



Charon Special  
Situations Group

2U

17 DECEMBER 2018

2U

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Short Analysis

We came across 2U a year ago on an up-and-coming small cap tech list. In July, Spruce Point Capital Management, a reputable short-only hedge fund, issued a strong sell recommendation on the stock. While neither events were particularly out of the ordinary, what caught our eye was a Bloomberg note in October in which equity research analysts doubled down on the beaten stock with 12 buy / 2 hold / no sell ratings. After 2U's 33% loss since July, we wanted to identify whether the company had performed dismally because of points made in Spruce Point's report or if the company was simply over-exposed to market trends. We also re-evaluated and updated the short thesis:

- **2U trades almost entirely on fund flows.** There is no actual evidence of anyone pricing in the concerns that Spruce Point has. 1-month moving Pearson R calculations show that capital appreciation / depreciation is very much a macro story. 2U will probably continue to trade with large cap technology names for the next year or so. **There may be an opportunity to properly short 2U, depending on whether volatility quells or investors acclimate to volatility.**
- **We do believe that there are more ingrained problems in the company, but none that would trigger a material catalyst.** In the short term, we do not anticipate any substantial headwinds in the next year so long as announced programs proceed on schedule. We agree on most of the points that Spruce Point brought up, but the over-crowding of the OPM market is slower than they anticipate. **Management decision making will most likely be the source of any short catalyst and should be scrutinized as industry conferences come up.**

At current multiples, there is not enough downside risk to justify initiating a short position (unless one is using 2U as a proxy for shorting the technology sector). We see a longer two to three year horizon for Spruce Point's concerns (poor industry outlook, management issues, and overzealous investors) to be priced in. In the near future, we expect more sell-offs in line with the macro climate, followed by limited recovery. Without any major catalysts, 2U will most likely fair well as long as it maintains its 30% growth rate (which we think is possible for the next year, although less likely thereafter).

*Refer to Abbreviations & Definitions section at the end of the slide deck for terminology.*

Figure 1: Company Details

## Market Opinion Holders

<b>Shares Short:</b>	6.85MM shares	<b>Public Short:</b>	Spruce Point Cap. Mgt.
<b>Short Ratio:</b>	7.84	<b>Short PT:</b>	30-50% Downside
<b>% of Float:</b>	15.21%	<b>Report Date:</b>	07/19/2018
<b>% of Shr. Out.:</b>	11.83%	<b>2U Return:</b>	-32.73% (12/13/2018)

## Equity Research Analyst Coverage

Barrington Research	Alexander Paris	BMO Capital Markets	Jeffrey Silber
Citigroup Global Markets	Thomas Singlehurst	Compass Point Research	Michael Tarkan
Credit Suisse	Brad A. Zelnick	D.A. Davidson & Company	Rishi Jaluria
First Analysis	Corey Greendale	Goldman Sachs	George K Tong
KeyBanc Capital Markets	Monika Garg	Macquarie Capital	Sarah Hindlian
Needham & Company	Ryan MacDonald	Oppenheimer & Co	Brian Schwartz
Piper Jaffray & Company	Peter Appert	Robert W. Baird & Co	Jeffrey Meuler

## Software Infrastructure Technology

Ticker (in MM except per share and ratios)	TWOU (US:NASDAQ)
<b>Price (12/13/2018)</b>	<b>\$60.29</b>
52-Week Range:	\$50.25-98.08
Shares Outstanding:	57.7
Market Cap:	3,476.5
Forward Dividend / Yield:	N/A
LT Debt:	\$0.0
ROE:	16.20%
P/E (TTM)	-81.51x
EPS (TTM)	-0.74x
EV / Revenue (TTM)	7.92x
EV / EBITDA (TTM)	293.94x
Leverage (TTM)	0.00x
Coverage (TTM)	N/A
Last Reporting Date:	11/5/2018



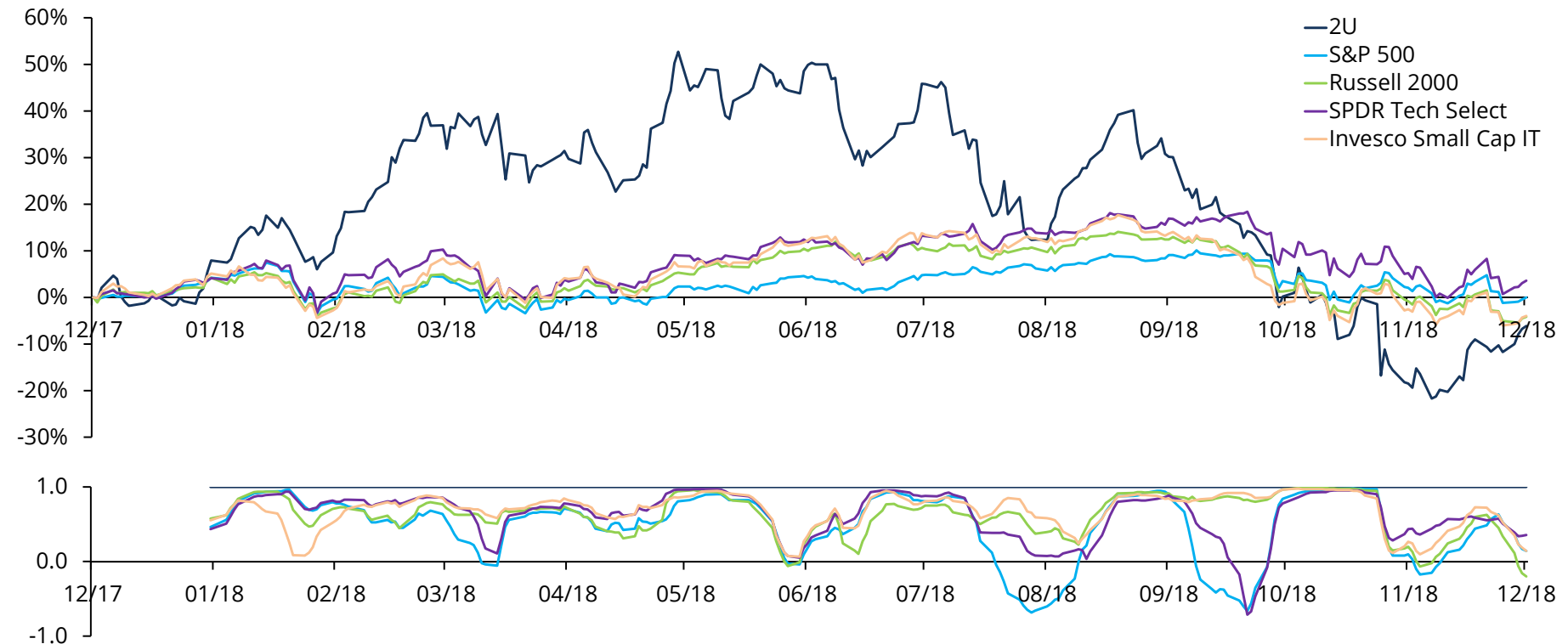
To calculate whether Spruce Point had successfully shorted the stock, we used Beta and Pearson R. The primary difference between the two statistics is that one is a measure of comparable volatility while the other gauges similarity. Because 2U has a much smaller float, we also used a 1-month moving R as the YTD R calculation was inconclusive.

2U's volatility exactly matches the tech components of the S&P; during periods of market growth or decline, 2U correlates perfectly with the indices we selected. What this means is that the recent sell-off purely reflects macro activity and not a pricing in of Spruce Point's short thesis.

**Figure 2: YTD Beta and YTD Pearson R Correlation to Indices**

	S&P 500	Russell 2000	SPDR Tech Select	Invesco SCap IT
	SPY	IWM	XLK	PSCT
2U	Beta Relative to Index			
	1.228932	1.275882	1.016501	1.122310
	Pearson R Correlation to Index			
	0.157286	0.588713	0.386972	0.683860

**Figure 3: YTD Performance and 1-Month Moving Pearson R Correlation**



Although it is a known fact that indices get rebalanced and arbitrageurs front run the trades, we used the S&P, Russell 2000, SPDR Tech Select, and Invesco Small Cap Information Technology ETFs as approximate proxies given 2U's institutional ownership.

Index, GARP, Growth, Core Growth, and Aggressive Growth tend to be strategies that are in line with mutual fund flows and passive investing trends. Since these make up 68% of shares outstanding as shown in Figure 5, we thought it would be apt to use similar indices for the calculations.

On a separate note, 13F filings aggregated in Figure 4 give fairly bullish indications of asset manager sentiment. Turnover seems to be low – a market positive for 2U; however, high concentration might indicate that fewer (<20) shareholders are strongly bullish (but this is not a huge concern).

## Factors that may influence future performance in order:

- **Rising rates.** 2U is incredibly materially exposed to macro factors. US GDP outlook, rates, and large cap tech will likely influence prices.
- **Growth to value rotation.** 2U is highly concentrated in growth portfolios. Should market downturn persist and fund flows rotate into value strategies, we anticipate huge sell-offs.
- **Management team.** 2U management team presents at industry conferences frequently and could further report on revenue expectations.

