Potential, unlocked.

2021 Annual Report

230+
World-Class Partners

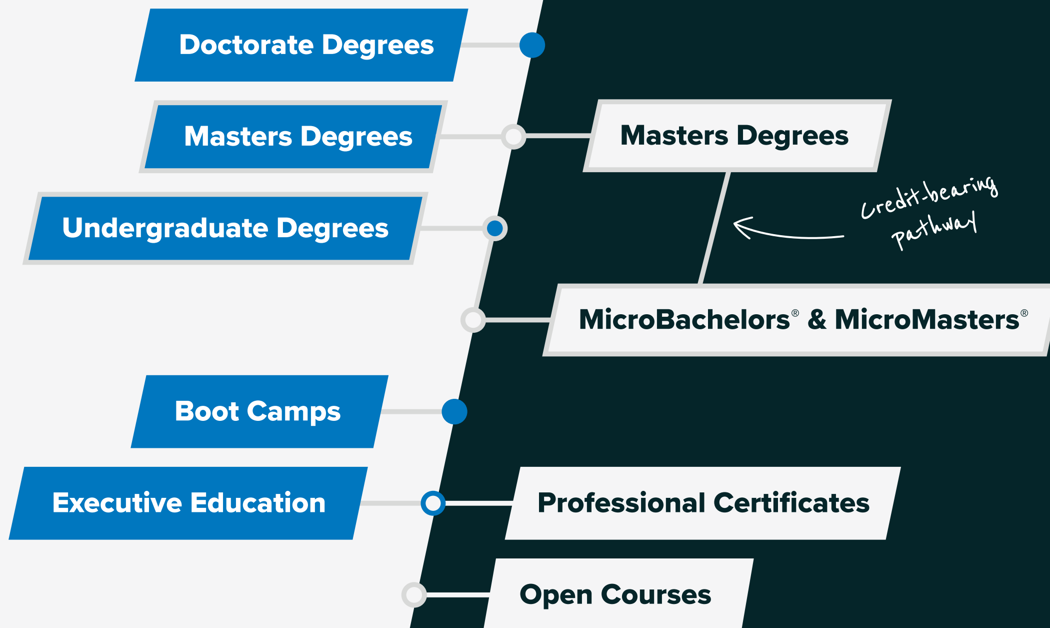
3,600+
Digital Offerings

42M+
Students

1,200+
Enterprise Clients

As of 2/9/2022

Free-to-degree lifelong learning



2U

We partner with 35+ of the 50 best global universities as ranked by *U.S. News*.

Berkeley UNIVERSITY OF CALIFORNIA	Caltech	COLUMBIA | ENGINEERING The Fu Foundation School of Engineering and Applied Science	Cornell University	ETH zürich
HARVARD UNIVERSITY	Imperial College London	JOHNS HOPKINS UNIVERSITY	MIT	MONASH University
Northwestern University	NYU | STEINHARDT	NUS | Computing	Penn	PRINCETON UNIVERSITY
SORBONNE UNIVERSITÉ	Stanford Center for Health Education	TEXAS	UBC THE UNIVERSITY OF BRITISH COLUMBIA	THE UNIVERSITY of NORTH CAROLINA at CHAPEL HILL
清華大学 Tsinghua University	UCL	UCLA Extension	UC San Diego	UNIVERSITY OF CAMBRIDGE INSTITUTE FOR SUSTAINABILITY LEADERSHIP
THE UNIVERSITY OF CHICAGO	THE UNIVERSITY of EDINBURGH	UNIVERSITY OF MICHIGAN	UNIVERSITY OF OXFORD	THE UNIVERSITY OF QUEENSLAND AUSTRALIA
THE UNIVERSITY OF SYDNEY	UNIVERSITY OF TORONTO	UNIVERSITY of WASHINGTON	Washington University in St. Louis	Yale SCHOOL OF MEDICINE Physician Assistant Online Program

As of 12/31/2021

We also partner with some of the world's top corporations and institutions.

DEAR FELLOW STOCKHOLDERS,

"The transformation starts today. Welcome, edX!"
That was the subject line of the email I sent to 2U employees across the globe on November 16, 2021—the day our industry-redefining combination with edX became official. It was a special moment in the history of 2U. It marked the beginning of a new era that brings together two mission-driven organizations committed to unlocking human potential by making higher education more affordable and accessible.

Evolving into a Platform

2U was founded in 2008 with the belief that online education, when done well, could change lives. We started by powering high-quality degree programs in partnership with some of the nation's top universities in disciplines like education, nursing, social work, and business. After scaling that business to 18 universities, over 40 degree programs, and 24 verticals, we broadened our portfolio by offering high-quality short courses with great universities through the acquisition of GetSmarter, allowing us to better meet the reskilling and upskilling needs of lifelong learners globally. Two years later, we added technical boot camps via the strategic acquisition of Trilogy Education, allowing us to not only expand our university partner base and meet the needs of more learners, but also help close the workforce skills gap. Fast forward to 2021: Prior to coming together with edX, 2U had grown to partner with 85 universities, serving over 375,000 students with 550 digital offerings, including undergraduate degrees.

Through hard work and a collective dedication to our mission, our global team has built 2U into a sustainable and resilient business. In 2021 we delivered revenue growth in excess of 20% in both our degree and alternative credential segments, with particularly strong demand for our undergraduate degree offerings.

And with the acquisition of edX, we are now a leading global education platform and free-to-degree marketplace that is a partner to 230+ of the world's most-recognized corporations and higher-education institutions, including 38 of the top 50 ranked universities according to *U.S. News & World Report*. We now provide access to more than 3,600 digital education offerings—from free courses to degrees—to more than 42 million learners from 196 countries and a growing network of more than 1,200 enterprise clients.

- **2008:** 2U was founded, delivering high-quality online degree programs
- **2014:** IPO
- **2017:** Acquired GetSmarter
- **2019:** Acquired Trilogy Education
- **2021:** Joined forces with edX

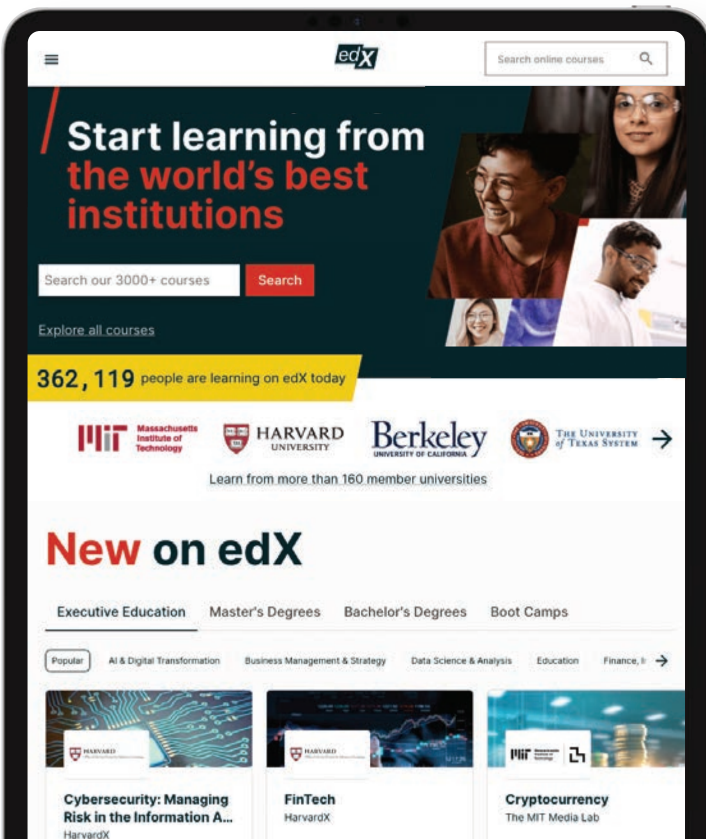
2U and edX also bring together unique strengths and complementary capabilities. edX built one of the strongest online education brands and largest global communities of learners in the world. 2U is the digital transformation partner of choice for the world's leading universities and offers one of the most comprehensive sets of enabling functions—including digital marketing, student success, fieldwork placement, and career services—to deliver high-impact, high-quality digital education globally. Our combined scale, reach, capabilities, marketing efficiency, and relationships unlock opportunities to reach and serve more learners, universities, and employers worldwide.

The Power of Our Platform

For the first time in 2U's nearly 15-year history, learners have access to all of our partners' online offerings—executive education courses, boot camps, and undergraduate and graduate degrees—in a marketplace alongside thousands of open courses and a growing number of new and disruptively priced degree programs. These include Boston University's Master's of Public Health and innovative MicroMasters® courses such as MIT's Supply Chain program, which has resulted in

40 students per year enrolling in other institutions' on-campus supply chain master's programs. This is just the beginning of our efforts to create more affordable and accessible credit-bearing pathways that offer students in-demand skills and the flexibility to finish a full degree or take what they've learned and put it to work immediately. We are also now well positioned to better deliver on this promise for learners and universities across the globe, as demonstrated by our recently announced partnership with the University of Sydney to bring four of its most in-demand degree programs online.

