at the same time in 2009, that they would have a 2014 combined adj. EBITDA margin in the mid-to-high 20%s.

# Risks & Caveats

**Near-term operating losses and cash outflow.** Given the company's early stage growth profile, and a continued increase in its new program partnerships (and associated operating losses from onboarding new programs), 2U currently operates at a loss and produces negative cash flow. While operating losses have been improving, we do not expect material consolidated profitability for the next several years.

**Client concentration.** 2U continues to diversify its revenue as additional partnerships continue to gain scale; however, the company continues to derive a majority of its revenue from its initial four core university programs (~82% as of 2014), including 55% derived from two programs at the University of Southern California, although down from ~94% in 2011.

**Competition.** The post-secondary education market is highly fragmented, and online programs are becoming increasingly competitive with more offerings coming from non-profit schools, aided by third-party enablers looking to partner with institutions and assist with their development of online curriculum. While we believe that 2U has an early mover advantage and a significant brand halo from some of its partnerships with leading colleges and universities, new providers continue to enter the third-party enabler market, including some that may offer to partner with schools at a significantly lower price/tuition share percentage.

**Incentive-based compensation restrictions.** The Higher Education Act prohibits the payment of incentive payments to any person or entity engaged in any student recruiting or admission activities; however, under official agency guidance ED issued a "Dear Colleague Letter" (DCL) on March 17, 2011. The DCL provides an exception to the ban when involving tuition revenue-sharing arrangements between institutions, and unaffiliated third parties that provide a set of bundled services. Despite the DCL's official status, it is not codified by statute or regulation, and as a result can be altered or removed without prior notice or formal agency rulemaking. While unlikely in our view, any revision, removal, or invalidation of the rule could require significant business model changes.

**"Anti-dilutive" shares.** As discussed in TWOU's 10-K and other filings with the SEC, it currently has stock options and restricted stock units that would have been anti-dilutive given its net loss position in recent periods, and hence are excluded from its average diluted sharecount. Management does not currently provide an estimate of a "non-GAAP" diluted sharecount assuming profitability. We believe that some investors may not be fully aware of potential implications from the anti-dilutive shares, and the implication of the anti-dilutive shares on some valuation metrics. Using a recent share price, we estimate the company's average diluted share count would be roughly 14.7% higher than its basic share count if the company were profitable, and accounting for the anti-dilutive shares.

**Potential risk to revenue per enrollment.** While we generally expect strong revenue share retention at renewal (and contracts are structured long term), we view the potential for risk to revenue per enrollment from a potentially reduced 2U revenue share, and/or from reduced tuition as a potential long-term risk to TWOU shares. That said, we believe 2U is somewhat isolated from this risk by: (1) long-term contracts, (2) what we view as a strong position for 2U at contract renegotiation (high risk to generally risk-averse university to transition well-performing program to another provider), and (3) partnering with premium academic institutions primarily for graduate programs should yield relatively stronger tuition pricing power for the institution.

**Exclusivity provisions.** Some of 2U’s first university partner contracts signed included exclusivity provisions limiting 2U’s ability to also partner with certain other universities for similar degree offerings. While some of the original exclusivity provisions have been “unlocked” or reduced, other exclusivity provisions remain. If they remain in place, they could limit 2U’s growth potential and its ability to execute its MPV strategy in those verticals. Conversely, “unlocking” or reducing the provisions could potentially come at the expense of other contract concessions.

**Valuation.** TWOU is currently a loss generating business, and trades at an elevated revenue multiple. Further, TWOU is currently the only pure play publicly traded "third party enabler," and hence does not have directly comparable public comps. Consequently, we use a broad group of fast growing SaaS businesses, which we view as a reasonable, but far from perfect "comp group" for TWOU as one of our valuation frameworks. Due in part to elevated EV/revenue multiples for TWOU (and fast growth SaaS companies in general) as well as other factors, we expect TWOU shares to experience above-average volatility over the near-to-intermediate term.

**Potential follow-on equity offerings.** According to Factset, TWOU's fully diluted insider ownership currently accounts for ~56% of the potential shares outstanding, including a 15.0% ownership by Redpoint Ventures (and associated entities), 8.6% by Highland Capital Partners, 8.5% by John Katzman and the Katzman Family, 7.9% by Noval Biddle Venture Partners, 6.3% by Deer Management Co., 3.2% by GSV Capital, and 2.1% by the Hillman Co. Hence, we believe follow-on equity offerings are possible. The currently elevated insider ownership also results in a currently limited average daily trading volume of TWOU shares. Further, we believe TWOU may consider selling additional primary shares in a secondary offering should it decide to accelerate the number of new university partners that it signs/on boards per year (which it is considering) given upfront losses associated with new program development/launches.

# Company Description

2U is a leading suite solution provider of cloud-based SaaS technology and services that enable not-for-profit colleges and universities (NFPCUs) to deliver high quality fully online degrees. 2U enables fully online, primarily graduate level, degrees at leading universities, with a focus on programs that it believes can scale to a certain critical mass based on its data-driven program selection algorithm. Through long-term partnership agreements, 2U provides SaaS platforms, outsourced services including outsourced marketing, and other administrative services to enable "traditional" colleges and universities to offer high-quality, fully online degree programs. 2U currently enables 16 degree programs at 11 not-for-profit colleges and universities (NFPCUs), with several more in backlog.

