With a proprietary cloud-based SaaS platform and a lucrative contract structure, 2U is poised to beneift from the ever-growing demand in post-graduate online education.

Ticker: TWOU	Price at Recommendation: $17.43
Action: LONG	Current Price: $25.52 (+46.4%)
Timeframe: 1-2 years	Price Target: $31.00
Target Allocation: 5-10%	Market Value: $1.05B
Catalyst: Proprietary SaaS Platform, Contract Structure, Elite Partnerships	

Company Profile

2U is an educational technologies company that partners with leading nonprofit colleges and universities to offer online degree programs. The company supplies its partner universities with cloud-based software-as-a-service platform coupled with a suite of technology-enabled services, including coursework design, infrastructural support and capital to deliver instructs to students.

2U primarily generates revenue via long-term contracts (approximately 10-15 years, initially) for a specified share of the tuition and fees that the firm's clients receive from students enrolled in 2U-enabled programs.

Notable Facts:

- The company went public on March 28, 2014, and raised $119M by offering 9.2 million shares at $13 per share.
- The Co-Founders include the current CEO Chip Paucek (former CEO of Hooked on Phonics) and John Katzman (founder of the Princeton Review)
- In May 2012, Forbes named 2U as one of the “10 Start-Ups Changing the World.”
- Has partnered with prestigious universities such as the University of California, Berkeley, Northwestern, and Georgetown University.

The educational technology sector has experienced rapid growth in the past several years; notably, due to the growing demand for postgraduate education and the recent change in consumer preferences. The cause for this consumer transformation is rooted naturally in the human condition, as we further integrate ourselves our learning habits via technology, it is only natural that we become less dependent on our geographic location and increasingly more dependent on the way which we learn.

In regards to the rapid change in consumer preferences, the Darwinian nature of our capitalistic society took hold as for-profit education corporations stepped in to fill the growing demand for on-line education that the for-profits were unable to adapt to. Fortuitously, thanks to 2U, that adaptation is accelerating, and the gap is slowly closing.

The key difference between 2U and it's competitors, is that this company values quality over quantity. This specific platform will allow universities to not only attract the most qualified students, but the most qualified professors as well. Both professors and students will no longer have to adhere to geographic boundaries; the overall program will undoubtedly benefit from attracting higher quality students, and will thus, provide a greater incentive for other universities to join the program.

Another difference is that 2U classes are small - just like 10 to 15 students and a professor onscreen in a Brady Bunch grid - so admission is selective. This company is simply bridging the gap between high quality students and high quality programs that would otherwise be unable to connect. Furthermore, this company could also deliver courses to entry-level undergraduate students in classes that are already beginning to integrate on a similar web-based platform.

Unlike other on-line degree programs, students enrolled in programs via 2U will be indifferent to students' enrolled on-campus, and will thus not generate the negative stigma that has recently covered the majority of for-profit education programs in this space. We are only in the early stages of this transformation, and 2U has proved to be the one leading it.

Financials

As you will see in our Discounted Cash Flow (DCF) Model, our price target for 2U (TWOU) is $20 per share. In our DCF, we use a weighted average cost of capital (WACC) of 11.0% and a terminal growth rate of 3.0%. For our multiple, we use 5.9x our estimated sales for 2015. As you will see in the Vertical Subscription Software Comparables chart, the multiple we attached to this company is a premium to its peer group average. We believe this premium accurately reflects our expectations for 2U's contract structure, business model leverage, and revenue growth.