We're also going beyond meeting the needs of individual learners and universities. Together with edX, we have one of the most comprehensive portfolios of degree and non-degree offerings to meet the rapidly growing demands of employers—large and small—to reskill and upskill their workforce, find new talent pipelines, and open doors of opportunity for historically underrepresented communities. Beyond offering companies access to thousands of high-quality courses through edX for Business, we can now help them provide relevant tech skills to their employees through our boot camps or essential leadership skills through executive education courses (previously known as short courses). And our rapidly growing Career Engagement Network has become a go-to resource for students looking for career advice and job opportunities, and for employers in search of a free, one-stop shop to source talent with the kind of skills their companies need.



Vision for the Future

We have a bold vision for the future. Our ambition is to be the premier education platform company through the edX consumer brand, marketplace, and high-quality offerings. The pandemic not only accelerated the adoption of online learning, but also permanently shifted the power dynamics in higher education toward consumers. They have more choice over what, when, where, and how they want to learn. They are seeking greater flexibility and personal relevance, placing a premium on convenience and affordability, and increasingly choosing online options. And they'll find those options at edX: the right learning at the right time, from the world's best institutions, delivering great outcomes for students.

As we expand our reach, we believe we will expand our impact by continuing to lead the industry in quality, transparency, and life-changing student outcomes. In December we released 2U's second annual industry-leading Transparency Report, one expression of our continued commitment to prioritizing student success in everything we do. I could not be prouder that a Gallup study found that 97% of all 2U-powered degree alumni achieved a positive career outcome after graduating, and that the number of students of color increased across our partners' boot camps and degree programs—creating more diverse pipelines of talent. Moreover, thousands of aspiring nurses, counselors, and teachers completed over 3.5 million hours of virtual and in-person field placements, helping care for and educate people in communities across all 50 states.

From the beginning, 2U's mission has been to eliminate the back row in higher education. Together with edX, we can now better deliver on that promise for millions of learners, universities, and companies around the world, helping each one unlock their potential, and in doing so positively transform their lives and the world around them. And that is what motivates and inspires all of us every day.

Christopher "Chip" Paucek
Co-Founder & CEO

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2021

or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission File Number: 001-36376

2U, INC.
(Exact name of registrant as specified in its charter)

Delaware	**26-2335939**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
7900 Harkins Road Lanham, MD	**20706**
(Address of Principal Executive Offices)	(Zip Code)

(301) 892-4350
Registrant's telephone number, including area code:

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common stock, $0.001 par value per share	TWOU	The Nasdaq Global Select Market

Securities registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

The aggregate market value of the 52,068,002 shares of the registrant's common stock held by non-affiliates as of June 30, 2021 (computed based on the closing price on such date as reported on The Nasdaq Global Select Market) was $2,169,673,643.

As of February 25, 2022, there were 76,350,667 shares of the registrant's common stock, par value $0.001 per share, outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Company's definitive proxy statement, to be filed pursuant to Regulation 14A under the Securities Exchange Act of 1934, for its 2022 Annual Meeting of Stockholders, or an amendment on Form 10-K/A are incorporated by reference in Part III of this Form 10-K.

2U, Inc.
FORM 10-K
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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, which are subject to substantial risks and uncertainties. In some cases, you can identify forward-looking statements by the words “may,” “might,” “will,” “could,” “would,” “should,” “expect,” “intend,” “plan,” “objective,” “anticipate,” “believe,” “estimate,” “predict,” “project,” “potential,” “continue” and “ongoing,” or the negative of these terms, or other comparable terminology intended to identify statements about the future. These statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from the information expressed or implied by these forward-looking statements. Although we believe that we have a reasonable basis for each forward-looking statement contained in this Annual Report on Form 10-K, we caution you that these statements are based on a combination of facts and factors currently known by us and our expectations of the future, about which we cannot be certain. Factors that may cause actual results to differ materially from current expectations include, but are not limited to:

- trends in the higher education market and the market for online education, and expectations for growth in those markets;
- the acceptance, adoption and growth of online learning by colleges and universities, faculty, students, employers, accreditors and state and federal licensing bodies;
- the impact of competition on our industry and innovations by competitors;
- our ability to comply with evolving regulations and legal obligations related to data privacy, data protection and information security;
- our expectations about the potential benefits of our cloud-based software-as-a-service technology and technology-enabled services to university clients and students;
- our dependence on third parties to provide certain technological services or components used in our platform;
- our expectations about the predictability, visibility and recurring nature of our business model;
- our ability to meet the anticipated launch dates of our degree programs, executive education offerings and boot camps;
- our ability to acquire new university clients and expand our degree programs, executive education offerings and boot camps with existing university clients;
- our ability to successfully integrate the operations of our acquisitions, including the edX Acquisition, to achieve the expected benefits of our acquisitions and manage, expand and grow the combined company;
- our ability to refinance our indebtedness on attractive terms, if at all, to better align with our focus on profitability;
- our ability to service our substantial indebtedness and comply with the covenants and conversion obligations contained in the Indenture (as defined below) governing our Notes (as defined below) and the Term Loan Agreement (as defined below) governing our Term Loan Facilities (as defined below);
- our ability to generate sufficient future operating cash flows from recent acquisitions to ensure related goodwill is not impaired;
- our ability to execute our growth strategy in the international, undergraduate and non-degree alternative markets;
- our ability to continue to recruit prospective students for our offerings;
- our ability to maintain or increase student retention rates in our degree programs;
- our ability to attract, hire and retain qualified employees;
- our expectations about the scalability of our cloud-based platform;
- potential changes in regulations applicable to us or our university clients;
- our expectations regarding the amount of time our cash balances and other available financial resources will be sufficient to fund our operations;
- the impact and cost of stockholder activism;

- the potential negative impact of the significant decline in the market price of our common stock, including the impairment of goodwill and indefinite-lived intangible assets;
- the impact of any natural disasters or public health emergencies, such as the coronavirus disease 2019 (“COVID-19”) pandemic;
- our expectations regarding the effect of the capped call transactions and regarding actions of the option counterparties and/or their respective affiliates; and
- other factors beyond our control.

You should refer to the risks described in Part I, Item 1A “Risk Factors” in this Annual Report on Form 10-K for a discussion of important factors that may cause our actual results to differ materially from those expressed or implied by our forward-looking statements. As a result of these factors, we cannot assure you that the forward-looking statements in this Annual Report on Form 10-K will prove to be accurate. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame, or at all. We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

You should read this Annual Report on Form 10-K completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of our forward-looking statements by these cautionary statements.

Additional Information

In this Annual Report on Form 10-K, the terms “2U,” “our company,” “we,” “us,” and “our” refer to 2U, Inc. and its subsidiaries, unless the context indicates otherwise.

We announce material information to the public through a variety of means, including filings with the Securities and Exchange Commission, press releases, public conference calls, our website (2u.com), the investor relations section of our website (investor.2u.com), our Twitter account (@2Uinc), Chip Paucek’s Twitter account (@chippaucek) and our blogs (2u.com/latest) and (blog.edx.org). We use these channels to communicate with investors and the public about our company, our products, and other matters. Therefore, we encourage investors, the media and others interested in our company to review the information we make public in these locations, as such information could be deemed to be material information. The information on or accessible through our websites and social media channels is not incorporated by reference in this Annual Report on Form 10-K.

PART I

Item 1. Business

Overview

We are a leading online education platform company. Our mission is to expand access to high-quality educational opportunities that unlock human potential. In November 2021, we acquired substantially all of the assets of edX Inc. (the "edX Acquisition"), including the edX brand, website and marketplace. As a result of the edX Acquisition, we expanded our digital education offerings to include open courses and micro-credential offerings at the undergraduate and graduate levels and added an education consumer marketplace, edx.org, with over 42 million registered learners.

Following the completion of the edX Acquisition, we now serve more than 230 top-ranked global universities and other leading institutions, and offer more than 3,600 high-quality online learning opportunities, including open courses, executive education offerings, boot camps, micro-credentials, professional certificates as well as undergraduate and graduate degree programs.

With the edX Acquisition, we are now positioned as one of the world's most comprehensive free-to-degree online learning platforms. We believe our platform and robust consumer marketplace provide our clients with the digital infrastructure to launch world-class online education offerings and allow students to easily access high-quality, job-relevant education offerings without the barriers of cost or location.

Business Segments

We have two reportable segments: the Degree Program Segment and the Alternative Credential Segment.