**2U, Inc. (NASDAQ - TWOU)**
July 13, 2015
Fiscal year ends: December
Figures in $000s, except percentages and per share data

**Robert W. Baird & Co., Inc.**
Jeffrey P. Meuler, CFA / (414) 298-7694
Nick Nikitas, CFA / (312) 609-5425

| **Income Statement** | **2011** | **2012** | **2013** | | | | **2013** | **2014** | | | | **2014** | **2015** | | | | **2015E** | **2016E** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Q1-13 | Q2-13 | Q3-13 | Q4-14 | | Q1-14 | Q2-14 | Q3-14 | Q4-14 | | Q1-15 | Q2-15E | Q3-15E | Q4-15E | | |
| **Revenue** | **29,733** | **55,879** | **19,134** | **18,691** | **20,499** | **24,803** | **83,127** | **26,332** | **24,744** | **28,407** | **30,756** | **110,239** | **34,612** | **34,394** | **36,929** | **41,521** | **147,456** | **190,862** |
| Servicing and Support | 12,300 | 14,926 | 5,018 | 5,656 | 5,842 | 6,202 | 22,718 | 6,248 | 7,000 | 6,598 | 7,012 | 26,858 | 7,550 | 9,000 | 9,250 | 9,650 | 35,450 | 44,650 |
| Technology and Content Development | 5,117 | 8,299 | 3,235 | 4,596 | 5,113 | 6,528 | 19,472 | 5,674 | 5,818 | 5,726 | 5,403 | 22,621 | 6,134 | 6,750 | 6,750 | 6,750 | 26,384 | 31,001 |
| Marketing and Sales | 32,116 | 45,390 | 11,770 | 13,695 | 15,412 | 13,226 | 54,103 | 15,241 | 16,710 | 16,971 | 16,296 | 65,218 | 19,587 | 22,883 | 21,693 | 21,591 | 85,754 | 109,139 |
| General and Administrative | 5,104 | 10,342 | 2,871 | 3,654 | 4,269 | 4,046 | 14,840 | 5,436 | 5,708 | 6,303 | 5,973 | 23,420 | 6,711 | 7,050 | 7,650 | 7,650 | 29,061 | 35,700 |
| **EBIT** | **(24,904)** | **(23,078)** | **(3,760)** | **(8,910)** | **(10,137)** | **(5,199)** | **(28,006)** | **(6,267)** | **(10,492)** | **(7,191)** | **(3,928)** | **(27,878)** | **(5,370)** | **(11,289)** | **(8,414)** | **(4,120)** | **(29,193)** | **(29,628)** |
| **EBIT Margin** | **-83.8%** | **-41.3%** | **-19.7%** | **-47.7%** | **-49.5%** | **-21.0%** | **-33.7%** | **-23.8%** | **-42.4%** | **-25.3%** | **-12.8%** | **-25.3%** | **-15.5%** | **-32.8%** | **-22.8%** | **-9.9%** | **-19.8%** | **-15.5%** |
| Interest / other income (expense), net | 26 | (35) | 14 | 15 | 4 | 20 | 53 | (783) | (103) | (146) | (89) | (1,121) | (98) | (100) | (100) | (100) | (398) | (400) |
| Pretax Income | (24,878) | (23,113) | (3,746) | (8,895) | (10,133) | (5,179) | (27,953) | (7,050) | (10,595) | (7,337) | (4,017) | (28,999) | (5,468) | (11,389) | (8,514) | (4,220) | (29,591) | (30,028) |
| Provision for income taxes | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Effective Income Tax Rate | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Preferred stock accretion | (314) | (339) | (87) | (87) | (87) | (86) | (347) | (87) | (2) | - | - | (89) | - | - | - | - | - | - |
| **GAAP Net income (Loss)** | **(25,192)** | **(23,452)** | **(3,833)** | **(8,982)** | **(10,220)** | **(5,265)** | **(28,300)** | **(7,137)** | **(10,597)** | **(7,337)** | **(4,017)** | **(29,088)** | **(5,468)** | **(11,389)** | **(8,514)** | **(4,220)** | **(29,591)** | **(30,028)** |
| **GAAP EPS** | **$ (0.18)** | **$ (0.19)** | **$ (0.52)** | **$ (1.21)** | **$ (1.38)** | **$ (0.70)** | **$ (3.81)** | **$ (0.93)** | **$ (0.27)** | **$ (0.18)** | **$ (0.10)** | **$ (0.91)** | **$ (0.13)** | **$ (0.27)** | **$ (0.20)** | **$ (0.10)** | **$ (0.71)** | **$ (0.69)** |
| Avg. Diluted Shares Outstanding (ex. Anti-Dilutive) | 141,750 | 122,418 | 7,386 | 7,398 | 7,416 | 7,529 | 7,432 | 7,699 | 39,305 | 40,270 | 40,577 | 31,963 | 40,979 | 41,700 | 42,000 | 42,300 | 41,745 | 43,388 |
| **Other Metrics** | | | | | | | | | | | | | | | | | | |
| GAAP Net income (Loss) | (25,192) | (23,452) | (3,833) | (8,982) | (10,220) | (5,265) | (28,300) | (7,137) | (10,597) | (7,337) | (4,017) | (29,088) | (5,468) | (11,389) | (8,514) | (4,220) | (29,591) | (30,028) |
| *add:* stock-based comp | 839 | 1,395 | 436 | 632 | 639 | 719 | 2,426 | 1,195 | 2,044 | 2,247 | 2,041 | 7,527 | 2,048 | 3,700 | 3,950 | 3,500 | 13,198 | 17,817 |
| *add:* other adj. | - | - | - | 82 | 81 | 71 | 234 | 775 | 9 | - | - | 784 | - | - | - | - | - | - |
| **Adj. Net income (loss)** | **(24,353)** | **(22,057)** | **(3,397)** | **(8,268)** | **(9,500)** | **(4,475)** | **(25,640)** | **(5,167)** | **(8,544)** | **(5,090)** | **(1,976)** | **(20,777)** | **(3,420)** | **(7,689)** | **(4,564)** | **(720)** | **(16,393)** | **(12,211)** |
| **Adj. EPS (ex. stock-comp); ex. Anti-Dilutive Sh.** | **$ (0.17)** | **$ (0.18)** | **$ (0.46)** | **$ (1.12)** | **$ (1.28)** | **$ (0.59)** | **$ (3.45)** | **$ (0.67)** | **$ (0.22)** | **$ (0.13)** | **$ (0.05)** | **$ (0.65)** | **$ (0.08)** | **$ (0.18)** | **$ (0.11)** | **$ (0.02)** | **$ (0.39)** | **$ (0.28)** |
| **GAAP Net income (Loss)** | **(24,878)** | **(23,113)** | **(3,746)** | **(8,895)** | **(10,133)** | **(5,179)** | **(27,953)** | **(7,050)** | **(10,595)** | **(7,337)** | **(4,017)** | **(28,999)** | **(5,468)** | **(11,389)** | **(8,514)** | **(4,220)** | **(29,591)** | **(30,028)** |
| *add:* interest/other income (expense), net | (26) | 35 | (14) | (15) | (4) | (20) | (53) | 783 | 103 | 146 | 89 | 1,121 | 98 | 100 | 100 | 100 | 398 | 400 |
| *add:* Depreciation & Amortization | 1,551 | 2,869 | 926 | 1,016 | 1,140 | 1,253 | 4,335 | 1,283 | 1,363 | 1,594 | 1,332 | 5,572 | 1,713 | 1,800 | 1,900 | 2,000 | 7,413 | 9,000 |
| *add:* stock-based comp | 839 | 1,395 | 436 | 632 | 639 | 719 | 2,426 | 1,195 | 2,044 | 2,247 | 2,041 | 7,527 | 2,048 | 3,700 | 3,950 | 3,500 | 13,198 | 17,817 |
| **Adj. EBITDA (loss)** | **(22,514)** | **(18,814)** | **(2,398)** | **(7,262)** | **(8,358)** | **(3,227)** | **(21,245)** | **(3,789)** | **(7,085)** | **(3,350)** | **(555)** | **(14,779)** | **(1,609)** | **(5,789)** | **(2,564)** | **1,380** | **(8,582)** | **(2,811)** |