Figure 4: Institutional Activity for Top 10 Biggest Positions

Investor (09/30/2018)	% O/S	Pos Chg	% Pos Chg
Wellington Management	13.35	184,122	2.44
Fidelity Management & Research	8.72	349,860	7.44
The Vanguard Group	8.31	184,555	3.99
Franklin Advisers	7.19	761,627	22.40
Baron Capital Management	4.60	143,883	5.71
BlackRock Institutional Trust Company	3.77	79,622	3.78
Gilder Gagnon Howe & Co	3.64	-32,706	-1.53
First Trust Advisors	3.12	269,559	17.50
TimesSquare Capital Management	3.03	415,055	31.02
AllianceBernstein	2.57	-6,897	-0.46

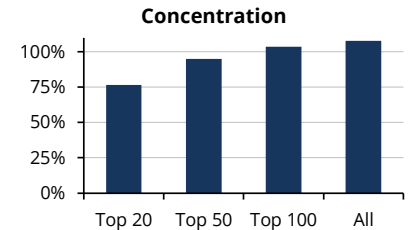
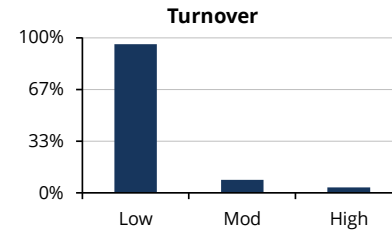
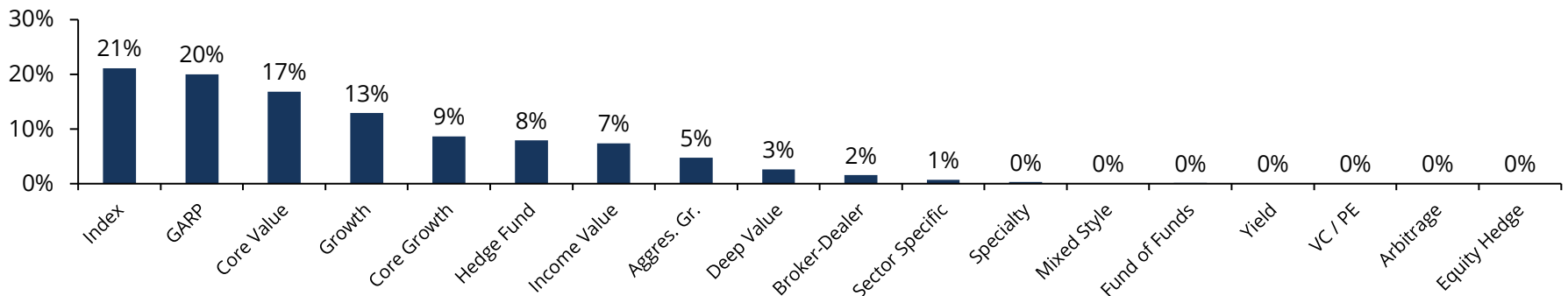
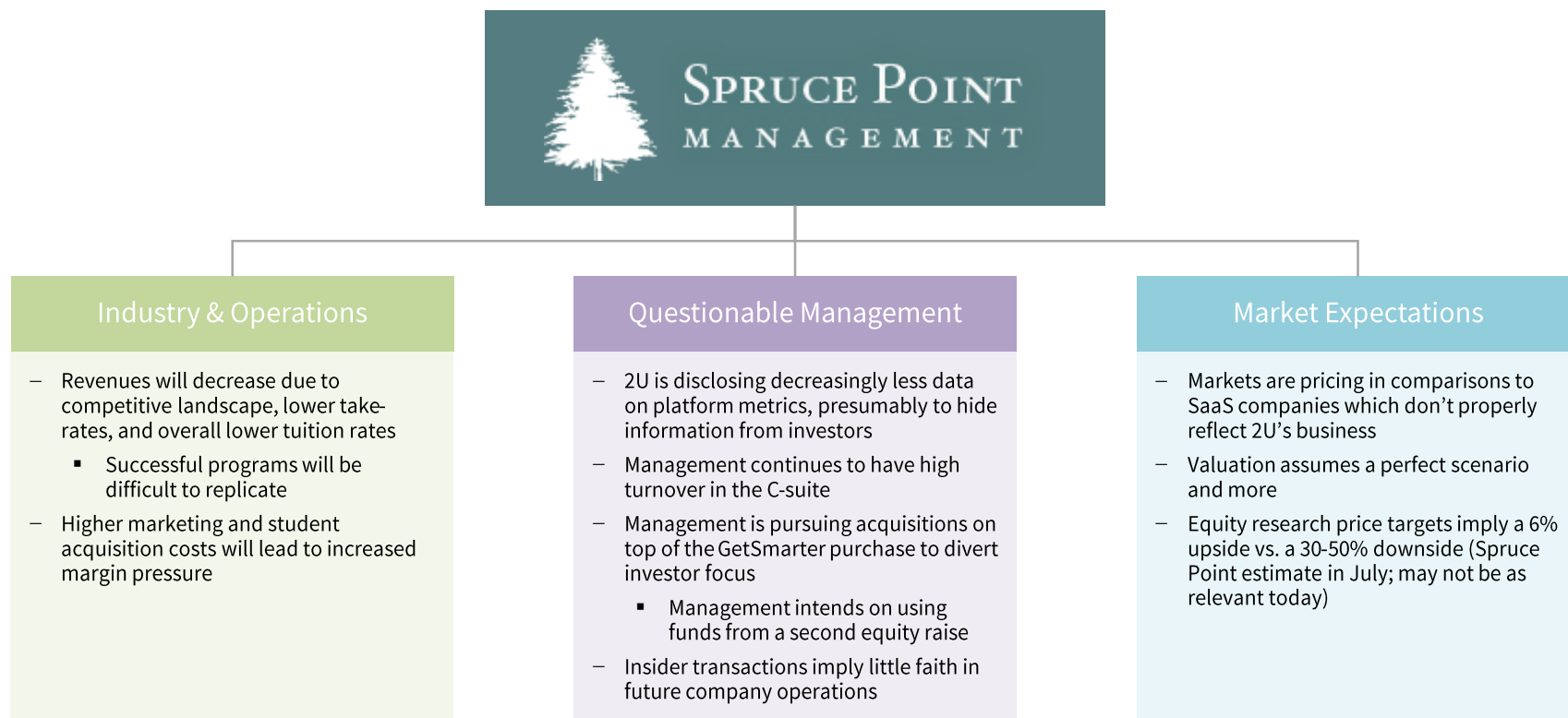


Figure 5: Investor Style as % of Owned Shares Outstanding



We have grouped Spruce Point's short report into three central arguments: 2U is positioned in a disrupted industry expecting diminished future performance, has issues with its management team, and is being valued optimistically and incorrectly by the market.

Many of Spruce Point's contentions are backed by anecdotal blog posts as well as their own proprietary estimates; however, their FOIA requested information provided data that may not have been reported on. We incorporated this into our own models based on 2U's public filings to render a conclusion.



*We agree with Spruce Point but see a longer horizon for these concerns to be priced in (2-3 years).  
We see a sell-off in line with the macro climate and limited recovery. Downside risk severely outweighs upside.*



Because we are mainly highlighting flaws in 2U, we recommend reading initiating coverage reports, filings, and investor presentations prior to reading the following so as to understand the OPM industry.

First, we used Spruce Point's case study of Simmons College FY17 and expanded their analysis to FY16 and FY18 to understand 2U's success.

Figure 6: Simmons College Financials

(in thousands, FY ending June 30)	2016	2017	2018
Online Revenue Tuition and Fees	45,013	65,605	77,720
Partner Share of Online Revenues	30,568	44,187	51,869
2U Implied Take Rate	67.9%	67.4%	66.7%
2U Revenues	30,568	44,187	51,869
Expenses	20,079	29,025	34,071
EBITDA	10,489	15,162	17,798
EBITDA Margin	34.3%	34.3%	34.3%
Simmons College Revenues	14,445	21,418	25,851
Expenses	8,173	12,118	14,626
Surplus to Simmons	6,272	9,300	11,225
Surplus Margin	43.4%	43.4%	43.4%

Even taking into account assumption sensitivity, it is undoubtedly clear that 2U earns significantly more than Simmons. This contests all of 2U's marketing material in which they claim steady state programs yield more cash flow to the university. By professing average gains of \$5-6MM versus \$6-7MM to the university, the company is able to win clients and exploit them behind the scenes.

The next logical step was to determine whether this strategy is sustainable. 2U's Chief Revenue Officer reports "low to mid 60 percent" revenue share in every piece of marketing material the company has. As we can see for Simmons, they pay a ~67% take-rate. The first few colleges that signed with 2U (USC, Georgetown, UNC, Simmons) pay between 60-67%, but continued growth depends on continued client acquisition.

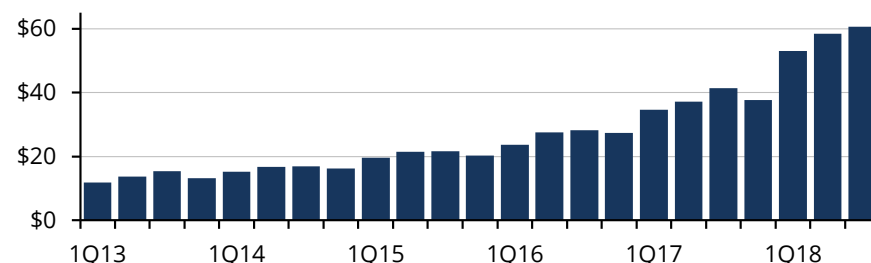
Spruce Point's FOIA request to the University Illinois found that Coursera in providing their iMBA program charges only a 40% take-rate, and between Fall '16 and Fall '17, the program grew from 264 to 787 students. What this shows is a democratization of the industry – higher numbers of OPMs with equally competitive platforms taking lower fees to expand. Considering the fact that an eighth of 2U's programs are MBAs and this secular trend isn't limited to MBAs, we find it hard to side with equity research analysts who

project DGP growth on a more linear scale. Future contracts will not come close to the lucrative nature of 2U's oldest programs.