In our Degree Program Segment, we provide the technology and services to nonprofit colleges and universities to enable the online delivery of degree programs. Students enrolled in these programs are generally seeking an undergraduate or graduate degree of the same quality they would receive on campus.

In our Alternative Credential Segment, we provide premium online open courses, executive education programs, technical, skills-based boot camps and micro-credential programs at the undergraduate and graduate levels through relationships with nonprofit colleges and universities and other leading institutions. Students enrolled in these offerings are generally seeking to reskill or upskill for career advancement or personal development through shorter duration, lower-priced offerings. Following the edX Acquisition, we changed the name of our "short courses" in our Alternative Credential Segment to "executive education" to more clearly align with industry terminology.

Our Platform

Our platform consists of a seamlessly integrated ecosystem of technology, people and data. Through our platform, we provide the tools and services our clients need to bring high-quality online education offerings to students around the world and we provide students an expansive range of offerings to support their educational and career goals.

Degree Program Segment: Technology and Services

In the Degree Program Segment, we provide front-end and back-end cloud-based SaaS technology and technology-enabled services, which are tightly integrated and optimized with data analysis and machine learning techniques. In general, for our degree program offerings, we provide the following full suite of technology and services:

- *Technology*.
  - Infrastructure – We use a variety of proprietary technologies to streamline the launch of our degree programs and to scale launches with multiple schools. Prior to the launch of new degree programs, we also tightly integrate our systems with our university clients' systems by building integrations and data connections. These integrations facilitate the secure bi-directional exchange of data to support our degree programs and to automate a variety of processes on an ongoing basis, including admissions and live class scheduling.
  - Learning Technology – Our learning platform provides a live and engaging classroom environment that is accessible through web and mobile applications for convenient consumption of asynchronous coursework. Our STEM-based education tools and collaborative annotation technology significantly enhance the learning experience for students and instruction capabilities for faculty.
- *Marketing Services*. Our marketing team uses best-in-class digital marketing strategies – including Search Engine Optimization, Search Engine Marketing and Social Media Optimization – together with data analytics and machine

learning techniques and a strong affiliate marketing channel to engage prospective students for our university clients' degree programs. Our marketing campaigns are often program-specific and leverage each university client's brand identity and approved messaging.

- *Student Engagement and Services*. We provide a broad scope of services to students to support them on their learning journey from the admissions process through career services.
  - Admissions – Our admissions team provides prospective students with transparent information regarding admissions requirements, the application process, curriculum, tuition information, and time to completion.
  - Student Success – We augment each student's academic experience by assigning a dedicated advisor to provide individualized non-academic support throughout their program. These advisors focus on retention and graduation by using data analysis and personalized coaching plans.
  - Career Services – Through our Career Engagement Network, we provide students and alumni of our university clients' offerings with access to industry-aligned resources designed to support students in achieving their career goals following graduation. These services include resume and interview tools, live coaching and workshops as well as career fairs and employer referrals to our strong network of employer partnerships around the world.
- *Curriculum and Learning Services*. Our learning design and development experts collaborate with faculty to produce high-quality, engaging, online coursework and content for our university clients' degree programs. Our learner-centered approach to curriculum design incorporates our university clients' curricular expertise and pedagogical preferences and is founded in principles of learning science and informed by our deep online course development expertise and historical user experience. We use a learning management system that facilitates authoring and hosting asynchronous learning activities. In addition to interactive asynchronous learning experiences, our offerings feature live, online classes. Live classes provide the opportunity for students to build community with peers and receive personalized and real-time instructor support, which is a cornerstone of our approach to delivering degree programs. To maximize the benefit of these synchronous live sessions, we employ a flipped classroom model, which focuses on dynamic interactive learning rather than solely direct teacher instruction. We also provide technology tools to reduce friction in the virtual learning environment for students and professors.
- *University Support Services*. We provide a range of other services to enable the success of our university clients' online degree programs and allow them to focus on their core academic functions.
  - Admissions – While our university clients are solely responsible for making admissions decisions, we streamline the admissions process by assisting prospective students in the application process and organizing and routing completed student application packages to the university's admissions office.
  - Placement – Using our global network of clinics, hospitals, schools and other sites, our field placement team secures local placements for students enrolled in degree programs such as nursing, social work, teaching and other programs that require field placements to satisfy curriculum and accreditation requirements. We have integrated placements into our learning technology to enable students, faculty and field placement supervisors to monitor completion of student field work directly from our platform. During the COVID-19 pandemic we developed a virtual field placement program for our counseling and social work programs to allow students to continue to progress through these degree programs while in-person placements were not possible.
  - Faculty Success – We provide a dedicated team to support and train university administration and faculty on how to use our platform to facilitate high-quality live instruction. In addition, we help our university clients succeed by assisting with faculty recruiting efforts, including attracting, cultivating and vetting a pool of faculty candidates for our university clients.

Alternative Credential Segment: Technology and Services

In the Alternative Credential Segment we provide flexible technology platforms and services to enable our clients to provide a range of non-degree credentials and other courses to learners. In general, for our alternative credential offerings, we provide the following technology and services:

- *Technology*. Our executive education and boot camp platform provides an integrated hub for students to access coursework and learning modules, interact with tutors and peers, attend live classes where applicable, and review assignment grading and tutor feedback. For our open course and micro-credential offering, our clients leverage the Open edX platform, an open source, scalable learning platform, that we have customized to enable our clients to build offerings to launch on the edX marketplace. For our executive education, open course and micro-credential offerings,

our platform is also available through proprietary mobile applications for convenient consumption of asynchronous coursework.

- *Marketing Services*. Our marketing team uses best-in-class digital marketing strategies – including Search Engine Optimization, Search Engine Marketing and Social Media Optimization – together with data analytics and machine learning techniques and a strong affiliate marketing channel to engage prospective students for our university partners alternative credential offerings.
- *Student Engagement and Services*. We provide a broad scope of services to students in our executive education courses and boot camps to support them on their learning journey from the enrollment process through career services.
  - Enrollment – We provide prospective students with transparent information regarding the enrollment process, curriculum, tuition information, and time to completion.
  - Student Success – For our executive education and boot camp offerings, we augment each student's academic experience by assigning a dedicated advisor to provide individualized non-academic support throughout their course. For our boot camp offerings we have proprietary tools to allow us to scale our student support and ensure student questions on asynchronous content or coursework receive an advisor or teaching assistant response efficiently.
  - Career Services – Through our Career Engagement Network, we provide students and alumni of our university clients' executive education and boot camp offerings with access to industry-aligned resources designed to support students in achieving their career goals following completion. These services include resume and interview tools and workshops as well as career fairs and employer referrals to our strong network of employer partnerships around the world.
- *Curriculum and Learning Services*. Our learning design and development experts produce high-quality, engaging, online coursework and content for our executive education and boot camp offerings. We use a learning management system that facilitates authoring and hosting asynchronous learning activities. We employ tools to make real-time updates to our curriculum to keep certain offerings current in quickly evolving fields such as coding, data analytics and cybersecurity. We also use a proprietary analytics platform to capture the sentiment of students in our boot camp and executive education offerings. We use this data to improve our curricula, calibrate differences across classrooms and offer targeted support to students. We also recruit, hire and train faculty to teach the executive education and boot camp offerings for our university clients. For our open course and micro-credential offerings, we provide course strategy and design consultation services and other self-help resources to assist our clients in creating engaging content for our platform.

edX Marketplace

Our marketplace, available at edX.org, provides the full catalog of online offerings ranging from free offerings to graduate degree programs that we enable. Once we have completed integration of the edX marketplace with our broader business, we believe this thriving consumer marketplace will enable our clients to efficiently reach a large audience of global learners and expand the impact of their institutions and brands, and allow students to access relevant, high-quality education offerings from top-tier academic institutions and other industry leading entities. We believe the edX marketplace provides an opportunity to increase the efficiency of our marketing efforts by combining the strength of the edX brand and large global audience with a comprehensive range of high-quality education offerings and our strong offering-specific marketing capabilities. As we continue to increase the range of offerings on the edX marketplace, we believe we will attract additional students to the marketplace, some of whom will enroll in additional offerings.

Key Benefits of our Solution

We believe our solutions provide the following key benefits:

- *Extend Institutional Reach and Impact*. Our platform enables our university and institutional clients to extend their brands and increase their impact by delivering high-quality education offerings to students anywhere in the world at a wide range of prices and credential levels.
- *Low Financial Risk for Clients*. We make many of the initial investments required to launch new offerings across our portfolio. In our Degree Program Segment, in particular, we make significant investments in technology, integration, content production, marketing, student and faculty support, and other services. Our revenue-share model, combined with long contractual terms in this segment, enables us to make these investments without significant financial risk to our university clients. Our platform provides a broad set of capabilities that would otherwise require universities to

purchase multiple, disparate point solutions, and significantly increase headcount in marketing, data analytics, technology and other areas.