Dollars and Shares in Millions

	Valuation @ Current Price $17.25			Valuation @ 12- Month Multiple Price $20.00	
	2013A	2014E	2015E	2014E	2015E
Price	**$17.25**	**$17.25**	**$17.25**	**$20.00**	**$20.00**
Fully Diluted Shares (IPO)	31.2	45.4	45.4	45.4	45.4
Market Capitalization	**$538.2**	**$783.3**	**$783.3**	**$908.2**	**$908.2**
Less: Net Cash (IPO)	(7.0)	(80.6)	(80.6)	(80.6)	(80.6)
• Net Cash / Share	($0.22)	($1.77)	($1.77)	($1.77)	($1.77)
Enterprise Value	**$531.2**	**$702.7**	**$702.7**	**$827.6**	**$827.6**
• EV / Share	$17.03	$15.48	$15.48	$18.23	$18.23
Revenue	$83.1	$109.5	$141.8	$109.5	$141.8
% Change YR/YR	49%	32%	29%	32%	29%
EV / Revenue	**6.4x**	**6.4x**	**5.0x**	**7.6x**	**5.8x**
EBITDAS	($21.2)	($15.4)	($13.5)	($15.4)	($13.5)
EV / EBITDAS	**(25.0)x**	**(45.5)x**	**(52.0)x**	**(53.6)x**	**(61.2)x**
EPS (Pro-forma)	($0.82)	($0.57)	($0.51)	($0.57)	($0.51)
P/E Multiple	(21.1)x	(30.0)x	(33.8)x	(34.8)x	(39.1)x
PEG Ratio	**(120.2)x**	**100.8x**	**305.2x**	**116.9x**	353.9x
Operating Cash Flow	($15.7)	($18.0)	($12.5)	($18.0)	($12.5)
• Operating Cash Flow / Share	($0.50)	($0.40)	($0.28)	($0.40)	($0.28)
EV / Operating Cash Flow	(33.9)x	(39.1)x	(56.2)x	(46.1)x	(66.2)x
Free Cash Flow	($23.3)	($29.0)	($26.3)	($29.0)	($26.3)
• Free Cash Flow / Share	($0.75)	($0.64)	($0.58)	($0.64)	($0.58)
EV / Free Cash Flow	**(22.8)x**	**(24.2)x**	**(26.7)x**	**(28.6)x**	**(31.5)x**
EV / Free Cash Flow / Growth	**3.2x**	**(1.0)x**	**2.9x**	**(1.2)x**	**3.4x**
FCF Yield	(4.3)%	(3.7)%	(3.4)%	(3.2)%	(2.9)%

Price Per Share	2014 Q3	
Total PV of Projected FCF	$139	
PV of Terminal Value	$602	
Total PV of Operations (Enterprise Value)	$740	
Plus: Cash (ipo)	$81	
Less: Debt (ipo)	$0	
Equity Value	$821	
Shares Outstanding (ipo)	45.4	
Current Value Per Share	**$18.08**	
12-month Price Per Share		**$20.06**
Current Share Price	**$17.25**	**$17.25**
Discount / Premium to Current Value	***4.8%***	***16.3%***

Cost of Equity	2014 Q3	2023E
Risk Free Rate	0.20%	2.00%
Beta	1.08	0.90
Risk Premium	10.00%	10.00%
Cost of Equity	**11.00%**	**11.00%**

WACC	2014 Q3	2023E
Equity Value (M)	$538	
Debt	$0.0	
Debt / Equity	0%	0.00%
Cost of Debt	4.00%	4.00%
Tax Rate	0.0%	21.0%
Net Cost of Debt	4.00%	3.16%
WACC	**11.00%**	**11.00%**

Terminal Multiple	2023E
Perpetual Growth Rate	3.00%
WACC	11.00%
Terminal Multiple (1/(WACC-g))	**12.5x**