## Some other notes to be aware of:

- Noodle Partners, a competing OPM founded by a 2U co-founder who left pre-IPO (see following slide), offers a severely discounted convertible revenue share model that takes 30-40% steady state revenue.
- As per the 3Q18 earnings call, 2U anticipates headwinds with its USC and UNC programs (two of its largest clients). USC is going through "a very significant change of leadership and direction... [which] will have an impact in 2019" while UNC "is currently grappling" with student requirement shifts which "will have some impact on new enrollments." The negative impact is expected to reduce 2019 revenue growth by 3% which highlights concentration risk in the event of a force majeure.
- Proponents of 2U as a SaaS company argue that margins will widen. On the surface level, most cost of sales and general & administrative expenses seem fairly flat which favors this opinion; however, the largest single line item is marketing which is increasing at an equal rate as revenue growth (Figure 7). It makes sense that 2U would pursue marketing as an add to its 2UOS platform given its lack of patents (it has one; see Sources) and nonunique infrastructure. The problem that we and Spruce Point see in this venture comes from 2U's FY17 10K where management states "marketing efforts make substantial use of search engine optimization, paid search..." Because those two features rely on a bidding process, we do not think the trend of increasing OPMs will help lower these growing costs.

Figure 7: 2U Marketing & Sales Expense (in millions)



Moving on, we noted some red flags with management and listed them below:

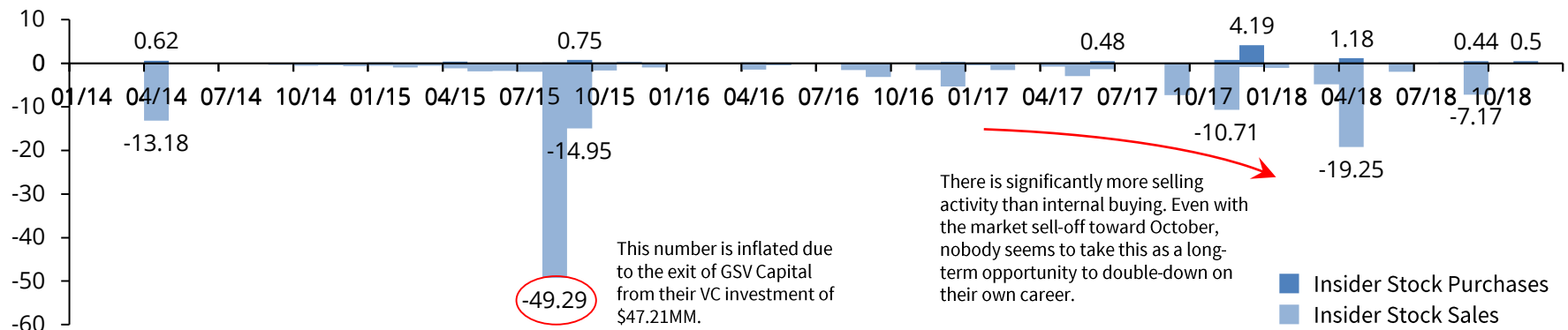
- **Net insider transactions flow negative (Figure 9).** 2U executives are consistently selling more of their positions in the company which could show little personal faith in future growth. [We've listed biggest net sellers and potential reasons in Figure 8.](#)
- **Management turnover is accelerating.** This includes:
  - **John Katzman** – Katzman served as executive officer until August 2012 and director until December 2012 before quitting prior to 2U's IPO and founding Noodle Partners, a competing education provider.
  - **Robert Cohen** – Cohen retired as President and COO in January 2016.
  - **Jeff Rinehart** – At the same time as Cohen, Rinehart left to become the CMO of Framebridge, a company he was on the board of.
  - **James Shelton** – Shelton, President and Chief Impact Officer, left in May 2016 to join the Chan Zuckerberg Initiative and head their education efforts.
  - **Susan Cates** – The COO resigned in May 2018 for undisclosed reasons, 17 months after starting the job.
- **Hiring questions.** With constant new positions and hires, here are two comments:
  - **Andrea Papa** – After joining as SVP, Corporate Controller, and CAO in January 2016, the CAO title was passed on to John Ellis in May 2018 without any comment on Papa's performance.
  - **Mark Chernis** – A board member since 2009, Chernis stepped into the COO role in May 2018. As Spruce Point noted, it is bad when directors step into operational roles, but it seems much worse when Chernis has sold \$1.75MM shares starting directly after his appointment.

**Figure 8: Net Insider Transactions (2014 - Present)**

Insider	Title	Net Change (\$MM)	Current Holdings	Current % O/S	Rationale
Moe (Michael T)	Director	-47.21	9,559	0.02	VC exit (GSV Capital)
Paucek (Christopher J)	CEO	-42.78	530,191	0.92	Offloading shares
Larson (JohnM)	Director	-25.76	113,428	0.03	Offloading shares
Katzman (John S)	B. Owner*	-10.70	N/A	N/A	Founder, quit to make competitor
Cohen (Robert L)	Officer	-9.17	N/A	N/A	Retired from COO position
Haley (Timothy M)	Director	-7.35	65,006	0.01	VC exit (Redpoint Ventures)
Kenigsberg James	CTO	-5.06	50,380	0.09	Offloading shares
Chernis (Mark J)	COO	-4.27	33,602	0.06	Offloading shares
Rinehart Jeff C	Officer	-2.40	38,295	0.07	CMO, left company
Mokkarala (Harsha)	Officer	-1.54	40,661	0.07	Offloading shares
Graham (Catherine A)	CFO	-0.96	73,837	0.13	Offloading shares
Lewis Earl	Director	-0.89	7,880	0.01	Offloading shares
Cates (Susan E)	COO	-0.07	37,126	0.06	COO, resigned after 17 months
Papa (Andrea)	Officer	-0.03	11,043	0.02	Offloading shares

Current Leadership			
Gabriel Bustamante EVP of Global Sales & Admissions	Cathy Graham CEO	James Kenigsberg CTO	Christopher Paucek CEO
Mark Chernis COO	Rani Hammond Chief People Officer	Harsha Mokkarala Chief Revenue Officer	David Sutphen Chief Strategy and Engagement Officer
Todd Glassman Co-General Counsel	Andrew Hermalyn 2UGrad President	Matt Norden Co-General Counsel	

**Figure 9: Insider Transactions (in millions)**





## Altered Revenue Metrics

- While going through the filings, we came across disparities that Spruce Point did not touch upon. 2U opportunistically reports its Concentration of Credit Risk section. It refers to its clients by name (USC, Georgetown, UNC, Simmons) when new clients are added or new revenues are received. However, on a regular basis the company makes efforts to hide client activity – inconsistently referring to them as “Client A, B, C, and D”, “Another and Additional University”, “1st, 2nd, 3rd, and 4th Largest Clients”.
- Piecing historical data, we were able to extrapolate that one of the changes between largest clients and client letters was to hide Georgetown’s revenue percent decrease to below 10% and Simmons’ increase to 16% between 3Q15 and 4Q15 by not properly naming either giving the illusion of single client growth. It would not be a surprise if other discrepancies were similarly hidden.

## Changing Disclosures

- Between 2U’s equity raises in September 2017 and May 2018 – the company had altered its use of proceeds by adding “the strategic acquisition of, or investment in, complementary products, technologies, solutions or businesses.”
- This likely indicates a shift in the executive and legal teams’ view of 2U’s organic growth within that eight month time frame.
- Furthermore in 3Q17, 2U stopped reporting recurrence metrics by deciding for investors that “platform revenue retention rate currently provides little to no value in evaluating our business and is not expected to provide value in the future.” When adding two year programs, we found that in FY16 13 programs (ending with Nursing@Simmons) should have been reported instead of 12.
- This means management withheld data and attempted to hide it behind analysts’ focus on the GetSmarter acquisition in 3Q17.

## Public Offerings

- September 2017 Public Offering resulted in net proceeds of \$189.5MM. 2U’s May 2018 Public Offering netted \$330.8MM. In conjunction with the use of proceeds changes, Spruce Point believes the guise of the GetSmarter acquisition as an international and segment diversification play is a ruse to stockpile investor cash before problems surface.
- Having \$442.2MM cash on the balance sheet as of 3Q18 and no demonstrated M&A track record, the timing of these back to back equity raises seems dubious. 2U would not be able to take on debt with negative EBITDA while at the same time claiming to work towards profitability. The company relies solely on equity offerings to survive and could very well be duping investors before its graduate segment underperformance comes to light.

## Acquisitions

- 2U acquired GetSmarter in July 2017 and announced its purchase of Critiquelt in June 2018.
- The main concern stems from GetSmarter revenue recognition. Cathy Graham, 2U CFO, stated in the 2Q17 call that “In our GetSmarter business, students enroll with and pay tuition directly to GetSmarter, and we recognize the full amount as revenue. We then pay the university partners their share upon course completion and this expense will make up the first part of a new cost line on our P&L called curriculum and teaching.” For the DGP segment, 2U only cites for its take-rate when making public filings.
- We share in Spruce Point’s question “Why are they recognizing gross course revenues in one case and just its portion in the latter?” when 2U partners with universities for both. We think this might be similar to the cash flow misrepresentation in Figure 6.