- *Marketing Reach*. As part of the edX Acquisition, we acquired edX's thriving consumer marketplace and global brand. Once we have completed our integration activities, we believe the edX marketplace together with the strong consumer-facing brand, will enable our clients to efficiently reach a large audience of potential students. As we continue to expand the scope of offerings on the edX marketplace, we believe we will generate additional interest in our offerings among students and incentivize clients to create additional offerings on our platform ranging from free-to-degree.
- *Comprehensive Scope of Offerings*. We provide a broad range of education offerings to students that range from free open courses to graduate degree programs. Our breadth of offerings allows students to gain the skills and credentials they need to reach their career and personal goals and provides the flexibility to "stack" credentials to progress towards a more advanced credential or degree.
- *Outcomes.* Our platform allows students to pursue a wide range of high-quality education offerings provided by leading universities and other top-tier institutions. Through these offerings, students obtain valuable skills and credentials that can create upward career mobility, facilitate a transition to a new field and lead to personal enrichment.
- *Scalable Support.* High-quality student support is a central pillar of our platform. We provide student support for all offerings in our portfolio that is tailored to student needs based on offering type. For many of our offerings our support teams work with prospective students prior to enrollment as they consider and apply to a particular offering. Once enrolled, we augment the academic experience by assigning a dedicated advisor to provide ongoing individualized non-academic support and career guidance for certain offerings. For our self-paced offerings such as our open courses, we provide students with platform technical support as needed.

Our Growth Strategy

We intend to continue our industry leadership as a provider of a digital education platform that enables our clients to deliver high-quality online education at scale and provides students with lifelong learning opportunities to unlock their potential. Our approach to growth is disciplined and focused on long-term success. The principal elements of our strategy are:

- *Adding Offerings with New and Existing Clients and Increasing Enrollments in Our Offerings*. We intend to add additional top-tier universities and other entities to our client base and to increase the number of offerings we power on behalf of our existing client base. We believe that once we have fully integrated the edX marketplace with our existing business, and enhanced search functionality of the marketplace, potential students will be able to more efficiently search for and find courses of interest from free-to-degree. We also intend to scale enrollments in our offerings by expanding the reach and diversity of our marketing channels and making incremental improvements to our learning technology.
- *Expanding Offerings from Free-to-Degree.* We intend to continue evolving our offering portfolio to meet the demands of lifelong learners by expanding our offerings in accordance with our client's roadmaps. This expansion could include new offering types, course bundles or stacks, or additional credentialing options.
- *Expanding Enterprise Channel.* We believe expanding our enterprise channel presents a significant opportunity for us. Our deep catalog of over 3,600 high-quality free-to-degree offerings enables us to partner with a wide range of institutions seeking to upskill and train employees at any level of their organizations with exceptional digital learning experiences in job-relevant subject areas.
- *Expanding Globally.* The edX marketplace generates significant traffic across the globe and the edX offerings have a large non-US student base. We believe this creates a significant opportunity to expand our offerings with top-tier international universities and other entities and to attract additional non-US students to our existing offerings.

Clients

As of December 31, 2021, we had more than 230 clients with more than 3,600 offerings. Our clients are nonprofit colleges and universities as well as leading corporations and non-profit entities.

Competition

The overall market for technology solutions that enable higher education providers to deliver education online is highly fragmented, rapidly evolving and subject to changing technology, shifting needs of students, faculty and clients and frequent introductions of new delivery methods.

We face competition from various companies in the online education sector, including companies that provide direct-to-consumer online education offerings, corporate training programs and technology solutions and services to universities that offer online learning programs. Many of these companies provide components of the technology and services we provide, and these companies may choose to pursue some of the institutions we target. Moreover, nonprofit colleges and universities may elect to continue using or develop their own online learning solutions in-house.

We expect that the competitive landscape will continue to expand as the market for online education offerings at nonprofit institutions matures. We believe the principal competitive factors in our market include the following:

- quality and reputation of university client base and track record of performance;
- robustness and evolution of technology solutions and marketplace capabilities;
- scope and quality of educational content;
- strength of brand awareness and reputation among consumers;
- ability of online education offerings to deliver desired student outcomes;
- breadth and depth of service offering;
- ability to make significant investments in launching and operating degree programs;
- expertise in marketing, student acquisition and student retention;
- student and faculty experience;
- ease of deployment and use of technology solutions; and
- level of customization, configurability, integration, security, scalability and reliability of technology solutions.

We believe we compete favorably on the basis of these factors. Our ability to remain competitive will depend, to a great extent, on our ability to consistently deliver high-quality offerings; meet client needs for content development; attract, support and retain students; and deliver desired student, faculty and client outcomes.

Seasonality

We experience seasonality in our marketing and sales expense in both our Degree Program Segment and our Alternative Credential Segment. We typically reduce our paid search and other marketing and sales efforts during late November and December because of less demand during the holiday season. We generally do not experience pronounced seasonality in our revenue, although revenue can fluctuate significantly from quarter to quarter due to variations driven by the varying academic schedules of our offerings and university clients.

Intellectual Property

We protect our intellectual property by relying on a combination of copyrights, trademarks, trade secrets and contractual agreements. For example, we rely on trademark protection in the United States and various foreign jurisdictions to protect our rights to various marks, including 2U, NO BACK ROW, GETSMARTER, TRILOGY, EDX and other distinctive logos associated with our brand. We continue to evaluate developing and expanding our intellectual property rights in patents, trademarks and copyrights, as available through registration in the United States and internationally.

We ensure that we own intellectual property created for us by signing agreements with employees, independent contractors, consultants, companies, and any other third party that creates intellectual property for us that assign any intellectual property rights to us.

We have also established business procedures designed to maintain the confidentiality of our proprietary information, including the use of confidentiality agreements with employees, independent contractors, consultants and companies with which we conduct business.

We also purchase or license technology that we incorporate into our technology or services. While it may be necessary in the future to seek or renew licenses relating to various aspects of our technology and services, we believe, based upon past experience and industry practice, such licenses generally could be obtained on commercially reasonable terms.

For important additional information related to our intellectual property position, please review the information set forth in “Risk Factors—Risks Related to Intellectual Property.”

Education Laws and Regulations

The higher education industry is heavily regulated. Institutions of higher education that award degrees and certificates to signify the successful completion of an academic program are subject to regulation from three primary entities: the U.S. Department of Education, or DOE, accrediting agencies and state licensing authorities. Each of these entities promulgates and enforces its own laws, regulations and standards, which we refer to collectively as education laws.

We contract with postsecondary institutions that are subject to education laws. In addition, we ourselves are required to comply with certain education laws as a result of our role as a service provider to institutions of higher education, either directly or indirectly through our contractual arrangements with university clients. Our failure, or that of our university clients, to comply with education laws could adversely impact our operations. As a result, we work closely with our university clients to maintain compliance with education laws.

Federal Laws and Regulations

Under the Higher Education Act of 1965, as amended, or the HEA, institutions offering postsecondary education must comply with certain laws and related regulations promulgated by the DOE in order to participate in the Title IV federal student financial assistance programs. Most of our university clients participate in the Title IV programs.

The HEA and the regulations promulgated thereunder are frequently revised, repealed or expanded. Congress historically has reauthorized and amended the HEA at regular intervals but has failed to do so in recent years. The reauthorization process and congressional oversight of the DOE is nonetheless ongoing, such as oversight and investigations of the education sector and DOE conducted on behalf of Congress by the Government Accountability Office, or GAO.

The reauthorization of the HEA, or other legislation, could alter the regulatory landscape of the higher education industry, and thereby impact the manner in which we conduct business and serve our university clients. In addition, the DOE frequently conducts rulemakings that may impact our business and we expect each incoming administration to change the DOE rules in accordance with its policy priorities regardless of whether the HEA is reauthorized by Congress. The DOE also issues formal and informal guidance instructing institutions of higher education and other covered entities how to comply with various federal laws and regulations. DOE guidance is subject to change and such changes may impact our business model.

Although we are not considered an institution of higher education and we do not directly participate in Title IV programs, we are required to comply with certain regulations promulgated by the DOE as a result of our role as a service provider to institutions that do participate in Title IV programs. These include, for example, regulations governing student privacy under Family Educational Rights and Privacy Act, or FERPA. While online executive education courses and boot camps are typically not eligible for Title IV aid, when offered by or on behalf of Title IV eligible institutions, many education laws, such as FERPA, remain applicable to us or our university clients even in the Alternative Credential Segment.

Current DOE rules material to our business include the incentive compensation rule, the misrepresentation rule, the "written arrangements" rules and state authorization requirements, which are discussed in further detail below.