1-year Forward Multiples	
EV / Revenue	**6.8x**
EV / EBITDA	**-47.9x**
EV / uFCF	**-25.9x**
uFCF Yield	**-4.39%**

	2013A	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	CAGR
												13-'23
Total revenue	**$83**	**$110**	**$142**	**$185**	**$245**	**$318**	**$397**	**$492**	**$596**	**$703**	**$829**	**25.9%**
% growth y-o-y		*31.8%*	*29.5%*	*30.2%*	*32.8%*	*29.6%*	*25.0%*	*24.0%*	*21.0%*	*18.0%*	*18.0%*	
												17-'23
EBITDAS	**-$21**	**-$15**	**-$14**	**-$11**	**$11**	**$42**	**$56**	**$79**	**$107**	**$141**	**$182**	**60.2%**
EBITDA margin	-25.6%	-14.1%	-9.5%	-6.1%	4.4%	13.1%	14.0%	16.0%	18.0%	20.0%	22.0%	
% growth y-o-y		*-27.3%*	*-12.5%*	*-16.2%*	*-195.1%*	*285.3%*	*33.8%*	*41.7%*	*36.1%*	*31.1%*	*29.8%*	
												18-'23
EBITS	**-$26**	**-$21**	**-$21**	**-$20**	**$0**	**$29**	**$40**	**$59**	**$83**	**$112**	**$149**	**39.0%**
Operating margin	-30.8%	-19.4%	-14.8%	-11.1%	0.0%	9.1%	10.0%	12.0%	14.0%	16.0%	18.0%	
% growth y-o-y		*-17.0%*	*-1.2%*	*-2.7%*	*-100.3%*	*54769%*	*37.8%*	*48.8%*	*41.2%*	*34.9%*	*32.8%*	
Cash tax rate	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*5.0%*	*15.0%*	*19.0%*	*21.0%*	
												18-'23
EBIT * (1-Tax)	**-$26**	**-$21**	**-$21**	**-$20**	**$0**	**$29**	**$40**	**$56**	**$71**	**$91**	**$118**	**32.6%**
+ D&A	4	6	7	9	11	13	16	20	24	28	33	
% of revenue	5.2%	5.3%	5.3%	4.9%	4.4%	4.0%	*4.0%*	*4.0%*	*4.0%*	*4.0%*	*4.0%*	
- CapEx and CapContent	(8)	(11)	(14)	(14)	(14)	(14)	(16)	(20)	(24)	(28)	(33)	
% of revenue	9.1%	10.1%	9.7%	7.5%	5.5%	4.3%	*4.0%*	*4.0%*	*4.0%*	*4.0%*	*4.0%*	
+ Δ WC	5	(2)	0	(0)	(1)	(1)	0	0	0	0	0	
% of revenue	5.7%	-2.0%	0.3%	-0.1%	-0.4%	-0.3%	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	18-'23
uFCF	**-$24**	**-$29**	**-$27**	**-$25**	**-$4**	**$27**	**$40**	**$56**	**$71**	**$91**	**$118**	**34.6%**
% growth y-o-y		*18.7%*	*-6.1%*	*-6.1%*	*-85.2%*	*-817.6%*	*48.7%*	*41.4%*	*26.3%*	*28.5%*	*29.5%*	
Shares	31	38	41	43	44	46	47	49	50	52	54	
% growth y-o-y (dilution rate)	*37.5%*	*34.5%*	*29.2%*	*23.2%*	*18.1%*	*14.5%*	*11.9%*	*9.9%*	*8.5%*	*7.4%*	*6.5%*	18-'23
UFCF/share	**-$0.77**	**-$0.76**	**-$0.65**	**-$0.59**	**-$0.08**	**$0.58**	**$0.84**	**$1.15**	**$1.40**	**$1.75**	**$2.20**	**30.5%**
% growth y-o-y		*-2.0%*	*-14.2%*	*-9.4%*	*-85.8%*	*-793.9%*	*43.9%*	*37.0%*	*22.5%*	*24.8%*	*25.8%*	