In addition to reading Spruce Point and 2U materials, we went ahead and summarized recent equity research reports from Credit Suisse, D.A. Davidson, Needham, Oppenheimer, and Piper Jaffray. Below are their main positives and our responses:

**Online education is rapidly growing sector featuring an increasing number of online university programs and student enrollments.** 2U maintains a ~30% YoY revenue growth rate and has lowered largest three or four client concentration to 44% from 84%. With a first mover advantage, 2U is well positioned to acquire more clients; however, higher enrollments do not imply 2U's success in client acquisition. This is analogous to the 1% fallacy – entrepreneurs making cliched assumptions that they can easily capture at least fraction of a large market. Since 2U was founded in 2008, 30+ competing OPMs have launched with equally competitive platforms and just as many contracts.

Following supply demand, Spruce Point's FOIA request to University of Illinois found that Coursera's take-rate for its IMBA program was 40% (versus 2U's advertised 60-70%). OPM alternatives are massively cheapening their offering through hybrid fee structures and other means. In addition, 2U has exactly one nonunique patent for interactive asynchronous education. This implies a lack of pricing power AND an undifferentiated product offering.

Also, OPM insiders believe consolidation is imminent in the industry, and due to the secular enrollment trend, many universities are considering launching their own software as well. Because DGP as a full degree program requires more restricting university contracts than short course, the real driver for 2U is the number of partnerships it can generate with colleges who act as gatekeepers in an incredibly bureaucratic system. Higher quantity of colleges partnered enables larger tuition capture which optimistically might compensate for dropping take-rates – splitting colleges is a zero-sum game and caps potential.

**2U has strong retention and is highly recurring – some analysts contend 2U shares in SaaS characteristics such as margin expansion.** 2U without a doubt has strong revenue momentum (which is addressed in the previous point). Despite the infrastructure scaling being so frequently cited, the company's SG&A expense has remained within the range of 70-90%, and Marketing & Sales has outpaced G&A by a long shot.

2U's FY17 10K notes under its risk factors, "Ineffective marketing efforts", mentioning that it "invest[s] substantial resources in ... search engine optimization, paid search and

custom website development and deployment..." Spruce Point correctly points out from their semrush.com search that SEO costs per click (CPC) are rising which is reasonable given CPC is based on a bidding process. Rapid growth in enrollments would thus play against 2U by increasing bidders, compressing margins and killing profitability.

**GetSmarter acquisition opens up foreign and short course diversification.** Buying Critiquelt which already is integrated into the 2U product, lets 2U reduce development time, avoid payments on patents, and keep technology from competitors. Unlike this defensive acquisition, GetSmarter represents an offensive foray into new markets.

**Figure 10: GetSmarter P&L**

(in thousands)	3Q17	4Q17	1Q18	2Q18	3Q18
Short Course Revenue	4,326	11,994	11,729	16,214	17,244
Curriculum & Teaching Expense	1,792	4,817	4,307	6,007	6,351
Gross Profit	2,534	7,177	7,422	10,207	10,893
Gross Margin	58.6%	59.8%	63.3%	63.0%	63.2%

Gross margins are roughly improving for GetSmarter, and we don't see any problems with the acquisition itself. We do believe that management's optimism for the DGP segment is waning (which explains the adoption of its acquisition strategy re: use of proceeds). Not to mention short courses are a more competitive segment and each international market follows its own trends, driving up other SG&A expenses.

**Valuation is attractive given 2U's market beat down.** We think most people would concede 2U is trading at a fair valuation at the moment. Even Spruce Point's short position stated a 30-50% downside, and it currently trades at the 30% level. The market does not seem to price in any of these concerns, so we believe 2U will further trade with the market before these problems are scrutinized. If the market calms down and 2U maintains its 30% growth rate, we anticipate a small recovery in the next year.

**Disclaimer: Goldman Sachs, Credit Suisse, Citigroup, Needham, Oppenheimer, Baird, Compass Point, First Analysis, KeyBanc, and Macquarie were all managers in 2U's secondary offering.** Although there is no definite proof, favorable research coverage has been previously used to solicit renewed ECM business. It would benefit the reader to read sell-side research with slight skepticism. Many of the reports were also purely rewritten filings and investor presentations which are doubtful.

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# Appendix



# 2U Income Statement (2013-2015)

2U, Inc. (in thousands, except share and per share)	Q1 3/31/2013	Q2 6/30/2013	Q3 9/30/2013	Q4 12/31/2013	FY 2013	Q1 3/31/2014	Q2 6/30/2014	Q3 9/30/2014	Q4 12/31/2014	FY 2014	Q1 3/31/2015	Q2 6/30/2015	Q3 9/30/2015	Q4 12/31/2015	FY 2015
<b>Income Statement</b>															
<b>Net Sales</b>	<b>19,134</b>	<b>18,691</b>	<b>20,499</b>	<b>24,803</b>	<b>83,127</b>	<b>26,332</b>	<b>24,744</b>	<b>28,407</b>	<b>30,756</b>	<b>110,239</b>	<b>34,612</b>	<b>35,238</b>	<b>37,092</b>	<b>43,252</b>	<b>150,194</b>
Graduate Program Segment	19,134	18,691	20,499	24,803	83,127	26,332	24,744	28,407	30,756	110,239	34,612	35,238	37,092	43,252	150,194
Short Course Segment															
Revenue Growth YoY						37.6%	32.4%	38.6%	24.0%	32.6%	31.4%	42.4%	30.6%	40.6%	36.2%
Revenue Growth QoQ		-2.3%	9.7%	21.0%		6.2%	-6.0%	14.8%	8.3%		12.5%	1.8%	5.3%	16.6%	
Curriculum & Teaching															
Servicing & Support	5,018	5,656	5,842	6,202	22,718	6,248	7,000	6,598	7,012	26,858	7,550	7,903	7,845	8,749	32,047
Technology & Content Development	3,235	4,596	5,113	6,528	19,472	5,674	5,818	5,726	5,403	22,621	6,134	6,466	7,082	7,529	27,211
Cost of Sales	8,253	10,252	10,955	12,730	42,190	11,922	12,818	12,324	12,415	49,479	13,684	14,369	14,927	16,278	59,258
% of Sales	43.1%	54.8%	53.4%	51.3%	50.8%	45.3%	51.8%	43.4%	40.4%	44.9%	39.5%	40.8%	40.2%	37.6%	39.5%
<b>Gross Profit</b>	<b>10,881</b>	<b>8,439</b>	<b>9,544</b>	<b>12,073</b>	<b>40,937</b>	<b>14,410</b>	<b>11,926</b>	<b>16,083</b>	<b>18,341</b>	<b>60,760</b>	<b>20,928</b>	<b>20,869</b>	<b>22,165</b>	<b>26,974</b>	<b>90,936</b>
Gross Margin	56.9%	45.2%	46.6%	48.7%	49.2%	54.7%	48.2%	56.6%	59.6%	55.1%	60.5%	59.2%	59.8%	62.4%	60.5%
Marketing & Sales	11,770	13,695	15,412	13,226	54,103	15,241	16,710	16,971	16,296	65,218	19,587	21,526	21,567	20,231	82,911
General & Administrative	2,871	3,654	4,269	4,046	14,840	5,436	5,708	6,303	5,973	23,420	6,711	8,871	8,477	10,064	34,123
SG&A Expense	14,641	17,349	19,681	17,272	68,943	20,677	22,418	23,274	22,269	88,638	26,298	30,397	30,044	30,295	117,034
% of Sales	76.5%	92.8%	96.0%	69.6%	82.9%	78.5%	90.6%	81.9%	72.4%	80.4%	76.0%	86.3%	81.0%	70.0%	77.9%
Total Cost & Expenses	22,894	27,601	30,636	30,002	111,133	32,599	35,236	35,598	34,684	138,117	39,982	44,766	44,971	46,573	176,292
<b>EBITDA</b>	<b>(2,834)</b>	<b>(7,894)</b>	<b>(8,997)</b>	<b>(3,946)</b>	<b>(23,671)</b>	<b>(4,984)</b>	<b>(9,129)</b>	<b>(5,597)</b>	<b>(2,596)</b>	<b>(22,306)</b>	<b>(3,657)</b>	<b>(7,851)</b>	<b>(5,981)</b>	<b>(1,389)</b>	<b>(18,878)</b>
EBITDA Margin	-14.8%	-42.2%	-43.9%	-15.9%	-28.5%	-18.9%	-36.9%	-19.7%	-8.4%	-20.2%	-10.6%	-22.3%	-16.1%	-3.2%	-12.6%
EBITDA Growth YoY						-75.9%	-15.6%	37.8%	34.2%	5.8%	26.6%	14.0%	-6.9%	46.5%	15.4%
EBITDA Growth QoQ		-178.5%	-14.0%	56.1%		78.9%	-83.2%	38.7%	53.6%		83.6%	-114.7%	23.8%	76.8%	
Depreciation & Amortization	926	1,016	1,140	1,253	4,335	1,283	1,363	1,594	1,332	5,572	1,713	1,677	1,898	1,932	7,220
<b>Operating Income</b>	<b>(3,760)</b>	<b>(8,910)</b>	<b>(10,137)</b>	<b>(5,199)</b>	<b>(28,006)</b>	<b>(6,267)</b>	<b>(10,492)</b>	<b>(7,191)</b>	<b>(3,928)</b>	<b>(27,878)</b>	<b>(5,370)</b>	<b>(9,528)</b>	<b>(7,879)</b>	<b>(3,321)</b>	<b>(26,098)</b>
Operating Margin	-19.7%	-47.7%	-49.5%	-21.0%	-33.7%	-23.8%	-42.4%	-25.3%	-12.8%	-25.3%	-15.5%	-27.0%	-21.2%	-7.7%	-17.4%
Interest (Expense)	8	5	(1)	15	27	(784)	(134)	(176)	(119)	(1,213)	(126)	(126)	(127)	(173)	(552)
Interest Income	6	10	5	5	26	1	31	30	30	92	28	24	21	94	167
Total Interest Income (Expense)	14	15	4	20	53	(783)	(103)	(146)	(89)	(1,121)	(98)	(102)	(106)	(79)	(385)
Other Income (Expense)													(250)	0	(250)
Income Before Preferred & Taxes	(3,746)	(8,895)	(10,133)	(5,179)	(27,953)	(7,050)	(10,595)	(7,337)	(4,017)	(28,999)	(5,468)	(9,630)	(8,235)	(3,400)	(26,733)
Preferred Stock Accretion	(87)	(87)	(87)	(86)	(347)	(87)	(2)	0	0	(89)	0	0	0	0	0
Income Taxes (Benefit)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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%
Income Before Extraordinary	(3,833)	(8,982)	(10,220)	(5,265)	(28,300)	(7,137)	(10,597)	(7,337)	(4,017)	(29,088)	(5,468)	(9,630)	(8,235)	(3,400)	(26,733)
Extraordinary Charges	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Net Income</b>	<b>(3,833)</b>	<b>(8,982)</b>	<b>(10,220)</b>	<b>(5,265)</b>	<b>(28,300)</b>	<b>(7,137)</b>	<b>(10,597)</b>	<b>(7,337)</b>	<b>(4,017)</b>	<b>(29,088)</b>	<b>(5,468)</b>	<b>(9,630)</b>	<b>(8,235)</b>	<b>(3,400)</b>	<b>(26,733)</b>
Reported Net Income	(3,833)	(8,982)	(10,220)	(5,179)	(28,300)	(7,137)	(10,597)	(7,337)	(4,017)	(29,088)	(5,468)	(9,630)	(8,235)	(3,400)	(26,733)
Check	0.00	0.00	0.00	(86.00)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Diluted Shares	7,386,133	7,398,059	7,415,777	7,528,940	7,432,055	7,698,709	39,304,884	40,269,937	40,577,087	32,075,107	40,978,741	41,362,476	41,645,894	45,651,475	42,420,356
Diluted EPS	(0.52)	(1.21)	(1.38)	(0.70)	(3.81)	(0.93)	(0.27)	(0.18)	(0.10)	(0.91)	(0.13)	(0.23)	(0.20)	(0.07)	(0.63)
Company Reported	(0.52)	(1.21)	(1.38)	(0.69)	(3.81)	(0.93)	(0.27)	(0.18)	(0.10)	(0.91)	(0.13)	(0.23)	(0.20)	(0.07)	(0.63)
Check	0.00	(0.00)	0.00	(0.01)	0.00	0.00	0.00	(0.00)	0.00	0.00	(0.00)	(0.00)	0.00	(0.00)	(0.00)