Incentive Compensation Rule

The HEA provides that any institution that participates in the Title IV federal student financial assistance programs must agree with the DOE that the institution will not provide any commission, bonus or other incentive payment to any person or entity engaged in any student recruiting or admission activities as those terms and activities are defined in DOE regulations and policy guidance.

Under DOE's incentive compensation regulations, each higher education institution agrees that it will not "provide any commission, bonus, or other incentive payment based in any part, directly or indirectly, upon success in securing enrollments or the award of financial aid, to any person or entity who is engaged in any student recruitment or admission activity, or in making decisions regarding the award of Title IV, HEA program funds." Pursuant to this rule, we are prohibited from offering our covered employees, who are those involved with or responsible for recruiting or admissions activities, any bonus or incentive-based compensation based on the successful recruitment, admission or enrollment of students into a postsecondary institution.

At the time the incentive compensation rule was last revised, in July 2011, the revised rule initially raised a question as to whether entities could be prohibited from entering into tuition revenue-sharing arrangements with university clients. On March 17, 2011, the DOE issued official agency guidance, known as a "Dear Colleague Letter," or the DCL, providing guidance on this point. The DCL states that "[t]he Department generally views payment based on the amount of tuition generated as an indirect payment of incentive compensation based on success in recruitment and therefore a prohibited basis upon which to measure the value of the services provided" and that "[t]his is true regardless of the manner in which the entity compensates its employees." But the DCL also provides an important exception to the ban on tuition revenue-sharing arrangements between institutions and third parties. According to the DCL, the DOE does not consider payment based on the

amount of tuition generated by an institution to violate the incentive compensation ban if the payment compensates an "unaffiliated third party" that provides a set of "bundled services" that includes recruitment services, such as those we provide. Example 2-B in the DCL is described as a "possible business model" developed "with the statutory mandate in mind." Example 2-B describes the following as a possible business model:

"A third party that is not affiliated with the institution it serves and is not affiliated with any other institution that provides educational services, provides bundled services to the institution including marketing, enrollment application assistance, recruitment services, course support for online delivery of courses, the provision of technology, placement services for internships, and student career counseling. The institution may pay the entity an amount based on tuition generated for the institution by the entity's activities for all the bundled services that are offered and provided collectively, as long as the entity does not make prohibited compensation payments to its employees, and the institution does not pay the entity separately for student recruitment services provided by the entity."

The DCL guidance indicates that an arrangement that complies with Example 2-B will be deemed to be in compliance with the incentive compensation provisions of the HEA and the DOE's regulations. Our business model and contractual arrangements with our university clients closely follow Example 2-B in the DCL. In addition, we assure that none of our "covered employees" are paid any bonus or other incentive compensation in violation of the rule.

Because the bundled services rule was promulgated in the form of agency guidance issued by the DOE in the form of a DCL and is not codified by statute or regulation, the rule could technically be altered or removed without customary administrative procedural requirements, such as adequate prior notice, that accompany formal agency rulemaking. Similarly, a court could invalidate the rule in an action involving our company or our university clients, or in an action that does not involve us at all. Finally, while most states defer to DOE regulations, different versions of the federal incentive compensation rule exist under state law, and such statutes or rules, or their interpretation, may change at any time. The revision, removal or invalidation of the bundled services rule by Congress, the DOE or a court could require us to change our business model, and separate revisions at the state level could require us to amend certain of our contracts.

Misrepresentation Rule

The HEA prohibits an institution that participates in the Title IV programs from engaging in any "substantial misrepresentation" regarding three broad subject areas: (i) the nature of the school's education programs, (ii) the school's financial charges and (iii) the employability of the school's graduates.

Under the DOE rule, "misrepresentation" is defined broadly as any false, erroneous or misleading statement, written, visual or oral. This may include even statements that "have the likelihood or tendency to deceive." Therefore, a statement need not be intentionally deceitful to qualify as a misrepresentation. "Substantial misrepresentation" is defined loosely as a misrepresentation on which the person to whom it was made could reasonably be expected to rely, or has reasonably relied, to that person's detriment.

The regulation also covers statements made by any representative of an institution, including agents, employees and subcontractors, and statements made directly or indirectly to any third party, including state agencies, government officials or the public, and not just statements made to students or prospective students.

Violations of the misrepresentation rule are subject to various sanctions by the DOE and violations may be used as a basis for legal action by third parties or as a defense to the obligation to repay student loans. The DOE rules regarding misrepresentation change frequently and DOE has indicated it may revise aspects of the rule and related student recruiting standards as part of its ongoing rulemakings. In addition, the DOE has designated an investigations unit to enforce rules related to deceptive student marketing, which is expected to work with other federal agencies.

Similar rules apply under state laws or are incorporated in institutional accreditation standards, and the Federal Trade Commission, or FTC, applies similar rules that prohibit any unfair or deceptive marketing practices by vendors in the education sector. As a result, we and our employees and subcontractors, as agents of our university clients, must use a high degree of care to comply with such rules and are prohibited by contract from making any false, erroneous or misleading statements about our university clients. To avoid an issue under the misrepresentation rule and similar state and federal rules, we assure that all marketing materials are approved in advance by our university clients before they are used by our employees.

Accreditation Rules and Standards

Accrediting agencies primarily examine the academic quality of the instructional programs of an educational institution, and a grant of accreditation is typically viewed as confirmation that an institution or an institution's programs meet generally accepted academic standards. Accrediting agencies also review the administrative and financial operations of the institutions they accredit to ensure that each institution has the resources to perform its educational mission. The DOE also relies on accrediting agencies to determine whether institutions qualify to participate in Title IV programs.

In addition to institutional accreditation, colleges and universities may require specialized programmatic accreditation for particular educational programs. Many states and professional associations require professional programs to be accredited, and require individuals to have graduated from accredited programs in order to sit for professional license exams. Programmatic accreditation, while not a sufficient basis for institutional Title IV Program certification by the DOE, assists graduates to practice or otherwise secure appropriate employment in their chosen field. Common fields of study subject to programmatic accreditation include teaching and nursing.

Although we are not an accredited institution and are not required to maintain accreditation, accrediting agencies are responsible for reviewing an accredited institution's third-party contracts with service providers like us and may require an institution to obtain approval from or to notify the accreditor in connection with such arrangements. One purpose of the notification and approval requirements is to verify that the accredited institution remains responsible for providing academic instruction leading to a credential and provides oversight of other activities undertaken by third parties like us that are within the scope of its accreditation. We work closely with our university clients to assure that the standards of their respective accreditors are met and are not adversely impacted by us.

Accrediting agencies are also responsible for assuring that any "written arrangements" to outsource academic instruction meet accreditation standards and related regulations of the DOE. Our operations are generally not subject to such "written arrangements" rules because academic instruction is provided by our university client institutions and not by us; however, the "written arrangements" rules may apply to online programs in the Alternative Credential Segment to the extent such courses are outsourced by university clients.

State Laws and Regulations

Each state has at least one licensing agency responsible for the oversight of educational institutions operating within its jurisdiction. Continued approval by such agencies is necessary for an institution to operate and grant degrees, diplomas or certificates in those states. Moreover, under the HEA, approval by such agencies is necessary to maintain eligibility to participate in Title IV programs. State attorneys general are also active in enforcing education laws, and the level of regulatory oversight varies substantially from state to state.

We and our university clients may be subject to regulation in each state in which we or they own facilities, provide distance education or recruit students. State laws establish standards for, among other things, student instruction, qualifications of faculty, location and nature of facilities, recruiting practices and financial policies. The need to comply with applicable state laws and regulations may limit or delay our ability to market or expand our offerings. In addition, the interpretation of state authorization regulations is subject to substantial discretion by the state agency responsible for enforcing the regulations.

DOE requires, among other things, that an institution offering distance learning or online programs secure the approval of those states which require such approval and provide evidence of such approval to the DOE upon request. This regulation increases the importance of state authorization because failure to obtain the necessary state authorization for online programs (which may also be obtained through participation in a state authorization reciprocity agreement) could result in an obligation to return federal funds received by an institution. The federal state authorization rules were updated in July 2020 to, among other things, require more detailed disclosure requirements about whether particular states have authorized programs that may lead to professional licensure, which created an additional compliance burden for many of our partner institutions. The DOE is currently considering further changes to its state authorization requirements.

All states except California now participate in the State Authorization Reciprocity Agreement, or SARA, governing the licensing of online offerings. All SARA-member institutions may provide online offerings in SARA states without obtaining separate state authorization (this includes externships, recruiting, local advertising, and faculty presence). SARA-member institutions must still obtain a separate authorization in order to open a physical location in another state and are also required to obtain any additional approvals that may be required for offerings leading to professional licensure in a state (e.g., nursing, teaching, or counseling). Most of our university clients are SARA members and the DOE accepts participation in a reciprocity agreement as evidence of state approval.