			2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E
Last Reported Quarter	2014 Q3					**Discount multiplier with WACC = 11.0%**						
Quarter	March		0.0000	0.9492	0.8551	0.7704	0.6940	0.6252	0.5633	0.5075	0.4572	0.4119
Quarter	June		0.0000	0.9247	0.8331	0.7505	0.6761	0.6091	0.5488	0.4944	0.4454	0.4013
Quarter	September		0.0000	0.9009	0.8116	0.7312	0.6587	0.5935	0.5346	0.4817	0.4339	0.3909
Quarter	December		0.9742	0.8777	0.7907	0.7124	0.6418	0.5782	0.5209	0.4693	0.4228	0.3809
Year		0	1	2	3	4	5	6	7	8	9	10
PV of uFCF			**-$7**	**-$25**	**-$21**	**-$3**	**$18**	**$24**	**$30**	**$35**	**$40**	**$47**

Company	Ticker	Market Cap (M)	Enterprise Value (M)	2014E Rev. (M)	2015E Rev. (M)	2014E Rev. (yr/yr %)	2015E Rev. (yr/yr %)	EV / Revenue 2014E	EV / Revenue 2015E	EV / EBITDA 2014E	EV / EBITDA 2015E	EV / Op. CF 2014E	EV / Op. CF 2015E	EV / Free CF 2014E	EV / Free CF 2015E	P / E 2014E	P / E 2015E
Vertical SaaS																	
Athenahealth Inc	ATHN	$5,281	$5,388	$747	$917	25.6%	22.7%	7.2x	5.9x	38.8x	32.5x	38.5x	37.6x	Nmf	Nmf	Nmf	110.8x
Benefitfocus Inc	BNFT	$683	$664	$136	$172	29.5%	26.7%	4.9x	3.9x	Nmf	Nmf	Nmf	Nmf	Nmf	Nmf	Nmf	Nmf
Cvent Inc	CVT	$1,130	$947	$142	$178	27.6%	25.4%	6.7x	5.3x	53.9x	48.1x	Nmf	Nmf	Nmf	60.1x	123.5x	Nmf
Channeladvisor Corp	ECOM	$236	$155	$85	$103	25.3%	20.9%	1.8x	1.5x	Nmf	Nmf	Nmf	Nmf	Nmf	Nmf	Nmf	Nmf
Demandware Inc	DWRE	$1,670	$1,410	$155	$214	49.5%	38.1%	9.1x	6.6x	Nmf	94.2x	102.7x	109.2x	Nmf	Nmf	Nmf	Nmf
Ellie Mae Inc	ELLI	$1,251	$1,165	$157	$197	21.9%	26.0%	7.4x	5.9x	28.8x	31.7x	46.3x	44.4x	Nmf	Nmf	46.4x	50.9x
Fleetmatics Group Plc	FLTX	$1,340	$1,204	$232	$288	30.6%	24.3%	5.2x	4.2x	17.0x	13.5x	24.8x	15.4x	Nmf	38.4x	36.5x	27.2x
Hubspot Inc	HUBS	$1,021	$1,027	$113	$145	Nmf	28.1%	9.1x	7.1x	Nmf	Nmf	Nmf	Nmf	Nmf	Nmf	Nmf	Nmf
Marin Software Inc	MRIN	$255	$183	$98	$117	27.2%	19.2%	1.9x	1.6x	Nmf	Nmf	Nmf	Nmf	Nmf	Nmf	Nmf	Nmf
Medidata Solutions Inc	MDSO	$2,331	$2,310	$337	$409	21.7%	21.4%	6.9x	5.6x	30.7x	22.8x	35.7x	45.9x	55.0x	37.5x	59.9x	45.8x
Opower Inc	OP	$653	$517	$127	$153	Nmf	20.3%	4.1x	3.4x	Nmf	Nmf	Nmf	Nmf	Nmf	Nmf	Nmf	Nmf
Realpage Inc	RP	$1,522	$1,449	$405	$444	6.6%	9.6%	3.6x	3.3x	20.9x	16.8x	23.0x	17.2x	52.1x	28.0x	51.6x	40.7x
Synchronoss Technologies	SNCR	$1,745	$1,440	$457	$558	29.5%	22.3%	3.2x	2.6x	8.4x	7.0x	15.2x	12.0x	Nmf	41.7x	23.5x	20.9x
Textura Corp	TXTR	$656	$590	$63	$90	53.9%	43.5%	9.4x	6.6x	Nmf	51.7x	Nmf	26.5x	Nmf	38.2x	Nmf	Nmf
2u Inc	TWOU	$794	$605	$110	$142	31.8%	29.5%	5.5x	4.3x	Nmf	Nmf	Nmf	Nmf	Nmf	Nmf	Nmf	Nmf
Veeva Systems Inc	VEEV	$4,053	$3,660	$303	$384	Nmf	26.9%	12.1x	9.5x	42.5x	34.9x	64.3x	45.2x	80.5x	47.9x	84.8x	69.8x
Simple Average		$1,539	$1,420	$229	$282	29.3%	25.3%	6.1x	4.8x	30.1x	35.3x	43.8x	39.3x	62.5x	41.7x	60.9x	52.3x
Market Cap Weighted Average						21.2%	24.8%	7.3x	5.8x	25.0x	28.7x	35.4x	33.0x	21.7x	22.0x	34.5x	47.7x
Median		$1,190.3	$1,096.2	$148.5	$187.6	27.6%	24.8%	6.1x	4.8x	29.7x	32.1x	37.1x	37.6x	55.0x	38.4x	51.6x	45.8x

Source: Credit Suisse, Corporate Filings, and assumptions from Pine Capital Partners L.P.

Risk

Due to the recent scrutiny that has surrounded the educational services sector, a multitude of inherent risk factors continue to remain present in this innovative industry; notably, the risk of for-profit colleges tarnishing the reputation of distance education as a whole. In addition, it is no secret that 2U has an abnormally high customer concentration, where one university alone accounts for over half of overall revenues.

As explained by the famous financial engineer, Andrew Lo, all investments come down to two variables: time and risk. In regards to risk, it is always a two-way street, with greater risk comes greater reward. 2U fits this narrative; although the risk is unjustifiably discernable, the reward is absolutely unfathomable. Despite our optimism, here the major risk factors that must be taken into consideration:

- High customer concentration
- 2U has a history of losses; multi-year pay-back period for every new program requires significant capital requirements to grow the business more quickly
- Decreased student retention could materially affect 2U's ability to grown revenue and achieve profitability
- Target universities could elect to build in-house online degree programs or partner with other marketing and technological providers
- For-profit on-line education providers could tarnish the reputation of distance education as a whole

High customer concentration

A significant portion of 2U's revenue is currently attributable to programs with the University of Southern California, or USC. A decline in enrollment in these programs could significantly reduce their revenue. USC represents the two longest running programs for the company, launched in 2009 and 2010. For the nine months ended September 30, 2013 and 2014, 70% and 57%, respectively, of their revenue was derived from these two programs; the two programs are in the Rossier School of Education and the School of Social Work.

Due to the contractual nature of their business model, these programs are locked in for long periods of time. However, 2U's compensation is tied to enrollment and student retention; meaning, revenue is tied to the success of the program and the overall market for on-line education. Although this company is contracted by a relatively small amount of clients, we have seen significant progress in their ability gain additional clients as well as increase enrollment numbers.

The fact of the matter is that the postsecondary education model is unambiguously changing; albeit the change is slow, but as the next generation of college students enters the market, they will tend to gravitate towards programs that offer greater accessibility. As evidenced by the boom in for-profit on-line universities, the market demand is there and organically growing.