| **% of Sales** | 2011 | 2012 | Q1-13 | Q2-13 | Q3-13 | Q4-14 | 2013 | Q1-14 | Q2-14 | Q3-14 | Q4-14 | 2014 | Q1-15 | Q2-15E | Q3-15E | Q4-15E | 2015E | 2016E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Servicing and Support | 41.4% | 26.7% | 26.2% | 30.3% | 28.5% | 25.0% | 27.3% | 23.7% | 28.3% | 23.2% | 22.8% | 24.4% | 21.8% | 26.2% | 25.0% | 23.2% | 24.0% | 23.4% |
| Technology and Content Development | 17.2% | 14.9% | 16.9% | 24.6% | 24.9% | 26.3% | 23.4% | 21.5% | 23.5% | 20.2% | 17.6% | 20.5% | 17.7% | 19.6% | 18.3% | 16.3% | 17.9% | 16.2% |
| Marketing and Sales | 108.0% | 81.2% | 61.5% | 73.3% | 75.2% | 53.3% | 65.1% | 57.9% | 67.5% | 59.7% | 53.0% | 59.2% | 56.6% | 66.5% | 58.7% | 52.0% | 58.2% | 57.2% |
| General and Administrative | 17.2% | 18.5% | 15.0% | 19.5% | 20.8% | 16.3% | 17.9% | 20.6% | 23.1% | 22.2% | 19.4% | 21.2% | 19.4% | 20.5% | 20.7% | 18.4% | 19.7% | 18.7% |
| D&A | 5.2% | 5.1% | 4.8% | 5.4% | 5.6% | 5.1% | 5.2% | 4.9% | 5.5% | 5.6% | 4.3% | 5.1% | 4.9% | 5.2% | 5.1% | 4.8% | 5.0% | 4.7% |