Finally, many programs leading to professional licensure, such as graduate degree programs in nursing or teaching, also require approval from, and are subject to ongoing oversight by separate state agencies such as state nursing boards. Membership in SARA does not encompass approvals by professional licensing boards, which must be obtained separately.

We monitor state law developments closely and work closely with our university clients to assist them with obtaining any required approvals.

Other Laws

Our activities or those of our university clients are also subject to other federal and state laws. These regulations include, but are not limited to, consumer marketing and unfair trade practices laws and regulations, including those promulgated and enforced by the FTC, state and federal consumer lending laws, including those enforced by the federal Consumer Financial Protection Bureau, student accessibility requirements, federal and state data protection and privacy requirements and foreign and U.S. anti-corruption regulations.

Human Capital Resources

General Information About Our Human Capital Resources

As of December 31, 2021, we had approximately 3,982 full-time employees and 3,206 part-time employees worldwide. Approximately 6,220 of our employees are located in the U.S., approximately 835 of our employees are located in Cape Town, South Africa, and approximately 133 employees are located in other jurisdictions. None of our employees are represented by a labor union or covered by a collective bargaining agreement. We consider our relations with our employees to be good.

Our Culture

2U was founded on a set of “guiding principles” that are core to our culture and guide big and small decisions every day. New employees are introduced to the guiding principles in orientation and are expected to bring these guiding principles to life as they work with their teams, interact with our university clients and students or otherwise represent 2U in the community.

- *Cherish each opportunity*. Life is short, so treasure every moment.
- *Give a damn*. Care about what you do each day.
- *Strive for excellence*. Don’t settle for second best.
- *Be bold and fearless*. Question the status quo and embrace change.
- *Be candid, honest and open*. Listen to others and offer respectful feedback.
- *Have fun*. Fun is important. Fun is simply better.
- *Make service your mission*. Give the highest level of support to our partners and to one another.
- *Don’t let the skeptic win*. “No” is easy. “Yes” is hard. Fight for “yes.”
- *Relationships matter*. Invest the time, build trust, and value differences.

Human Capital Measures and Objectives

2U is dedicated to eliminating the back row in higher education and our employees are critical to achieving this mission. We believe that when our employees feel appreciated and included they can be more creative, innovative, and better serve our university clients and students. Human capital measures and objectives that we focus on in managing our business include talent acquisition and retention, diversity and inclusion, employee development and training, community involvement and employee experience and wellness.

- *Talent Acquisition and Retention*. We seek to recruit, retain and incentivize highly talented employees and our compensation and benefits programs are aligned with these goals. We are committed to providing total rewards programs for our employees that are market-competitive and based on each employee’s contribution and performance. To foster a stronger sense of ownership and align the interests of employees with stockholders, we provide equity compensation in the form of performance and service-based restricted stock units to eligible employees under our broad-based stock compensation program. We also offer eligible employees the ability to participate in our Employee Stock Purchase Plan, which enables them to purchase shares of our stock at a discount. We also provide

comprehensive benefits for employees and their families, which are tailored to the various geographies in which we operate. Depending on the jurisdiction, our benefits may include health insurance coverage, 401(k) matching, paid parental leave, and unlimited paid time off.

- *Diversity and Inclusion*. We believe an equitable and inclusive environment with diverse teams produces more creative solutions and results in better outcomes for our university clients and students. We strive to attract, retain and promote diverse talent at all levels of the organization. Our Board is 27% women and 27% people of color and our executive team is 28% women and 33% people of color. We have established a diversity and inclusion committee, known as MOSAIC, that serves as a liaison with management on diversity and inclusion issues and we maintain executive-sponsored business resource networks ("BRNs") that offer a forum for employees to network and engage in professional development activities. As of December 31, 2021 we had 6 BRNs focused on the following groups: Black/African American, Women, LGBTQ+, Asian Pacific Islander, Latinx and People Who Are Differently Abled. To further support our diversity and inclusion goals, starting in 2020 the Company bonus plan included a diversity and inclusion component for our employees at and above the vice president level.

- *Employee Development and Training*. We provide a range of mandatory and optional employee development programs and opportunities for employees to develop the skills they need to be successful. Our learning and development teams create and teach a variety of live courses and our employees also have free access to a library of learning resources via LinkedIn Learning. Our diversity and inclusion principles are also reflected in our employee training programs. We require all managers to complete trainings on allyship, unconscious bias, cultural communication and thriving across differences and we offer additional training on emotional intelligence and leading with empathy. In addition, we offer a tuition reimbursement benefit for employees, which allows eligible employees and their family members to receive reimbursement for completion of certain of our offerings.

- *Community Involvement*. We are committed to making an impact in our local communities through volunteering, financial donations, scholarships and other forms of engagement. Our corporate social responsibility program, "2U Engage", supports local non-profit organizations in each location where we have a 2U office with a focus on organizations that are aligned with our mission to provide access to quality education. Employees are encouraged to volunteer for these organizations throughout the year using our "Volunteer Paid Time Off" program and bi-annually through Company-organized "Days of Service" events. We also endeavor to support the local community through scholarship initiatives, which focus on reaching the Black, Latinx and indigenous communities, as well as women and individuals from low income households.

- *Employee Experience and Wellness*. We strive to create employee programs that promote our guiding principles, support employee wellness and enable employees to work productively. Particularly during the COVID-19 pandemic with our global workforce working primarily remotely, supporting and engaging our employees has been our top priority. These efforts include providing access to free wellness resources such as meditation and mental health support, monthly stipends for home Wi-Fi access, a Company-wide "Daily Dose of Team Time" call to foster employee engagement and connection and hosting remote-versions of our annual employee events. We regularly survey our employees to assess wellness and additional support needs.

Other Information

We were incorporated as a Delaware corporation in April 2008 and completed our initial public offering in April 2014. We acquired Get Educated International Proprietary Limited, or GetSmarter, in July 2017, acquired Trilogy in May 2019, and acquired substantially all of the assets of edX in November 2021.

Our principal executive offices are located at 7900 Harkins Road, Lanham, MD 20706, and our telephone number is (301) 892-4350.

You can obtain copies of our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and other filings with the U.S. Securities and Exchange Commission, or the SEC, and all amendments to these filings, free of charge from our website at investor.2u.com or on the SEC's website at www.sec.gov as soon as reasonably practicable following our filing of any of these reports with the SEC. The contents of these websites are not incorporated into this filing. Further, our references to the URLs for these websites are intended to be inactive textual references only.

Item 1A. Risk Factors

In addition to the other information set forth in this Annual Report on Form 10-K, you should carefully consider the factors discussed in the "Special Note Regarding Forward-Looking Statements" in this Annual Report on Form 10-K.

Risk Factors Summary

Our business is subject to numerous risks and uncertainties, including those highlighted in this section of our Annual Report on Form 10-K and summarized below. This risk factor summary does not contain all of the information that may be important to you, and you should read the risk factor summary together with the more detailed discussion of risks and uncertainties set forth following this section as well as elsewhere in this Annual Report on Form 10-K.

Risks Related to COVID-19

- Our business, results of operations, and financial condition have been, and could continue to be, affected by COVID-19.

Risks Related to Our Business Model

- We have incurred significant net losses since inception and may not achieve or maintain profitability in the future.
- Our financial performance depends heavily on our ability to recruit potential students for our offerings, and our ability to do so may be affected by circumstances beyond our control.
- Our business depends heavily on the adoption by colleges and universities of online delivery of their educational offerings.
- To launch a new degree program, we typically must incur significant expense in technology and content development, as well as in marketing and sales to identify and attract prospective students, and it may be several years, if ever, before we generate revenue from a new program sufficient to recover our costs.
- If new offerings do not scale efficiently and in the time frames we expect, our reputation and our revenue will suffer.
- Our financial performance depends heavily on student retention within our offerings, and factors influencing student retention may be out of our control.

Risks Related to Our Operations and Our Growth Strategy

- Our student acquisition efforts depend in large part upon a limited number of third-party advertising platforms.
- If our security measures or those of our third-party service providers are breached or fail and result in unauthorized disclosure of data, we could lose clients, fail to attract new clients and be exposed to protracted and costly litigation.
- Disruption to or failures of our platform could reduce client and student satisfaction with our offerings and could harm our reputation.
- We face competition from established and emerging companies, which could divert clients or students to our competitors, result in pricing pressure and significantly reduce our revenue.
- If we do not retain our senior management team and key employees, we may not be able to sustain our growth or achieve our business objectives.