In time, 2U's focus on value will be their greatest return on investment. As students graduate from the programs that have pioneered this industry, the doubt and stigma will slowly leave, and more universities will look for ways expand on-line course offerings.

In 2015, 2U will launch two MBA programs at both Syracuse and American University. In addition to this, 2U will also be launched a Master of Science in Analytics, a program that has already found success at both Southern Methodist University and the UC Berkeley. As evidenced by earlier programs, enrollment tends to grown in each inaugural class.

History of Losses

In order to launch a new program, 2U must incur significant expenses in technology and content development, as well as program marketing and sales, to identify and attract prospective students, and it may even take several years, if every, before they can generate revenue from a new program sufficient to cover their losses. The process of launching a new program is time-consuming and costly and, under the agreement with clients, 2U is responsible for the significant cost for this effort, even before they start to generate revenue.

Additionally, during the life of the client agreement, 2U is responsible for the costs associated with continued program marketing, maintaining their technology platform and providing non-academic and other support for students enrolled in the program. The time it takes to recover the investment in a new program depends on a variety of factors, primarily the level of student acquisition costs and the rate of growth in student enrollment in the program. On average, 2U estimates that it takes approximately four to five years after engagement with a client to fully recover their investment in the clients program.

So, the inherent risk within this model is that 2U could potentially have the incentive to employ a commission based compensation model for their recruiters because the company relies on their ability to attract new students and retain those currently enrolled. As evidenced by the pending lawsuits against countless for-profit education companies, this type of marketing is heavily regulated. However, unlike the for-profit institutions, 2U does not admit students, they simply get them to apply. Therefore, there is no incentive to contact a vast number of potential applicants; if the applicant does not have a reasonable chance of being accepted, 2U would not benefit from the boiler tactics employed at those institutions currently being investigated.

Logically, the more clients that partner with 2U the greater the expenses will be; however, we are now seeing the early investments payoff and synergies within the already established programs increasing the profit margins. Nevertheless, in order to achieve this growth and opportunity it will be absolutely necessary that 2U is able to raise additional capital.

Student Retention

The financial performance of this company depends heavily on student retention within their clients' programs, and basically, factors that influence this retention could be out of the companies; namely, reduced support from the client. Per the contract agreement, 2U is responsible for retaining the student over the life of the degree program. Their strategy to retain students involves offering high quality support and deliver the engaging educational content that the student expects.

The biggest risk we see in regards to retention is the potential lack of support from client faculty members. As evidenced at Duke, it is important that the faculty is engaged in the decision process, and not demanded by governing board at the university. It is a pivotal that 2U provides the same quality of service to the professors, if not, the students could potentially suffer from a pissed off instructor. Nevertheless, as noted previously, the transfer to an on-line platform should ultimately help the professor, as they will potentially be able to travel and conduct research that they otherwise would not be able to do.

In addition, another factor is the potential student dissatisfaction. Last quarter thousands of students left the University of Phoenix – Online Campus after technological glitches in their online platform ruined the experience for the students and eventually led to their departure. However, it is unfair to draw a parallel to a university that only graduates 5% of its students.

The majority of programs serviced by 2U are in the area of postgraduate studies at some of the best universities in the country; therefore, there is a much higher incentive for students to finish their degree. Although a con in regards to enrollment, the high price of these programs should theoretically lead to a higher retention rate.

Going forward, it is important that 2U executives manages growth effectively; rapid growth and expansion could be detrimental to their business model; management could potentially cannibalize their own business. In order for the already established programs to remain profitable, 2U must continue to allocate the same amount of services and not push for programs to expand at a rate that saturates the market and tarnishes the reputation.

Lastly, it is important that employees are well versed in the areas of student loans, Title IV programs, and the overall regulatory framework that has recently attached itself to this sector. Although it is necessary that 2U provides superior service to potential students, it is also important to not tarnish the prestige of the program by desperately contacting students as for-profit education companies do. For example, if a salesman calls every day about enrolling in the Masters of Finance program at Georgetown, people will naturally begin to doubt the pedigree of the program.

Competitive Alternatives

As in any business, 2U naturally faces the qualms of competition; specifically in this sector, the largest competitors include EmbanetCompass and Deltak, which were acquired in 2012 by Pearson and John Wiley & Sons, respectively, both of which are large education and publishing companies. In addition to their competitors, colleges and universities may also chose to continue using or to develop their own online learning solutions in-house, rather than pay for 2U's solutions.