| **Y/Y Change** | 2011 | 2012 | Q1-13 | Q2-13 | Q3-13 | Q4-14 | 2013 | Q1-14 | Q2-14 | Q3-14 | Q4-14 | 2014 | Q1-15 | Q2-15E | Q3-15E | Q4-15E | 2015E | 2016E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Revenue | | 87.9% | 46.0% | 39.8% | 57.9% | 51.1% | 48.8% | 37.6% | 32.4% | 38.6% | 24.0% | 32.6% | 31.4% | 39.0% | 30.0% | 35.0% | 33.8% | 29.4% |
| EBIT | | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M |
| Adj. EBITDA | | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M |
| Operating Income | | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M |
| EPS | | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M |
| Adj. EPS (ex. stock-comp); ex. Anti-Dilutive Sh. | | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M |
| Adj. EPS | | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M | N/M |

Source: Company reports and Robert W. Baird & Co., Inc. estimates
**Please refer to Appendix - Important Disclosures and Analyst Certification**

## 2U, Inc. (NASDAQ - TWOU)

July 13, 2015
Fiscal year ends: December
Figures in $000s, except percentages and per share data

**Robert W. Baird & Co., Inc.**
Jeffrey P. Meuler, CFA / (414) 298-7694
Nick Nikitas, CFA / (312) 609-5425

| **Revenue** | **2011** | **2012** | **1Q13** | **2Q13** | **3Q13** | **4Q13** | **2013** | **1Q14** | **2Q14** | **3Q14** | **4Q14** | **2014** | **1Q15** | **2Q15E** | **3Q15E** | **4Q15E** | **2015E** | **2016E** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Revenue ('000)** | **29,733** | **55,879** | **19,134** | **18,691** | **20,499** | **24,803** | **83,127** | **26,332** | **24,744** | **28,407** | **30,756** | **110,239** | **34,612** | **34,394** | **36,929** | **41,521** | **147,456** | **190,862** |
| % Change | | 87.9% | 46.0% | 39.8% | 57.9% | 51.1% | 48.8% | 37.6% | 32.4% | 38.6% | 24.0% | 32.6% | 31.4% | 39.0% | 30.0% | 35.0% | 33.8% | 29.4% |
| **Enrollment Data** | | | | | | | | | | | | | | | | | | |
| FCE Enrollment* | | | 7,650 | 6,950 | 7,673 | 9,065 | | 9,809 | 9,331 | 10,389 | 11,505 | | 13,093 | | | | | |
| % Change | | | 51.5% | 25.8% | 50.5% | 43.2% | | 28.2% | 34.3% | 35.4% | 26.9% | | 33.5% | | | | | |
| **Average Revenue/Student** | 2,109 | 2,480 | 2,501 | 2,689 | 2,672 | 2,736 | 2,653 | 2,684 | 2,652 | 2,734 | 2,673 | 2,686 | 2,644 | | | | | |
| % Change | | 17.6% | -3.6% | 11.1% | 4.9% | 5.5% | 7.0% | 7.3% | -1.4% | 2.3% | -2.3% | 1.2% | -1.5% | | | | | |
| Platform Revenue Retention Rate | 127% | 157% | 145% | 138% | 153% | 142% | 144% | 122% | 114% | 125% | 109% | 112% | 123% | | | | | |
| Number of Programs ** | 1 | 2 | 4 | 4 | 4 | 4 | 4 | 4 | 6 | 8 | 8 | 4% | 9 | | | | | |

*Full course equivalent enrollments in 2U clients' programs
**Number of programs operating both in the reported period and in the prior year comparative period.
**Please refer to "Appendix - Important Disclosures" and Analyst Certification.**

**2U, Inc. (NASDAQ - TWOU)**
July 13, 2015
Fiscal year ends: December
Figures in $000s, except percentages and per share data