Risks Related to the edX Acquisition and the Combined Company

- We may experience difficulties in integrating the operations of edX into our business and in realizing the expected benefits of the edX Acquisition.
- We have incurred substantial transaction and integration expenses related to the edX Acquisition and expect to incur additional integration expenses related to edX that could negatively impact our financial results and cash flows.
- If students do not expand beyond the free offerings available on our platform, our ability to grow our business and improve our results of operations may be adversely affected.

Risks Related to Our Indebtedness and Capital Structure

- Our substantial indebtedness could adversely affect our ability to raise additional capital to fund our operations, limit our ability to react to changes in the economy or our industry, expose us to interest rate risk and prevent us from meeting our obligations with respect to our indebtedness.
- Despite current indebtedness levels and existing restrictive covenants, we may still incur additional indebtedness that could further exacerbate the risks associated with our substantial financial leverage.
- To service our indebtedness, we will require a significant amount of cash, and our ability to generate cash depends on many factors beyond our control.
- We may be unable to raise the funds necessary to repurchase the Notes for cash following a "fundamental change," or to pay any cash amounts due upon conversion, and our other indebtedness may limit our ability to repurchase the Notes or pay cash upon their conversion.
- Conversion of the Notes may dilute the ownership interest of existing stockholders or may otherwise depress the price of our common stock.
- We may need additional capital in the future to pursue our business objectives. Additional capital may not be available on favorable terms, or at all, which could compromise our ability to grow our business.

Risks Related to Regulation of Our Business and That of Our University Clients

- Our business model relies on university client institutions complying with federal and state laws and regulations.
- Our activities are subject to federal and state laws and regulations and other requirements.
- Activities of the U.S. Congress or DOE could result in adverse legislation or regulatory actions or investigations.
- Our business model, which depends in part on our ability to receive a share of tuition revenue as payment from our university clients, has been validated by a DOE "dear colleague" letter, but such validation is not codified by statute or regulation and may be subject to change.
- If we or our subcontractors or agents violate the incentive compensation rule, we could be liable to our university clients for substantial fines, sanctions or other liabilities.
- Our future growth could be impaired if our university clients fail to obtain timely approval from applicable regulatory agencies to offer new programs, make substantive changes to existing programs or expand their programs into or within certain states.
- Evolving regulations and legal obligations related to data privacy, data protection and information security and our actual or perceived failure to comply with such obligations, could have an adverse effect on our business.

Risk Factors

Risks Related to COVID-19

Our business, results of operations, and financial condition have been, and could continue to be, affected by COVID-19.

The ongoing COVID-19 pandemic and the actions taken by governments, businesses and individuals in response to the pandemic has caused, and continues to cause, significant disruptions to the flow of the economy, significant volatility and uncertainty in the global financial markets and disruptions to the normal operations of many businesses, including ours. Furthermore, as the COVID-19 pandemic continues, new variants of the virus are emerging and many jurisdictions are seeing a resurgence in COVID-19 cases, resulting in governments and businesses implementing additional measures in the interest of public health. As such, we cannot predict, with any degree of certainty, the ultimate duration and severity of the adverse effects of the COVID-19 pandemic and the measures taken in response to the pandemic on the global economy and our business, or the likelihood or frequency of future resurgences of the COVID-19 pandemic or other similar major public health concerns.

In response to the COVID-19 pandemic, we have taken steps to protect and assist our employees, including implementing remote and flexible work policies, limiting non-essential business travel, postponing, cancelling or converting to virtual-only certain industry, analyst and employee events and implementing a vaccine policy for employees.

The COVID-19 pandemic, as well as measures undertaken to contain the spread of COVID-19, including the measures we have taken, has caused disruptions to our business, including volatility in demand for our offerings from students and in

student retention rates and fluctuations in marketing costs from period to period. Disruptions and impacts to our business in the future may include, but are not limited to:

- causing one or more of our university clients to file for bankruptcy protection or shut down;
- reducing student demand for our offerings;
- impacting current and prospective university clients' desire to launch new educational offerings with us;
- impacting collections of accounts receivable;
- impacting our ability to facilitate in-program placements for students in clinical graduate programs;
- impacting student retention rates in our offerings;
- increasing cyberattacks and security challenges as our employees and those of our clients and third-party service providers work remotely from networks that may be less secure;
- impacting the efficiency of our marketing activities;
- creating difficulties or delays in ramping, training and retaining new employees in an effective manner;
- imposing negative physical and mental health impacts on, and resulting unavailability or reduced productivity of, our key executives or other employees as a result of such employees or their family members contracting the virus, being placed in quarantine or self-isolation, being in jurisdictions where travel or other activities remain restricted, or due to prolonged social isolation or distancing measures;
- delaying the anticipated launch dates of our offerings;
- changing our internal controls, policies and procedures due to remote work arrangements, which may result in significant deficiencies or material weaknesses in our internal controls in the preparation of our financial reports and resulting increased costs of controls and compliance oversight activities; and
- harming our business, results of operations and financial condition.

We cannot predict with any certainty whether and to what degree the disruption caused by the COVID-19 pandemic and reactions thereto will continue and how our business and results of operation will be impacted as the COVID-19 pandemic continues to evolve or subside. As a result, we expect to face difficulty accurately predicting our internal financial forecasts.

The COVID-19 pandemic may also have the effect of heightening many of the other risks identified in this "Risk Factors" section of our Annual Report on Form 10-K for the year ended December 31, 2021. It is not possible for us to predict the duration or magnitude of the adverse results of the outbreak and its effects on our business, results of operations or financial condition at this time, but such effects may be material.

Risks Related to Our Business Model

Our limited operating history, and the evolving scope of our offerings, make it difficult to predict our future financial and operating results, and we may not achieve our expected financial and operating results in the future.

We were incorporated in 2008 and launched our first graduate program in 2009. In July 2017, we acquired GetSmarter and extended our offerings to include premium online executive education programs and in May 2019, we acquired Trilogy and further extended our offerings to include skills-based boot camps. In November 2021, we acquired substantially all of the assets of edX, which expanded our offerings to include open courses and micro-credentials and added a consumer facing marketplace. As a result of our limited operating history, and the evolving scope of our offerings, our ability to forecast our future operating results, including revenue, cash flows and profitability, is limited and subject to a number of risks and uncertainties. If our assumptions regarding these risks and uncertainties are incorrect or change, or if we do not manage these risks successfully, our operating and financial results may differ materially from our expectations and our business may suffer.

We have incurred significant net losses since inception and may not achieve or maintain profitability in the future.

We incurred net losses of $194.8 million, $216.5 million and $235.2 million during the years ended December 31, 2021, 2020 and 2019, respectively. We will need to generate and sustain increased revenue levels in future periods to become profitable, and, even if we do, we may not be able to maintain or increase our profitability. We expect to continue to expend substantial financial and other resources on technology and production efforts to support a growing number of offerings and our marketing and sales efforts to drive the acquisition of potential students. Our efforts to grow our business may be more costly than we expect, and we may not be able to increase our revenue enough to offset our operating expenses. If we are forced to reduce our expenses, our growth strategy could be compromised. We may incur significant losses in the future for a number of reasons, including unforeseen expenses, difficulties, complications, delays and other unknown events. As a result, we may be unable to achieve and maintain profitability, and the value of our company and our common stock could decline significantly.

Our financial performance depends heavily on our ability to recruit potential students for our offerings, and our ability to do so may be affected by circumstances beyond our control.

Building awareness of our offerings is critical to our ability to recruit prospective students for our university clients' offerings and generate revenue. A substantial portion of our expenses is attributable to marketing and sales efforts dedicated to attracting potential students to our offerings. Because we generate revenue based on a portion of the tuition and fees that students pay, it is critical to our success that we identify prospective students for our offerings in a cost-effective manner, and that enrolled students remain active in our offerings until graduation or completion.

We have experienced, and may in the future experience, fluctuations in our student enrollments based on a variety of factors. For example, student enrollments have declined, and may decline in the future, due to our university clients changing their admissions standards. In addition, the COVID-19 pandemic has led to significant fluctuations in student enrollment across our offerings and we are unable to predict the impact of the COVID-19 pandemic on student enrollments in the future.