Per corporate filings, the following list characterizes the competitive factors that have the greatest potential for affecting future client opportunities:

- Competitors may develop service offerings that potential clients find more appealing than 2U
- Competitors may adopt more aggressive pricing policies and offer more attractive sales terms, adapt more quickly to new technologies and changes in client and student requirements, and devote greater resources to the acquisition of qualified students than 2U can
- Current and potential competitors may establish cooperative relationships among themselves or with third parties to enhance their products and expand their markets, and this industry is likely to see an increasing number of new entrants and increased consolidation. Accordingly, new competitors or alliances among competitors may emerge and rapidly acquire significant market share.

So, put simply, the core threat amongst competitors is that they will have an easier access to capital and will put that capital to more efficient uses than 2U could possibly do. As stated earlier, the business structure is capital intensive; therefore, the CFO position will be all the more important. Despite capital being relatively cheap at the moment, monetary policies could change that valuation in the near future. Overall, the competitive alternatives is not the core risk, retaining management is the heart of this issue.

As we are in the early stages of educational technologies, it is imperative that management can grow this company effectively and stick to their strategy despite the inevitable influence from Wall Street. Also, due to the small number of clients and the significant nature of each new client relationship, the senior management team is heavily involved in the client identification process; and of course, their expertise is critical in navigating the complex approval process of large nonprofit colleges and universities.

For-profit Education Stigma

If for-profit postsecondary institutions, which offer online education alternatives different from those at 2U, perform poorly, it could potentially tarnish the reputation of online education as a whole, which could impair 2U's ability to grow the business. For-profit postsecondary institutions, which provide the majority of their services online, are under intense regulations and other scrutiny, which has led to media attention that has portrayed the sector in an unflattering light. The scrutiny within this sector is not unwarranted; for-profit colleges are currently being investigated for their predatory lending practices and for their ongoing abuse of federal aid funds.

Even though 2U does not market their solutions to these types of institutions, the negative media attention may nevertheless add to skepticism about online higher education generally, including 2U's solutions. Moreover, allegations of abuse of federal aid funds and other statutory violations against for-profit higher education companies could negatively impact 2U's opportunity to succeed due to increased regulations and decreased demand.

Contrarily, the students who would potentially enroll in programs with 2U are most likely already aware of the social irresponsibility employed by for-profit universities. Therefore, even if the negative perception continued around the alternative online programs, it should theoretically not affect 2U inversely. Put simply, this risk would only be logical if we assumed that the same people who applied to the University of Phoenix also applied to UC Berkeley, which is obviously not the case.

Opportunity

As evidenced by recent trends, an increasing number of institutions of higher education globally will implement online learning strategies to expand their reach and remain relevant to the needs of students. There is undoubtedly a significant opportunity for 2U to help leading nonprofit colleges and universities implement and scale high quality online degree programs, as well as protect and deliver on the promise of their brands.

The transition of the higher education market to cloud-based online delivery is just the beginning, and this company is uniquely positioned to capture market share by delivering compelling, value-producing services to these institutions. We believe that the following characteristics will allow 2U to further their market presence and grow revenue exponentially over the next several years:

- Rising global demand for postsecondary/online education
- Lucrative contract structure
- Business model leverage
- Proprietary cloud-based SaaS platform

Rising global demand for postsecondary/online education

Higher education is a large and well-established market, both in the United States and worldwide. In the United States alone, total revenue for all degree-granting postsecondary institutions was over $550 billion for the 2010-2011 academic year, according to a May 2013 report by the U.S. National Center for Educational Statistics (NCES). The decade between 2000 and 2010 saw a 37% increase in enrollment in postsecondary degree granting institutions in the United States, from 15.3 million to 21.0 million, according to the U.S. Department of Education (DOE), and that number is expected to rise to 23.8 million by 2021, a further increase of 13%.

In addition to the growth in postsecondary education, the market for online education haw grown more rapidly than the entire postsecondary market, driven by the increased acceptance of online programs among students, academic institutions and employers, and the greater flexibility and convenience of many online programs. Until now, this demand has been solely supplied by for-profit colleges, this market grew to a multi-billion dollar industry overnight; however, due to their fraudulent practices and sub-par instruction, this boom is now a bust.

Unlike corporations who can adapt quickly to the change in consumer preferences, nonprofit colleges and universities have been slow to change. In the past, many nonprofit institutions lacked the confidence that online programs could offer sufficient quality to align with their brands, market reputation and academic standards. However, as evidenced by academic research, academic outcomes in online environments are generally equivalent to or better than those in traditional face-to-face environments. As in traditional classrooms, the determining factor is the student; the poor performance of online programs at for-profit colleges is mainly attributed to their student base and poor instruction.

Despite this digression, as technology improves and online education initiatives become more prominent, nonprofit colleges and universities are considering online education as a means to increase enrollment cost-effectively. For nonprofit institutions, the solutions provided by 2U solve two significant problems: decrease expenses due to the tighter budgets, and adapt effectively to modern technologically dependent society.