**Robert W. Baird & Co., Inc.**
Jeffrey P. Meuler, CFA / (414) 298-7694
Nick Nikitas, CFA / (312) 609-5425

| Balance Sheet | 2012 | 2013 | Q1-14 | Q2-14 | Q3-14 | 2014 | Q1-15 |
|---|---|---|---|---|---|---|---|
| **ASSETS** | | | | | | | |
| Current Assets | | | | | | | |
| Cash & cash equivalents | 25,190 | 7,012 | 106,190 | 104,762 | 80,558 | 86,929 | 83,077 |
| Accounts Receivable, net | 248 | 1,835 | 632 | 655 | 10,038 | 350 | 4,305 |
| Advance to clients, current | 498 | 581 | 324 | - | - | - | 658 |
| Prepaid expenses | 823 | 1,763 | 2,871 | 2,773 | - | 2,709 | 5,212 |
| Other assets | - | - | - | - | 3,246 | - | - |
| **Total Current Assets** | **26,759** | **11,191** | **110,017** | **108,190** | **93,842** | **89,988** | **93,252** |
| Non-Current Assets | | | | | | | |
| Property and equipment, net | 4,871 | 5,231 | 5,662 | 5,741 | 5,841 | 6,755 | 6,936 |
| Capitalized content development costs, net | 6,608 | 8,904 | 9,680 | 11,034 | 11,825 | 13,155 | 14,201 |
| Advance to clients, non-current | 498 | - | - | 1,150 | 1,413 | 1,675 | 1,204 |
| Other assets | 1,141 | 3,326 | 5,211 | 1,745 | 1,191 | 1,466 | 1,456 |
| **Total Non-Current Assets** | **13,118** | **17,461** | **20,553** | **19,670** | **20,270** | **23,051** | **23,797** |
| **TOTAL ASSETS** | **39,877** | **28,652** | **130,570** | **127,860** | **114,112** | **113,039** | **117,049** |
| **LIABILITIES & STOCKHOLDERS' EQUITY** | | | | | | | |
| Current Liabilities | | | | | | | |
| Accounts Payable | 2,964 | 5,089 | 9,264 | 4,085 | 4,677 | 2,293 | 7,078 |
| Accrued expenses and other current liabilities | 6,037 | 12,025 | 9,378 | 13,326 | 14,720 | 17,138 | 14,406 |
| Current Deferred Revenue | 736 | 1,266 | 5,777 | 12,396 | 2,100 | 1,906 | 6,152 |
| Refunds Payable | 1,228 | 1,831 | 2,040 | 2,027 | 2,398 | 2,431 | 2,815 |
| **Total Current Liabilities** | **10,965** | **20,211** | **26,459** | **31,834** | **23,895** | **23,768** | **30,451** |
| Non-Current Liabilities | | | | | | | |
| Rebate Reserve | 1,891 | 1,571 | 1,574 | 1,566 | 641 | 639 | 641 |
| Other LT liabilities | 611 | 847 | 747 | 642 | 649 | 621 | 576 |
| **Total Non-Current Liabilities** | **2,502** | **2,418** | **2,321** | **2,208** | **1,290** | **1,260** | **1,217** |
| **Total Liabilities** | **13,467** | **22,629** | **28,780** | **34,042** | **25,185** | **25,028** | **31,668** |
| **Redeemable Noncontrolling Interests** | **92,706** | **98,047** | **-** | **-** | **-** | **-** | **-** |
| **Total Stockholders' Equity (Deficit)** | **(66,296)** | **(92,024)** | **101,790** | **93,818** | **88,927** | **88,011** | **85,381** |
| **TOTAL LIABILITIES & STOCKHOLDERS' EQUITY** | **39,877** | **28,652** | **130,570** | **127,860** | **114,112** | **113,039** | **117,049** |

| **Liquidity Metrics** | | | | | | | |
|---|---|---|---|---|---|---|---|
| Net Working Capital | 15,794 | (9,020) | 83,558 | 76,356 | 69,947 | 66,220 | 62,801 |
| Net Cash/(Debt) | 25,190 | 7,012 | 106,190 | 104,762 | 80,558 | 86,929 | 83,077 |
| Net Cash/(Debt) per share (avg. Q dil.) | 0.18 | 0.93 | 13.79 | 2.67 | 2.00 | 2.14 | 2.60 |

Source: Company reports and Robert W. Baird & Co., Inc. estimates

**Please refer to Appendix - Important Disclosures and Analyst Certification**

**2U, Inc. (NASDAQ - TWOU)**
July 13, 2015
Fiscal year ends: December
Figures in $000s, except percentages and per share data