# 2U Income Statement (2016-2018)

2U  
17 DECEMBER 2018

2U, Inc. (in thousands, except share and per share)	Q1 3/31/2016	Q2 6/30/2016	Q3 9/30/2016	Q4 12/31/2016	FY 2016	Q1 3/31/2017	Q2 6/30/2017	Q3 9/30/2017	Q4 12/31/2017	FY 2017	Q1 3/31/2018	Q2 6/30/2018	Q3 9/30/2018	Q4 12/31/2018	FY 2018
<b>Income Statement</b>															
<b>Net Sales</b>	<b>47,444</b>	<b>49,110</b>	<b>51,960</b>	<b>57,350</b>	<b>205,864</b>	<b>64,829</b>	<b>64,995</b>	<b>70,250</b>	<b>86,678</b>	<b>286,752</b>	<b>92,288</b>	<b>97,423</b>	<b>106,963</b>		
Graduate Program Segment	47,444	49,110	51,960	57,350	205,864	64,829	64,995	65,924	74,684	270,432	80,559	81,209	89,719		
Short Course Segment								4,326	11,994	16,320	11,729	16,214	17,244		
Revenue Growth YoY	37.1%	39.4%	40.1%	32.6%	37.1%	36.6%	32.3%	35.2%	51.1%	39.3%	42.4%	49.9%	52.3%		
Revenue Growth QoQ	9.7%	3.5%	5.8%	10.4%		13.0%	0.3%	8.1%	23.4%		6.5%	5.6%	9.8%		
Curriculum & Teaching								1,792	4,817	6,609	4,307	6,007	6,351		
Servicing & Support	9,512	10,260	10,351	10,859	40,982	10,925	13,458	12,939	13,445	50,767	15,233	17,297	16,586		
Technology & Content Development	7,275	8,842	8,670	8,496	33,283	9,205	11,140	12,735	12,846	45,926	13,840	15,235	16,361		
Cost of Sales	16,787	19,102	19,021	19,355	74,265	20,130	24,598	27,466	31,108	103,302	33,380	38,539	39,298		
% of Sales	35.4%	38.9%	36.6%	33.7%	36.1%	31.1%	37.8%	39.1%	35.9%	36.0%	36.2%	39.6%	36.7%		
<b>Gross Profit</b>	<b>30,657</b>	<b>30,008</b>	<b>32,939</b>	<b>37,995</b>	<b>131,599</b>	<b>44,699</b>	<b>40,397</b>	<b>42,784</b>	<b>55,570</b>	<b>183,450</b>	<b>58,908</b>	<b>58,884</b>	<b>67,665</b>		
Gross Margin	64.6%	61.1%	63.4%	66.3%	63.9%	68.9%	62.2%	60.9%	64.1%	64.0%	63.8%	60.4%	63.3%		
Marketing & Sales	23,656	27,483	28,165	27,306	106,610	34,670	37,242	41,311	37,700	150,923	53,058	58,376	60,548		
General & Administrative	10,447	10,944	11,569	13,061	46,021	13,664	13,930	17,227	17,844	62,665	21,869	22,480	18,974		
SG&A Expense	34,103	38,427	39,734	40,367	152,631	48,334	51,172	58,538	55,544	213,588	74,927	80,856	79,522		
% of Sales	71.9%	78.2%	76.5%	70.4%	74.1%	74.6%	78.7%	83.3%	64.1%	74.5%	81.2%	83.0%	74.3%		
Total Cost & Expenses	50,890	57,529	58,755	59,722	226,896	68,464	75,770	86,004	86,652	316,890	108,307	119,395	118,820		
<b>EBITDA</b>	<b>(1,297)</b>	<b>(6,042)</b>	<b>(4,261)</b>	<b>318</b>	<b>(11,282)</b>	<b>13</b>	<b>(6,992)</b>	<b>(9,867)</b>	<b>6,332</b>	<b>(10,514)</b>	<b>(8,644)</b>	<b>(14,564)</b>	<b>(3,258)</b>		
EBITDA Margin	-2.7%	-12.3%	-8.2%	0.6%	-5.5%	0.0%	-10.8%	-14.0%	7.3%	-3.7%	-9.4%	-14.9%	-3.0%		
EBITDA Growth YoY	64.5%	23.0%	28.8%	122.9%	40.2%	101.0%	-15.7%	-131.6%	1891.2%	6.8%	-66592.3%	-108.3%	67.0%		
EBITDA Growth QoQ	93.1%	-365.8%	29.5%	107.5%		100.1%	-53884.6%	-41.1%	164.2%		17.8%	-68.5%	77.6%		
Depreciation & Amortization	2,149	2,377	2,534	2,690	9,750	3,648	3,783	5,887	6,306	19,624	7,375	7,408	8,599		
<b>Operating Income</b>	<b>(3,446)</b>	<b>(8,419)</b>	<b>(6,795)</b>	<b>(2,372)</b>	<b>(21,032)</b>	<b>(3,635)</b>	<b>(10,775)</b>	<b>(15,754)</b>	<b>26</b>	<b>(30,138)</b>	<b>(16,019)</b>	<b>(21,972)</b>	<b>(11,857)</b>		
Operating Margin	-7.3%	-17.1%	-13.1%	-4.1%	-10.2%	-5.6%	-16.6%	-22.4%	0.0%	-10.5%	-17.4%	-22.6%	-11.1%		
Interest (Expense)	(26)	(9)	0	0	(35)	0	(1)	(36)	(50)	(87)	(27)	(27)	(27)		
Interest Income	92	91	37	163	383	196	53	18	104	371	342	912	1,799		
Total Interest Income (Expense)	66	82	37	163	348	196	52	(18)	54	284	315	885	1,772		
Other Income (Expense)	0	0	0	0	0	0	(1,031)	59	106	(866)	(395)	(825)	(273)		
Income Before Preferred & Taxes	(3,380)	(8,337)	(6,758)	(2,209)	(20,684)	(3,439)	(11,754)	(15,713)	186	(30,720)	(16,099)	(21,912)	(10,358)		
Preferred Stock Accretion	0	0	0	0	0	0	0	0	0	0	0	0	0		
Income Taxes (Benefit)	0	0	0	0	0	0	0	(974)	(323)	(1,297)	(1,228)	(3,565)	(414)		
Income Tax Rate	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.2%	-173.7%	4.2%	7.6%	16.3%	4.0%		
Income Before Extraordinary	(3,380)	(8,337)	(6,758)	(2,209)	(20,684)	(3,439)	(11,754)	(14,739)	509	(29,423)	(14,871)	(18,347)	(9,944)		
Extraordinary Charges	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>Net Income</b>	<b>(3,380)</b>	<b>(8,337)</b>	<b>(6,758)</b>	<b>(2,209)</b>	<b>(20,684)</b>	<b>(3,439)</b>	<b>(11,754)</b>	<b>(14,739)</b>	<b>509</b>	<b>(29,423)</b>	<b>(14,871)</b>	<b>(18,347)</b>	<b>(9,944)</b>		
Reported Net Income	(3,380)	(8,337)	(6,758)	(2,209)	(20,684)	(3,439)	(11,754)	(14,739)	509	(29,423)	(14,871)	(18,347)	(9,944)		
Check	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Diluted Shares	45,953.082	46,494.464	46,903.628	47,075.167	46,609.751	47,237.341	47,668.397	48,961.914	52,330.067	49,062.611	52,687.299	54,981.192	57,663.361		
Diluted EPS	(0.07)	(0.18)	(0.14)	(0.05)	(0.44)	(0.07)	(0.25)	(0.30)	0.01	(0.60)	(0.28)	(0.33)	(0.17)		
Company Reported	(0.07)	(0.18)	(0.14)	(0.05)	(0.44)	(0.07)	(0.25)	(0.30)	0.01	(0.60)	(0.28)	(0.33)	(0.17)		
Check	(0.00)	0.00	(0.00)	0.00	(0.00)	(0.00)	0.00	(0.00)	(0.00)	0.00	(0.00)	(0.00)	(0.00)		