Lucrative Contracts

Up to this point, we have covered the potential risk associated with this venture as well as the potential opportunity; what we have not talked about is how this company actually makes money, and is the predefined risk worth the reward. The answer, of course, is hell yes. Per the company records, 2U makes $10,000 - $15,000 in revenue per student per year.

> From our inception through December 31, 2013, a total of 8,540 unique individuals have enrolled as students in our clients' programs. [p 1]

> For the years ended December 31, 2011, 2012 and 2013, our revenue was $29.7 million, $55.9 million and $83.1 million, respectively. [p 2]

Aside from biopharmaceuticals and blood diamonds, this is one of the best contracts you are going to find. As noted in a previous article regarding the company, the revenue per student is by assuming that 8,000 students are generating $83.1 million in tuition revenue, that gives a lower bound of ~ $10,000 per student per year. However, it is more likely that 2U had closer to 5,500 students (based on 84% retention rate and some students completing their programs), which gives an upper bound for 2013 of ~ $15,000 per student per year.

If that number didn't wet your whistle, here is a better one: 2U makes an average of $10 million in revenue per customer per year. 2U made $83.1 million in revenue with just eight of its nine customers (UC Berkeley did not start in 2013). Unfortunately, 2U is still losing a lot of money per their initial expenses in each program; from 2011-2013, net losses were $24.9 million, $23.1 million and $28.0 million, respectively.

In an interview with Techonomy in fall 2012, Co-Founder/CEO Chip Paucek described the cost structure in the following manner:

> "The notion that online is somehow a cost-saving mechanism is simply incorrect. You're only saving cost if you make the experience low quality. We partner with a school that wants to become preeminent in their field online. We will not partner with a school if they expect to see online discounted in any fashion"

At first glance, the cost premium seems counterintuitive; yet, these types of programs are actually considered a *Veblen Good*, meaning the demand is actually proportional to their price. Basically, aside from for-profit colleges, you normally get what you pay for in education. Moving forward, 2U will be able to leverage the brand recognition of high-quality universities, this will allow them to increase margins and grow revenue at a rate that they otherwise could not.

As stated in corporate filings, 2U's contracts are normally from 10-15 years. The company spends approximately $20 million to set up the program and attract students; although the initial expense is relatively high, the company will realize extraordinary profits after the first several years of the program.

Business Model Leverage

Paradoxically, the student debt bubble cliché could ultimately be a net positive for 2U. Because of escalating tuition rates, unemployment and a massive student debut burden in the United States – which has now reached more than $1 trillion – there is tremendous momentum to disrupt education as we know it and provide an alternative, or at least a complement, to the traditional and largely one-size-fits-all bricks-and-mortar school system.

Technological innovation has finally caught up to the potential at hand. As a result, education is undergoing a monumental shift, from a factory model to a digital, personalized model. In other words, 2U is not only solving a problem in a niche sector, but is actually leading a tectonic shift in the $7 trillion education industry.

Over the last several years we have seen start of this progression in the form of MOOCs; by offering free courses by prominent professors, thousands of people have signed up and currently enrolled in these classes. However, the majority of companies offering the MOOC platform are venture funded – meaning they will one day be forced to purse revenue and liquidation opportunities for their investors.

Although we cannot speculate on how MOOCs will evolve to realize revenue, we can however see their impact on the overall industry and what will eventually provide a economic benefit from 2U. The initial success achieved by these programs proved that there was a demand that was currently not being met by the current market participants. In reaction to this, the majority of institutions began experimenting with online courses and began offering hybrid classes that would test the actual efficiency of this educational innovation.

Into this new landscape has come a wealth of new educational opportunities and models. Some small schools, like Southern New Hampshire State University, adapted early, focusing on assembling the best educational experience as possible while maintaining ties to bricks-and-mortar community and regional business. We are now seeing large flagship institutions like Penn State choose to offer a relatively low-cost education in order to serve hundreds of thousands and eventually perhaps millions of students. Elite institutions, like those who have partnered with 2U, offer online credits only will most likely begin offering online degrees once it becomes clear that it will not dilute their brand (e.g. because enough of their competitors are doing it already).

Given this transition, 2U will stand to leverage their business model to benefit from the MOOCs and non-profit online academies, students will look for a credit-based alternative to further their education that uses the same format that started with. As 2U enters the undergraduate market and offers classes on a larger scale, the company will be able to scale organically and increase operating margins at a unimaginable rate.

Proprietary Cloud-Based SaaS Platform

2U's innovative online learning platform, Online Campus, enables clients to offer high quality educational content together with instructor-led classes in a live, intimate and engaging setting, averaging ten students per session, all accessible through proprietary web-based and mobile applications.