**Robert W. Baird & Co., Inc.**
Jeffrey P. Meuler, CFA / (414) 298-7694
Nick Nikitas, CFA / (312) 609-5425

| Statement of Cash Flows | 2011 | 2012 | Q1-13 | Q2-13 | Q3-13 | Q4-13 | 2013 | Q1-14 | Q2-14 | Q3-14 | Q4-14 | 2014 | Q1-15 | Q2-15E | Q3-15E | Q4-15E | 2015E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **CASH FLOW FROM OPERATIONS** | | | | | | | | | | | | | | | | | |
| **Net Income/(Loss)** | **(24,878)** | **(23,113)** | **(3,746)** | **(8,895)** | **(10,133)** | **(5,179)** | **(27,953)** | **(7,050)** | **(10,595)** | **(7,337)** | **(4,017)** | **(28,999)** | **(5,468)** | **(11,389)** | **(8,514)** | **(4,220)** | **(29,591)** |
| **Non-Cash Adjustments** | **2,409** | **4,316** | **1,354** | **1,643** | **1,774** | **2,768** | **7,539** | **3,168** | **3,412** | **3,841** | **3,373** | **13,794** | **3,761** | **5,500** | **5,850** | **5,500** | **20,611** |
| Depreciation & amortization | 1,551 | 2,869 | 926 | 1,016 | 1,140 | 1,253 | 4,335 | 1,283 | 1,363 | 1,594 | 1,332 | 5,572 | 1,713 | 1,800 | 1,900 | 2,000 | 7,413 |
| Stock-based compensation | 839 | 1,395 | 436 | 632 | 639 | 719 | 2,426 | 1,195 | 2,044 | 2,247 | 2,041 | 7,527 | 2,048 | 3,700 | 3,950 | 3,500 | 13,198 |
| Other | 19 | 52 | (8) | (5) | (5) | 796 | 778 | 690 | 5 | - | - | 695 | | | | | |
| **Changes in Assets and Liabilities** | **3,857** | **(1,388)** | **3,291** | **5,237** | **(7,566)** | **3,770** | **4,732** | **6,356** | **6,351** | **(18,269)** | **9,082** | **3,520** | **420** | **3,424** | **(14,639)** | **15,320** | **4,525** |
| Accounts receivable, net | (1,312) | 1,142 | (404) | (520) | (16,033) | 15,370 | (1,587) | 1,203 | (23) | (9,383) | 9,688 | 1,485 | (3,955) | 3,100 | (16,878) | 17,498 | (236) |
| Advances to clients | (996) | - | - | - | 166 | 249 | 415 | 257 | (826) | (263) | (262) | (1,094) | (187) | - | - | - | (187) |
| Prepaid expenses | (590) | (24) | (1,487) | 467 | 730 | (649) | (939) | (1,108) | 98 | (473) | 537 | (946) | (2,503) | 33 | (382) | (691) | (3,543) |
| Related party receivable | - | (265) | - | - | - | 265 | 265 | - | - | - | - | - | - | - | - | - | - |
| Other assets | (127) | (133) | (361) | 380 | (92) | (1,311) | (1,384) | (23) | 685 | 457 | (340) | 779 | (3) | - | - | - | (3) |
| Accounts payable | (101) | 1,328 | 434 | (469) | 279 | 1,650 | 1,894 | 4,244 | (5,017) | 533 | (2,325) | (2,565) | 4,785 | 439 | 909 | (4,587) | 1,546 |
| Accrued expenses and other current liabilities | 3,360 | 1,047 | 1,714 | 703 | 2,679 | (110) | 4,986 | (3,020) | 4,941 | 1,703 | 1,973 | 5,597 | (2,304) | (91) | 1,055 | 1,911 | 571 |
| Deferred revenue | 2,144 | (5,002) | 3,378 | 4,457 | 4,954 | (12,259) | 530 | 4,511 | 6,619 | (10,296) | (194) | 640 | 4,246 | (39) | 451 | 816 | 5,474 |
| Refunds payable | 513 | 159 | (18) | 191 | 70 | 360 | 603 | 209 | (13) | 371 | 33 | 600 | 384 | (18) | 206 | 373 | 946 |
| Rebate reserve | 618 | 240 | 20 | 24 | (338) | (26) | (320) | 3 | (8) | (925) | (2) | (932) | 2 | - | - | - | 2 |
| Other liabilities | 348 | 120 | 15 | 4 | 19 | 231 | 269 | 80 | (105) | 7 | (26) | (44) | (45) | - | - | - | (45) |
| **CASH FLOW FROM OPERATIONS** | **(18,612)** | **(20,185)** | **899** | **(2,015)** | **(15,925)** | **1,359** | **(15,682)** | **2,474** | **(832)** | **(21,765)** | **8,438** | **(11,685)** | **(1,287)** | **(2,464)** | **(17,303)** | **16,600** | **(4,455)** |
| **CASH FLOW FROM INVESTING** | | | | | | | | | | | | | | | | | |
| Capital expenditures | (2,512) | (2,275) | (790) | (878) | (448) | (251) | (2,367) | (1,116) | (604) | (815) | (1,268) | (3,803) | (946) | (2,008) | (2,114) | (2,221) | (7,289) |
| Capitalized content development | (3,656) | (2,578) | (771) | (1,274) | (1,516) | (1,652) | (5,213) | (1,505) | (1,971) | (1,823) | (1,851) | (7,150) | (2,409) | (426) | (439) | (452) | (3,726) |
| Other | (90) | (362) | - | - | - | (56) | (56) | (17) | (4) | - | (8) | (29) | - | - | - | - | - |
| **CASH FLOW FROM INVESTING** | **(6,258)** | **(5,215)** | **(1,561)** | **(2,152)** | **(1,964)** | **(1,959)** | **(7,636)** | **(2,638)** | **(2,579)** | **(2,638)** | **(3,127)** | **(10,982)** | **(3,355)** | **(2,434)** | **(2,553)** | **(2,673)** | **(11,015)** |
| **CASH FLOW FROM FINANCING** | | | | | | | | | | | | | | | | | |
| Proceeds from stock issued under stock plans | - | - | - | - | - | - | - | - | 100,302 | - | - | 100,302 | - | - | - | - | - |
| Proceeds from exercise of stock options | - | 611 | - | 69 | 43 | 213 | 325 | 262 | 761 | 199 | 1,060 | 2,282 | 1,226 | - | - | - | 1,226 |
| Proceeds from revolving line of credit | - | - | - | - | | - | - | - | - | - | 5,000 | 5,000 | - | - | - | - | - |
| Payment on revolving line of credit | - | - | - | - | | - | - | - | - | - | (5,000) | (5,000) | - | - | - | - | - |
| Repurchase of common shares | - | - | - | (149) | (29) | (1) | (179) | - | - | - | - | - | - | - | - | - | - |
| Other | 32,260 | 26,021 | 4,994 | - | - | - | 4,994<br>- | (1,411) | 1,411 | - | - | - | (436) | - | - | - | (436) |
| **CASH FLOW FROM FINANCING** | **32,260** | **26,632** | **4,994** | **(80)** | **14** | **212** | **5,140** | **(1,149)** | **102,474** | **199** | **1,060** | **102,584** | **790** | **-** | **-** | **-** | **790** |
| Effect of exchange rates on cash & equivalents | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Net increase/(decrease) in cash & equivalents | 7,390 | 1,232 | 4,332 | (4,247) | (17,875) | (388) | (18,178) | (1,313) | 99,063 | (24,204) | 6,371 | 79,917 | (3,852) | (4,899) | (19,857) | 13,927 | (14,680) |
| Cash & equivalents - beginning of period | 16,568 | 23,958 | 25,190 | 29,522 | 25,275 | 7,400 | 25,190 | 7,012 | 5,699 | 104,762 | 80,558 | 7,012 | 86,929 | 83,077 | 78,178 | 58,322 | 86,929 |
| Cash & equivalents - end of period | 23,958 | 25,190 | 29,522 | 25,275 | 7,400 | 7,012 | 7,012 | 5,699 | 104,762 | 80,558 | 86,929 | 86,929 | 83,077 | 78,178 | 58,322 | 72,249 | 72,249 |