# 2U Adjusted EBITDA Calculation (2013-2018)

2U  
17 DECEMBER 2018

2U, Inc. (in thousands, except share and per share)	Q1 3/31/2013	Q2 6/30/2013	Q3 9/30/2013	Q4 12/31/2013	FY 2013	Q1 3/31/2014	Q2 6/30/2014	Q3 9/30/2014	Q4 12/31/2014	FY 2014	Q1 3/31/2015	Q2 6/30/2015	Q3 9/30/2015	Q4 12/31/2015	FY 2015
<b>Adjusted EBITDA</b>															
Net Income (Loss), Less Tax Benefits	(3,833)	(8,982)	(10,220)	(5,265)	(28,300)	(7,137)	(10,597)	(7,337)	(4,017)	(29,088)	(5,468)	(9,630)	(8,235)	(3,400)	(26,733)
Total Interest	(14)	(15)	(4)	(20)	(53)	783	103	146	89	1,121	98	102	106	79	385
Depreciation & Amortization	926	1,016	1,140	1,253	4,335	1,283	1,363	1,594	1,332	5,572	1,713	1,677	1,898	1,932	7,220
SBC Expense	436	632	639	719	2,426	1,195	2,044	2,247	2,041	7,527	2,048	3,867	3,302	3,282	12,499
Foreign Currency (Gain) Loss	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Adjustments	1,348	1,633	1,775	1,952	6,708	3,261	3,510	3,987	3,462	14,220	3,859	5,646	5,306	5,293	20,104
<b>Adjusted EBITDA</b>	<b>(2,485)</b>	<b>(7,349)</b>	<b>(8,445)</b>	<b>(3,313)</b>	<b>(21,592)</b>	<b>(3,876)</b>	<b>(7,087)</b>	<b>(3,350)</b>	<b>(555)</b>	<b>(14,868)</b>	<b>(1,609)</b>	<b>(3,984)</b>	<b>(2,929)</b>	<b>1,893</b>	<b>(6,629)</b>
Adjusted EBITDA Margin	-13.0%	-39.3%	-41.2%	-13.4%	-26.0%	-14.7%	-28.6%	-11.8%	-1.8%	-13.5%	-4.6%	-11.3%	-7.9%	4.4%	-4.4%
Adjusted EBITDA Growth YoY						-56.0%	3.6%	60.3%	83.2%	31.1%	58.5%	43.8%	12.6%	441.1%	55.4%
Adjusted EBITDA Growth QoQ		-195.7%	-14.9%	60.8%		82.0%	-82.8%	52.7%	83.4%		89.2%	-147.6%	26.5%	164.6%	
Company Reported	(2,398)	(7,262)	(8,358)		(21,245)	(3,789)	(7,085)	(3,350)		(14,779)	(1,609)	(3,984)	(2,929)		(6,629)
Check	(87.00)	(87.00)	(87.00)		(347.00)	(87.00)	(2.00)	0.00		(89.00)	0.00	0.00	0.00		0.00

2U, Inc. (in thousands, except share and per share)	Q1 3/31/2016	Q2 6/30/2016	Q3 9/30/2016	Q4 12/31/2016	FY 2016	Q1 3/31/2017	Q2 6/30/2017	Q3 9/30/2017	Q4 12/31/2017	FY 2017	Q1 3/31/2018	Q2 6/30/2018	Q3 9/30/2018	Q4 12/31/2018	FY 2018
<b>Adjusted EBITDA</b>															
Net Income (Loss), Less Tax Benefits	(3,380)	(8,337)	(6,758)	(2,209)	(20,684)	(3,439)	(11,754)	(15,713)	186	(30,720)	(16,099)	(21,912)	(10,358)		
Total Interest	(66)	(82)	(37)	(163)	(348)	(196)	(52)	18	(54)	(284)	(315)	(885)	(1,772)		
Depreciation & Amortization	2,149	2,377	2,534	2,690	9,750	3,648	3,783	5,887	6,306	19,624	7,375	7,408	8,599		
SBC Expense	3,544	3,976	4,073	4,230	15,823	3,895	5,495	6,147	6,393	21,930	7,122	9,009	7,933		
Foreign Currency (Gain) Loss	0	0	0	0	0	0	1,031	(59)	(106)	866	395	825	273		
Total Adjustments	5,627	6,271	6,570	6,757	25,225	7,347	10,257	11,993	12,539	42,136	14,577	16,357	15,033		
<b>Adjusted EBITDA</b>	<b>2,247</b>	<b>(2,066)</b>	<b>(188)</b>	<b>4,548</b>	<b>4,541</b>	<b>3,908</b>	<b>(1,497)</b>	<b>(3,720)</b>	<b>12,725</b>	<b>11,416</b>	<b>(1,522)</b>	<b>(5,555)</b>	<b>4,675</b>		
Adjusted EBITDA Margin	4.7%	-4.2%	-0.4%	7.9%	2.2%	6.0%	-2.3%	-5.3%	14.7%	4.0%	-1.6%	-5.7%	4.4%		
Adjusted EBITDA Growth YoY	239.7%	48.1%	93.6%	140.3%	168.5%	73.9%	27.5%	-1878.7%	179.8%	151.4%	-138.9%	-271.1%	225.7%		
Adjusted EBITDA Growth QoQ	133.9%	-191.9%	90.9%	2519.1%		-13.9%	-138.3%	-148.5%	442.1%		-113.3%	-265.0%	184.2%		
Company Reported	2,247	(2,066)	(188)		4,541	3,908	(1,497)	(3,720)		11,416	(1,522)	(5,555)	4,675		
Check	0.00	0.00	0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00		

# 2U Balance Sheet Assets (2013-2015)

2U  
17 DECEMBER 2018

2U, Inc.	Q1	Q2	Q3	Q4	FY	Q1	Q2	Q3	Q4	FY	Q1	Q2	Q3	Q4	FY
(in thousands, except share and per share)	3/31/2013	6/30/2013	9/30/2013	12/31/2013	2013	3/31/2014	6/30/2014	9/30/2014	12/31/2014	2014	3/31/2015	6/30/2015	9/30/2015	12/31/2015	2015
<b>Balance Sheet</b>															
Cash & Equivalents				7,012	7,012	5,699	104,762	80,558	86,929	86,929	83,077	88,224	175,324	183,729	183,729
Availability				37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	25,000	25,000
Liquidity				44,012	44,012	42,699	141,762	117,558	123,929	123,929	120,077	125,224	212,324	208,729	208,729
Restricted Cash															
Short-Term Investments															
Accounts Receivable				1,835	1,835	632	655	10,038	350	350	4,305	4,393	12,688	975	975
Advance to Clients, Current				581	581	324					658	817	1,163	1,508	1,508
Prepaid Expenses & Other Assets, Current				1,763	1,763	2,871	2,773	3,246	2,709	2,709	5,212	3,215	5,191	6,695	6,695
Total Current Assets				11,191	11,191	9,526	108,190	93,842	89,988	89,988	93,252	96,649	194,366	192,907	192,907
Internally-Developed Software				5,516	5,516	6,008	6,569	7,149	7,820	7,820	8,590	7,831	8,718	8,564	8,564
Internally-Dev. Software in Process												1,441	1,264	1,640	1,640
Computer Hardware				2,082	2,082	2,219	2,254	2,374	3,016	3,016	3,019	3,114	3,379	2,911	2,911
Furniture & Office Equipment				774	774	1,015	1,067	1,067	1,104	1,104	1,134	1,469	1,611	1,666	1,666
Leasehold Improvements				1,494	1,494	1,655	1,707	1,706	1,801	1,801	1,782	1,782	1,781	1,837	1,837
Leasehold Improvements in Process															
Accumulated Depreciation				4,635	4,635	5,235	5,856	6,455	6,986	6,986	7,589	8,284	8,962	8,490	8,490
Net PPE				5,231	5,231	5,662	5,741	5,841	6,755	6,755	6,936	7,353	7,791	8,128	8,128
Goodwill															
Cap. Tech Costs															
Cap. Tech Costs in Process															
Accumulated Amortization															
Cap. Tech Costs, Net															
Cap. Content Dev. Costs				11,816	11,816	13,703	14,894	16,076	16,835	16,835	19,757	21,603	24,042	24,796	24,796
Cap. Content Dev. Costs in Process				1,961	1,961	1,520	2,412	2,353	3,699	3,699	2,662	2,956	3,112	4,256	4,256
Accumulated Amortization				4,873	4,873	5,543	6,272	6,604	7,379	7,379	8,218	9,186	10,394	10,931	10,931
Cap. Content Dev. Costs, Net				8,904	8,904	9,680	11,034	11,825	13,155	13,155	14,201	15,373	16,760	18,121	18,121
University Client Relationships															
Accumulated Amortization															
University Client Relationships, Net															
Trade Names & Domain Names															
Accumulated Amortization															
Trade Names & Domain Names, Net															
Total Amortizable Intangible Assets				8,904	8,904	9,680	11,034	11,825	13,155	13,155	14,201	15,373	16,760	18,121	18,121
Advance to Clients, Non-Current							1,150	1,413	1,675	1,675	1,204	1,733	1,387	1,042	1,042
Prepaid Expenses, Non-Current														7,099	7,099
Other Non-Current Assets				3,326	3,326	5,211	1,745	1,191	1,466	1,466	1,456	1,995	8,259	3,744	3,744
Prepaid Expenses & Other Assets				3,326	3,326	5,211	1,745	1,191	1,466	1,466	1,456	1,995	8,259	10,843	10,843
<b>Total Assets</b>				<b>28,652</b>	<b>28,652</b>	<b>30,079</b>	<b>127,860</b>	<b>114,112</b>	<b>113,039</b>	<b>113,039</b>	<b>117,049</b>	<b>123,103</b>	<b>228,563</b>	<b>231,041</b>	<b>231,041</b>