The cloud-based technology enables instructors to simultaneously lead group discussions and customize the virtual classroom to their individual styles and display a variety of documents, images, charts, notes, and videos. Basically, it's like something you would see some futuristic dystopian movie, it's that cool. Online Campus also enhances collaboration by allowing students to interact during class sessions using face-to-face online interaction, unlike other web-based education platforms, establish breakout groups for student discussion and group work and share projects onscreen for group feedback. More importantly, the program allows students to collaborate in planned or ad hoc study, regardless of day or time.

2U and the client creates, publishes, and delivers video and other asynchronous content, interactive course lectures, and other types of content to enhance interaction between faculty members and students. Additionally, Online Campus provides students with fully customizable social profiles, multimedia postings and dynamic communication and other notification tools designed to supplement the live classroom experience and promote meaningful relationships.

As touched on earlier, 2U offers a comprehensive suite of technology-enabled services throughout the lifetime of the program. One of these services deals with student acquisition; the company develops creative assets, such as websites related to the fields of study, and executes campaigns aimed at acquiring students cost-effectively. Unlike the University of Phoenix who advertises in homeless shelters and VA hospitals, 2U targets students who have actually inquired about the programs.

This platform accurately reflects the quality of the client's institution, from application advising to state authorization services, 2U handles it. Per the prospectus, the high quality student and faculty support is a central pillar of their bundled service offering. Between the proprietary cloud-based platform and the high quality services, 2U has clearly set the standard in educational services.

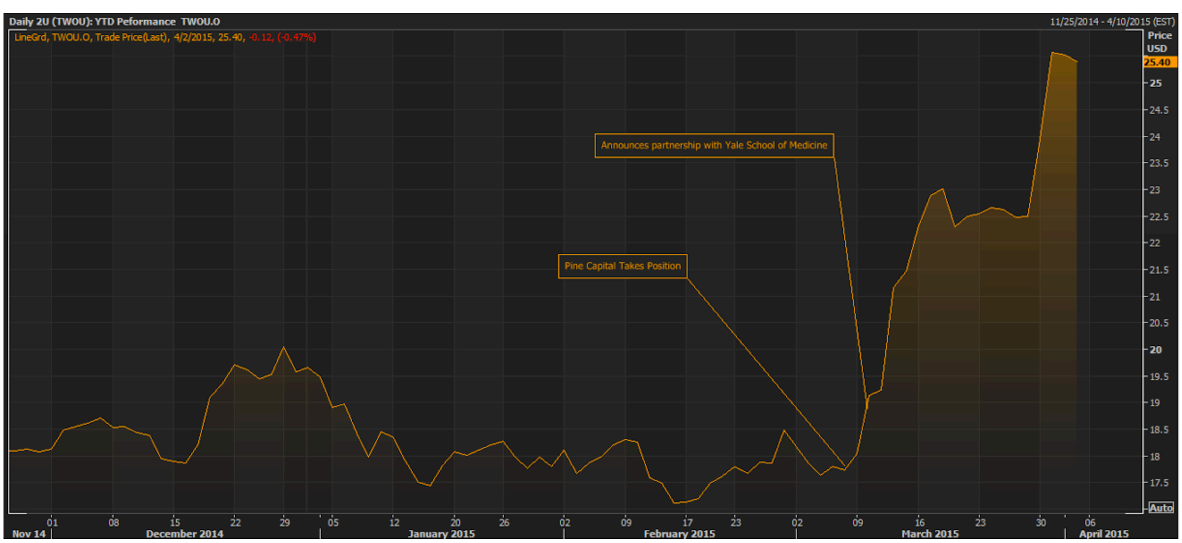
Conclusion

As we conclude our thesis on the promising young educational service company, 2U, we must take a look at the overall theme that is currently driving this specific industry. Due to the innate human condition, we often fail to change until we reach the precipice of our problem. Regrettably, in this case, it will take a multitude of problems to occur before 2U ultimately achieves the success that it deserves.

The popular contention is that the fall in for-profit education will inevitably fall on the shoulders of companies like 2U. Like many popular beliefs, this contention is fundamentally wrong. The same reason for-profit online colleges and MOOCs will fails is the same reason 2U will find prosperity; in the end, it always comes down to incentive. The dropout rate for online programs is because the students are not motivated; the economic benefit is simply not there. This reason alone sets 2U apart from competitors; students can actually conceptualize the benefits of having a graduate degree from a program like UC Berkeley.

In all fairness, it is likely that the larger universities will either develop their own platform or use a less expensive competitor to supply a class or two to a mass market. However, as evidenced by recent success, 2U has dominated their current market and will most likely continue to do so.

Although we cannot predict who will win the battle of education technology, we can say however that the battle has only begun. The monumental shift towards the digital age has finally come to fruition, and we fully believe 2U will stand to benefit from it.



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