**Supplemental Cash Flow Information**

| | 2011 | 2012 | Q1-13 | Q2-13 | Q3-13 | Q4-13 | 2013 | Q1-14 | Q2-14 | Q3-14 | Q4-14 | 2014 | Q1-15 | Q2-15E | Q3-15E | Q4-15E | 2015E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cash Flow from Operations | (18,612) | (20,185) | 899 | (2,015) | (15,925) | 1,359 | (15,682) | 2,474 | (832) | (21,765) | 8,438 | (11,685) | (1,287) | (2,464) | (17,303) | 16,600 | (4,455) |
| Capital expenditures | (2,512) | (2,275) | (790) | (878) | (448) | (251) | (2,367) | (1,116) | (604) | (815) | (1,268) | (3,803) | (946) | (2,008) | (2,114) | (2,221) | (7,289) |
| Capitalized content development | (3,656) | (2,578) | (771) | (1,274) | (1,516) | (1,652) | (5,213) | (1,505) | (1,971) | (1,823) | (1,851) | (7,150) | (2,409) | (426) | (439) | (452) | (3,726) |
| **Free Cash Flow** | **(24,780)** | **(25,038)** | **(662)** | **(4,167)** | **(17,889)** | **(544)** | **(23,262)** | **(147)** | **(3,407)** | **(24,403)** | **5,319** | **(22,638)** | **(4,642)** | **(4,899)** | **(19,857)** | **13,927** | **(15,470)** |

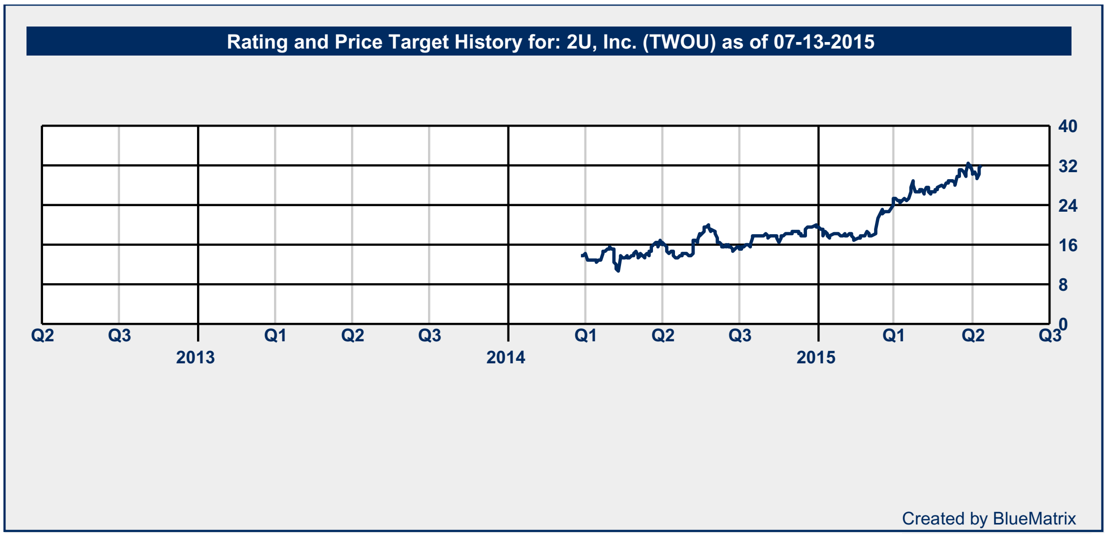
Source: Company reports and Robert W. Baird & Co., Inc. estimates
**Please refer to Appendix - Important Disclosures and Analyst Certification**