# 2U Balance Sheet Liabilities and Equity (2013-2015)

2U  
17 DECEMBER 2018

2U, Inc.	Q1	Q2	Q3	Q4	FY	Q1	Q2	Q3	Q4	FY	Q1	Q2	Q3	Q4	FY
(in thousands, except share and per share)	3/31/2013	6/30/2013	9/30/2013	12/31/2013	2013	3/31/2014	6/30/2014	9/30/2014	12/31/2014	2014	3/31/2015	6/30/2015	9/30/2015	12/31/2015	2015
<b>Balance Sheet</b>															
Current Maturities of LT Debt															
Accounts Payable				5,089	5,089	9,264	4,085	4,677	2,293	2,293	7,078	2,846	4,330	4,544	4,544
Accrued Comp & Related Benefits														13,405	13,405
Accounts Payable & Accrued Expenses				5,089	5,089	9,264	4,085	4,677	2,293	2,293	7,078	2,846	4,330	17,949	17,949
Accrued Exp. & Other Current Liabilities				12,025	12,025	9,378	13,326	14,720	17,138	17,138	14,406	21,881	20,986	12,039	12,039
Deferred Revenues				1,266	1,266	5,777	12,396	2,100	1,906	1,906	6,152	13,426	3,818	2,609	2,609
Refunds Payable				1,831	1,831	2,040	2,027	2,398	2,431	2,431	2,815	3,077	3,512		
Other Current Liabilities															
Total Current Liabilities				20,211	20,211	26,459	31,834	23,895	23,768	23,768	30,451	41,230	32,646	32,597	32,597
<b>Long-Term Debt</b>															
Rebate Reserve				1,571	1,571	1,574	1,566	641	639	639	641	642	407		
Lease-Related Liabilities, Non-Current															
Deferred Government Grant Obligations															
Deferred Tax Liabilities															
Other Non-Current Liabilities				847	847	1,561	642	649	621	621	576	612	594	2,655	2,655
Total Liabilities				22,629	22,629	29,594	34,042	25,185	25,028	25,028	31,668	42,484	33,647	35,252	35,252
Convert. Series A Preferred				12,384	12,384	12,419									
Convert. Series B Preferred				22,210	22,210	22,246									
Convert. Series C Preferred				32,405	32,405	32,416									
Convert. Series D Preferred				31,048	31,048	31,053									
Total Preferred Stock				98,047	98,047	98,134									
Shareholders' Equity				8	8	8	40	40	41	41	41	42	46	46	46
Additional Paid-In Capital				7,817	7,817	9,242	211,272	213,718	216,818	216,818	219,656	224,523	347,051	351,324	351,324
Accumulated Deficit				(99,849)	(99,849)	(106,899)	(117,494)	(124,831)	(128,848)	(128,848)	(134,316)	(143,946)	(152,181)	(155,581)	(155,581)
Accumulated Other															
Total Shareholders' (Deficit) Equity				(92,024)	(92,024)	(97,649)	93,818	88,927	88,011	88,011	85,381	80,619	194,916	195,789	195,789
<b>Liabilities + Shareholders' Equity</b>				28,652	28,652	30,079	127,860	114,112	113,039	113,039	117,049	123,103	228,563	231,041	231,041
Balance				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Working Capital				(16,032)	(16,032)	(22,632)	(28,406)	(10,611)	(20,709)	(20,709)	(20,276)	(32,805)	(13,604)	(23,419)	(23,419)
Working Capital Use (Source)				(16,032)	(16,032)	(6,600)	(5,774)	17,795	(10,098)	(10,098)	433	(12,529)	19,201	(9,815)	(9,815)



# 2U Balance Sheet Assets (2016-2018)

2U  
17 DECEMBER 2018

2U, Inc.	Q1	Q2	Q3	Q4	FY	Q1	Q2	Q3	Q4	FY	Q1	Q2	Q3	Q4	FY
(in thousands, except share and per share)	3/31/2016	6/30/2016	9/30/2016	12/31/2016	2016	3/31/2017	6/30/2017	9/30/2017	12/31/2017	2017	3/31/2018	6/30/2018	9/30/2018	12/31/2018	2018
<b>Balance Sheet</b>															
Cash & Equivalents	186,710	188,251	156,927	168,730	168,730	142,889	37,435	202,434	223,370	223,370	182,110	488,834	442,226		
Availability	19,000	17,900	17,900	13,500	13,500	13,500	10,000	10,000	10,000	10,000	10,000	10,000	10,000		
Liquidity	205,710	206,151	174,827	182,230	182,230	156,389	47,435	212,434	233,370	233,370	192,110	498,834	452,226		
Restricted Cash							100,987								
Short-Term Investments													25,000		
Accounts Receivable	1,262	5,242	20,974	7,860	7,860	28,672	23,426	42,332	14,174	14,174	40,290	50,031	49,651		
Advance to Clients, Current	1,204	1,125	938	567	567	296	213								
Prepaid Expenses & Other Assets, Current	8,097	7,163	7,085	7,541	7,541	8,855	8,398	12,950	10,509	10,509	15,075	15,087	14,878		
Total Current Assets	197,273	201,781	185,924	184,698	184,698	180,712	170,459	257,716	248,053	248,053	237,475	553,952	531,755		
Internally-Developed Software															
Internally-Dev. Software in Process															
Computer Hardware	3,014	3,180	3,823	3,935	3,935				8,519	8,519					
Furniture & Office Equipment	1,677	1,722	1,750	2,204	2,204				5,354	5,354					
Leasehold Improvements	1,838	1,846	1,846	6,689	6,689				42,086	42,086					
Leasehold Improvements in Process	257	823	4,400	6,864	6,864				194	194					
Accumulated Depreciation	3,182	3,577	4,001	4,096	4,096				7,098	7,098					
Net PPE	3,604	3,994	7,818	15,596	15,596	29,659	34,390	45,025	49,055	49,055	50,669	50,264	51,527		
Goodwill															
Cap. Tech Costs	9,895	10,585	11,408	12,988	12,988	13,617	14,491	26,678	27,108	27,108	43,569	59,549	63,789		
Cap. Tech Costs in Process	1,632	2,356	3,579	4,112	4,112	5,382	6,615								
Accumulated Amortization	6,150	6,681	7,215	7,822	7,822	8,520	9,305	10,457	9,486	9,486	10,820	12,269	14,593		
Cap. Tech Costs, Net	5,377	6,260	7,772	9,278	9,278	10,479	11,801	16,221	17,622	17,622	32,749	47,280	49,196		
Cap. Content Dev. Costs	27,350	29,843	32,840	33,353	33,353	36,265	38,058	54,365	55,872	55,872	60,815	65,981	73,428		
Cap. Content Dev. Costs in Process	3,921	4,121	3,481	4,603	4,603	4,297	5,544								
Accumulated Amortization	12,134	13,404	14,665	15,367	15,367	16,778	18,001	19,913	21,417	21,417	23,525	25,988	28,758		
Cap. Content Dev. Costs, Net	19,137	20,560	21,656	22,589	22,589	23,784	25,601	34,452	34,455	34,455	37,290	39,993	44,670		
University Client Relationships															
Accumulated Amortization								24,162	29,443	29,443	30,692	26,757	26,033		
University Client Relationships, Net								671	1,636	1,636	2,558	2,973	3,616		
Trade Names & Domain Names								23,491	27,807	27,807	28,134	23,784	22,417		
Accumulated Amortization								11,555	12,119	12,119	18,225	17,040	16,852		
Trade Names & Domain Names, Net								924	1,242	1,242	1,702	2,035	2,443		
Total Amortizable Intangible Assets	24,514	26,820	29,428	31,867	31,867	34,263	37,402	84,795	90,761	90,761	114,696	126,062	130,692		
Advance to Clients, Non-Current	771	1,350	1,350	2,100	2,100	2,100	2,163								
Prepaid Expenses, Non-Current	6,698	8,123	6,974	7,052	7,052	10,843	14,789								
Other Non-Current Assets	3,858	3,768	3,079	3,007	3,007	3,103	2,770								
Prepaid Expenses & Other Assets	10,556	11,891	10,053	10,059	10,059	13,946	17,559	21,214	22,205	22,205	25,972	30,313	34,562		
<b>Total Assets</b>	<b>236,718</b>	<b>245,836</b>	<b>234,573</b>	<b>244,320</b>	<b>244,320</b>	<b>260,680</b>	<b>261,973</b>	<b>476,350</b>	<b>482,062</b>	<b>482,062</b>	<b>504,108</b>	<b>825,464</b>	<b>811,491</b>		

# 2U Balance Sheet Liabilities and Equity (2016-2018)

2U  
17 DECEMBER 2018

2U, Inc.	Q1	Q2	Q3	Q4	FY	Q1	Q2	Q3	Q4	FY	Q1	Q2	Q3	Q4	FY
(in thousands, except share and per share)	3/31/2016	6/30/2016	9/30/2016	12/31/2016	2016	3/31/2017	6/30/2017	9/30/2017	12/31/2017	2017	3/31/2018	6/30/2018	9/30/2018	12/31/2018	2018
<b>Balance Sheet</b>															
Current Maturities of LT Debt															
Accounts Payable	6,350	5,588	4,756	3,729	3,729	10,829	4,323								
Accrued Comp & Related Benefits	6,947	9,987	13,791	16,491	16,491	8,823	17,908								
Accounts Payable & Accrued Expenses	13,297	15,575	18,547	20,220	20,220	19,652	22,231	32,496	22,629	22,629	30,955	32,055	34,513		
Accrued Exp. & Other Current Liabilities	14,237	16,916	16,453	17,712	17,712	19,468	22,324	15,031	19,017	19,017	13,599	16,956	20,137		
Deferred Revenues	9,982	17,587	3,030	3,137	3,137	11,719	7,365	16,628	7,024	7,024	21,625	30,862	18,953		
Refunds Payable															
Other Current Liabilities								9,795	9,330	9,330	15,928	17,096	10,708		
<b>Total Current Liabilities</b>	37,516	50,078	38,030	41,069	41,069	50,839	51,920	73,950	58,000	58,000	82,107	96,969	84,311		
<b>Long-Term Debt</b>															
Rebate Reserve															
Lease-Related Liabilities, Non-Current						13,792	15,202	17,626	22,573	22,573	23,485	24,613	24,550		
Deferred Government Grant Obligations							3,500	3,500	3,500	3,500	3,500	3,500	3,500		
Deferred Tax Liabilities								9,602	10,087	10,087	9,113	6,935	7,001		
Other Non-Current Liabilities	2,579	2,543	3,858	8,014	8,014	305	300	2,160	70	70	70				
<b>Total Liabilities</b>	40,095	52,621	41,888	49,083	49,083	64,936	70,922	106,838	94,230	94,230	118,275	132,017	119,362		
Convert. Series A Preferred															
Convert. Series B Preferred															
Convert. Series C Preferred															
Convert. Series D Preferred															
<b>Total Preferred Stock</b>															
Shareholders' Equity	46	47	47	47	47	47	48	52	53	53	53	57	58		
Additional Paid-In Capital	355,538	360,466	366,694	371,455	371,455	375,549	382,609	579,422	588,289	588,289	596,529	936,664	948,070		
Accumulated Deficit	(158,961)	(167,298)	(174,056)	(176,265)	(176,265)	(179,852)	(191,606)	(206,345)	(205,836)	(205,836)	(220,707)	(239,054)	(248,998)		
Accumulated Other								(3,617)	5,326	5,326	9,958	(4,220)	(7,001)		
<b>Total Shareholders' (Deficit) Equity</b>	196,623	193,215	192,685	195,237	195,237	195,744	191,051	369,512	387,832	387,832	385,833	693,447	692,129		
<b>Liabilities + Shareholders' Equity</b>	236,718	245,836	234,573	244,320	244,320	260,680	261,973	476,350	482,062	482,062	504,108	825,464	811,491		
Balance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Working Capital	(26,953)	(36,548)	(9,033)	(25,101)	(25,101)	(13,016)	81,104	(18,668)	(33,317)	(33,317)	(26,742)	(31,851)	5,218		
Working Capital Use (Source)	(3,534)	(9,595)	27,515	(16,068)	(16,068)	12,085	94,120	(99,772)	(14,649)	(14,649)	6,575	(5,109)	37,069		



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Notes: Full model can be provided upon request. This slide only represents a snapshot of historic performance.  
Sources: CSSG Estimates, SEC EDGAR

**Abbreviations:**

DGP	Domestic Graduate Program (notation for 2U's US graduate education segment)
EBITDA	Earnings before Interest, Taxes, Depreciation, and Amortization (used as a proxy for free cash flow)
FOIA	Freedom of Information Act (US controlled entities must disclose requested information in full or partially)
OPM	Online Program Management (usually refers to the companies that offer online education services)
SEO	Search Engine Optimization (paid manipulation of online search results)
SG&A	Selling, General, and Administrative Expenses

**Definitions:**

Take-rate	The percent rate that OPMs charge universities for maintaining their online course systems.
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Date	News	
01/06/2016	2U	<a href="#">2U Announces Leadership Changes</a>
05/04/2016	2U	<a href="#">2U Announces Senior Leadership Changes</a>
05/02/2017	2U	<a href="#">2U Inc. to Acquire GetSmarter</a>
09/06/2017	2U	<a href="#">2U Inc. Announces Pricing of Public Offering of Common Stock</a>
04/26/2018	Mid-Atlantic Marketing Summit	<a href="#">Jeff Rinehart</a>
05/09/2018	2U	<a href="#">John Ellis joins 2U Inc as SVP, Corporate Controller, and Chief Accounting Officer</a>
05/22/2018	2U	<a href="#">2U Inc. Announces Pricing of Public Offering of Common Stock</a>
05/23/2018	2U	<a href="#">Mark Chernis Joins 2U Inc. as Chief Operating Officer</a>
06/05/2018	2U	<a href="#">Baird Conference Deck</a>
06/21/2018	2U	<a href="#">2U Inc. Agrees to Acquire Critiquelt Inc.</a>
07/19/2018	Spruce Point	<a href="#">Spruce Point Report: 2U Inc.</a>
10/23/2018	Needham	Attractive Investment in Ed; Initiating Coverage with a Buy, \$80 PT
10/24/2018	Bloomberg	2U Defended at Piper Jaffray, Rated New Buy at Needham on Growth
11/06/2018	Credit Suisse	3Q – Investing in the LT Opportunity
11/06/2018	D.A. Davidson	Plenty of Ammunition for the Bulls and Bears
11/06/2018	Oppenheimer	2U's Execution in the Reported Results Continues to Soften; Expect the Name to Remain Controversial
11/16/2018	Piper Jaffray	Takeaways from Management Meetings
Title	Source	
The 1 Percent Fallacy	Inc	<a href="https://www.inc.com/erik-sherman/the-1-percent-fallacy-that-trips-many-entrepreneurs.html">https://www.inc.com/erik-sherman/the-1-percent-fallacy-that-trips-many-entrepreneurs.html</a>
A Tipping Point for OPM	Inside Higher Ed	<a href="https://www.insidehighered.com/digital-learning/article/2018/06/04/">https://www.insidehighered.com/digital-learning/article/2018/06/04/</a>
Interactive Asynchronous Education	Justia	<a href="https://patents.justia.com/patent/20140272887">https://patents.justia.com/patent/20140272887</a>
Six Types of Successful Acquisitions	McKinsey	<a href="https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/">https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/</a>
A Flexible Economic Model	Noodle Partners	<a href="https://www.noodlepartners.com/approach/economics/">https://www.noodlepartners.com/approach/economics/</a>
2U Inc.	SEC EDGAR	<a href="https://www.sec.gov/cgi-bin/browse-edgar?CIK=twou">https://www.sec.gov/cgi-bin/browse-edgar?CIK=twou</a>
TWOU Earnings	Seeking Alpha	<a href="https://seekingalpha.com/symbol/TWOU/earnings/transcripts">https://seekingalpha.com/symbol/TWOU/earnings/transcripts</a>
Financial Reports	Simmons	<a href="http://www.simmons.edu/about-simmons/administrative-offices/finance">http://www.simmons.edu/about-simmons/administrative-offices/finance</a>
2U Inc.	Thomson ONE	<a href="https://www.thomsonone.com/">https://www.thomsonone.com/</a>
2U Inc.	Yahoo Finance	<a href="https://finance.yahoo.com/quote/TWOU">https://finance.yahoo.com/quote/TWOU</a>
Analyst Coverage	2U	<a href="https://investor.2u.com/analyst-coverage">https://investor.2u.com/analyst-coverage</a>
2U Leadership	2U	<a href="https://2u.com/about/2u-leadership/">https://2u.com/about/2u-leadership/</a>

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Charon Special Situations Group (CSSG or Charon SSG) is an independent investment research firm focused on covering quantitative and event-driven strategies for institutional investors. Comprised of undergraduate students from the Georgia Institute of Technology, our team works to produce the highest quality investment research and share our publications with financial professionals in Atlanta and New York.

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