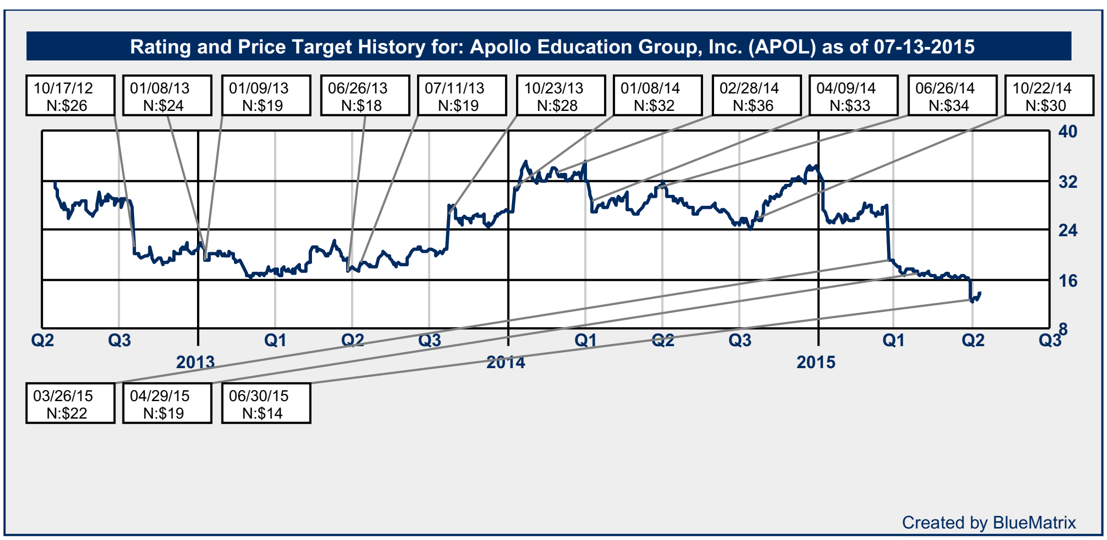
# Appendix - Important Disclosures and Analyst Certification

**Covered Companies Mentioned**

All stock prices below are the July 13, 2015 closing price.

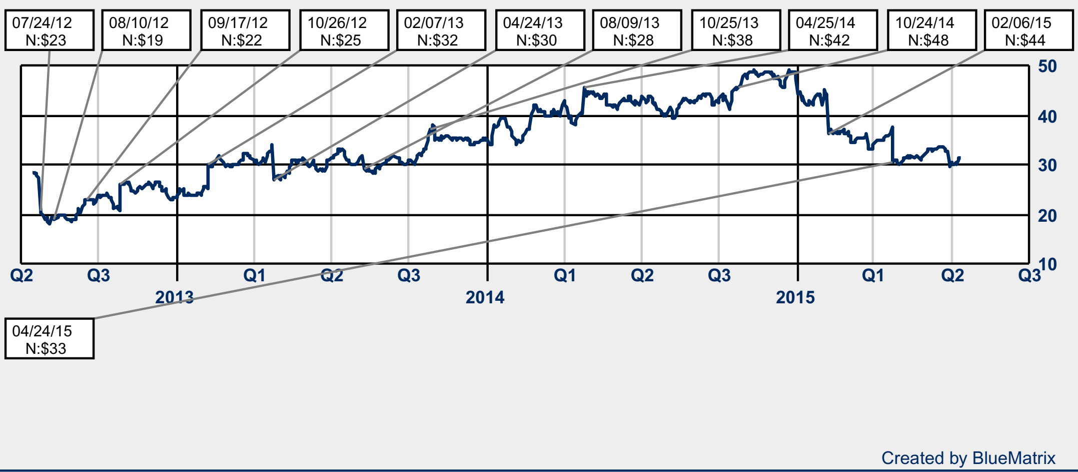
Apollo Education Group, Inc. (APOL - $14.03 - Neutral)
Bright Horizons Family Solutions, Inc. (BFAM - $59.03 - Neutral)
DeVry Education Group Inc. (DV - $31.48 - Neutral)
Grand Canyon Education, Inc. (LOPE - $43.65 - Outperform)
(See recent research reports for more information)



Rating and Price Target History for: Bright Horizons Family Solutions, Inc. (BFAM) as of 07-13-2015


Rating and Price Target History for: DeVry Education Group Inc. (DV) as of 07-13-2015




Rating and Price Target History for: Grand Canyon Education, Inc. (LOPE) as of 07-13-2015


1 Robert W. Baird & Co. Incorporated makes a market in the securities of TWOU, APOL, BFAM, DV and LOPE.

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