The following factors, many of which are largely outside of our control, may prevent us from successfully driving and maintaining student enrollment in our offerings in a cost-effective manner or at all, which would adversely affect our revenue and ability to achieve profitability:

- Negative perceptions about online learning programs. Online offerings that we or our competitors provide may not be successful or operate efficiently, and new entrants to the market also may not perform well. Such underperformance could create the perception that online offerings in general are not an effective way to educate students, whether or not our offerings achieve satisfactory performance.
- Unsuccessful marketing efforts. We invest substantial resources in developing and implementing data-driven marketing strategies that focus on identifying the right potential student at the right time. These marketing efforts make substantial use of search engine optimization, paid search, social media and custom website development and deployment and we rely on a small number of internet search engines and marketing partners. The effectiveness and cost of our marketing efforts has varied over time and from offering to offering based on economic conditions, competition, advertising prices, offerings type, university client reputation and other factors.
- Damage to university client reputation. Because we often use a university client's brand in connection with our marketing efforts for their offerings, our university clients' reputations are critical to our ability to enroll students. Many factors affecting our university clients' reputations are beyond our control, including ranking among nonprofit educational institutions, internal university matters, changes in university leadership positions and other matters that impact the public perception of our university clients.
- Lack of interest in an offering. We may encounter difficulties attracting students for offerings that are not highly desired or that are relatively new within their fields. Macroeconomic conditions beyond our control may diminish interest in employment in a field, which could contribute to a lack of interest in offerings related to that field.
- Reduced support from our university clients. Our ability to grow our revenue from a particular offering depends on the growth of enrollment in that offering. Our university clients could limit enrollment in certain offerings, cease providing the offerings altogether or significantly curtail or inhibit our ability to promote their offerings, any of which would negatively impact our revenue.
- Our lack of control over our university clients' admissions standards and admissions decisions for degree programs. Even if we identify prospective students for a degree program, there is no guarantee that our university clients will admit these students to that program. Our university clients retain complete discretion over setting admissions standards and making admissions decisions, and university clients may change admissions standards or inconsistently apply admissions standards.

- Inability to maintain sufficient high-quality content from our partners. Our success depends on our ability to provide students with high-quality learning experiences. For certain of our offerings, including our degree programs, while our clients are primarily responsible for curriculum development our learning design and development experts collaborate with faculty to ensure the final course content is engaging and digestible in an online format. For other offerings, including our open course and micro-credential offerings, our clients are solely responsible for curriculum development and we provide limited self-help resources. If the course content in our offerings is not high-quality and students are dissatisfied with their experience in an offering on our platform or do not find the content of our offerings appealing, they may stop accessing our content. In turn, if clients perceive that our platform lacks an adequate learner audience, clients may be less willing to provide content to offer on our platform, and the experience of students could be further negatively impacted.

- Inability of students to secure funding. Like on-campus college and university students, many of the students in our university clients' offerings, in particular degree programs and boot camps, rely on the availability of third-party financing to pay for tuition and other costs of their education. This may include federal or private student loans, scholarships and grants, or benefits or reimbursement provided by an employer. Any developments that reduce the availability or increase the cost of financial aid for higher education generally, or for our university clients' offerings, could impair students' abilities to meet their financial obligations and could negatively impact future enrollment in our offerings.

- General economic conditions. Student enrollment in our offerings may be affected by changes in global economic conditions, including changes caused by the COVID-19 pandemic. An improvement in economic conditions and, in particular, an improvement in the economic conditions in the U.S. and the U.S. unemployment rate, may reduce demand among potential students for educational services, as they may find adequate employment without additional education. Conversely, a worsening of economic and employment conditions may reduce the willingness of employers to sponsor educational opportunities for their employees or discourage existing or potential students from pursuing additional education due to a perception that there are insufficient job opportunities, increased economic uncertainty or other factors.

Our business depends heavily on the adoption by colleges and universities of online delivery of their educational offerings. If we fail to attract new university clients, or if new leadership at existing university clients does not have an interest in continuing or expanding online delivery of their educational offerings, our revenue growth and profitability may suffer.

The success of our business depends in large part on our ability to enter into agreements with additional nonprofit colleges and universities to provide their offerings online. In particular, to engage new university clients, we need to convince potential university clients, many of which have been educating students only in on-campus programs for hundreds of years, to invest significant time and resources to introduce a new teaching modality. The delivery of online education at leading nonprofit colleges and universities is evolving, but many administrators and faculty members continue to have concern regarding the perceived loss of control over the education process that might result from offering content online, as well as skepticism regarding the ability of colleges and universities to provide high-quality education online that maintains the standards they set for their on-campus programs. It may be difficult to overcome this resistance, and online offering of the kind we develop with our university clients may not achieve significant market acceptance. In addition, our university clients have regular turnover in their leadership positions, and there is no guarantee that any new leader will have an interest in continuing or expanding online delivery of the university's educational offerings. If new leaders at our university clients do not embrace online delivery of educational offerings, we may not be able to add additional offerings with the university client and the university client may attempt to terminate or may not renew their relationship with us.

The market for our offerings may be limited based on the types of nonprofit colleges and universities we target and due to exclusivity provisions in certain of our contracts with university clients. We have agreed to incur, and we may incur in the future, costs to terminate some or all of the exclusivity obligations in certain of our university client contracts.

Certain of our contracts with our university clients limit our ability to enable competitive offerings with other schools. In our Degree Program Segment, we have determined that enabling some of these contractually prohibited competitive programs may be part of our business strategy. We have in the past agreed and may in the future agree with certain university clients to do some or all of the following to reduce or eliminate certain exclusivity obligations: make fixed and contingent cash payments over time, reduce our revenue share over time, and/or make minimum investments in marketing under certain conditions.

In addition, in order to maintain good relations with our university clients, we may decide not to approach certain institutions that our university clients regard as their direct competitors to offer similar programs or courses, even if we are allowed to do so under our contracts. A limited number of our contracts with our university clients include provisions that may result in pricing adjustment in limited circumstances. If we need to incur contingent costs in connection with enabling

competitive offerings or if we determine not to approach certain institutions, or if we have to adjust our pricing provisions, our ability to grow our business and achieve profitability would be impaired.

To launch a new degree program, we generally incur significant expense in technology and content development, as well as in marketing and sales to identify and attract prospective students, and it may be several years, if ever, before we generate revenue from a new program sufficient to recover our costs.

To launch a new degree program, we generally integrate components of our platform with the various student information and other operating systems our university clients use to manage functions within their institutions. In addition, for these degree programs, our content development staff works closely with the university client's faculty members to produce engaging online coursework and content, and we must commence student acquisition activities. This process is time-consuming and costly and, under our agreements with our university clients, we are primarily responsible for the significant costs of this effort for most of our degree programs, even before we generate any revenue and there is no guarantee we will ever recoup these costs.

In exchange for the upfront investments we make in our university clients' degree programs, our university client agreements generally provide that we receive a fixed percentage of the tuition that the university clients receive from the students enrolled in their degree programs. We only begin to recover these upfront costs once students are enrolled and our university clients begin billing students for tuition and fees. The time that it takes for us to recover our investment in a new degree program depends on a variety of factors, primarily our content development costs, student acquisition costs, the rate of growth in student enrollment in the program, and the tuition of the program. We estimate that, on average, it takes approximately three years after signing an agreement with a university client to fully recover our investment in that university client's new degree program. Because of the lengthy period required to recoup our investment in these new degree programs, unexpected developments beyond our control could occur that result in the university client ceasing or significantly curtailing a degree program before we are able to fully recoup our investment. As a result, we may ultimately be unable to recover the full investment that we make in a new degree program or achieve our expected level of profitability for the degree program.

If new offerings do not scale efficiently and in the time frames we expect, our reputation and our revenue will suffer.

Our continued growth and ability to achieve profitability depends on our and our university clients' ability to successfully scale newly launched offerings. Our ability to scale new offerings in the time frame we expect has varied over time and from offering to offering. If we are not successful in recruiting potential students for our offerings, it would adversely impact our ability to generate revenue, and our university clients and the students in their offerings could lose confidence in the knowledge and capability of our employees. If we cannot quickly and efficiently scale our technology to handle growing student enrollment and new offerings, our university clients' and their students' experiences may suffer, which could damage our reputation among colleges and universities and their faculty and students and impact our ability to acquire new university clients.

In addition, in our Degree Program Segment, if our university clients cannot quickly develop the infrastructure and hire sufficient faculty and administrators to handle growing student enrollments, our university clients' and their students' experiences with our platform may suffer, which could damage our reputation among colleges and universities and their faculty and students.

Our ability to efficiently scale new offerings will depend on a number of factors, including our ability to:

- satisfy existing students in, and attract and enroll new students for, our offerings;
- assist our university clients in recruiting qualified faculty to support their expanding enrollments;
- assist our university clients in developing and producing an increased volume of course content;
- successfully introduce new features and enhancements and maintain a high level of functionality in our platform; and
- deliver high-quality support to our university clients and their faculty and students.

If student enrollment in our offerings does not increase, if we are unable to launch new offerings in a cost-effective manner or if we are otherwise unable to manage new offerings effectively, our ability to grow our business and achieve profitability would be impaired, and the quality of our platform and the satisfaction of our university clients and their students could suffer.

Our financial performance depends heavily on student retention within our offerings, and factors influencing student retention may be out of our control.

Once a student is enrolled in an offering, we and our university client must retain the student over the life of the offering to generate ongoing revenue. Our strategy involves offering high-quality support to students enrolled in these offerings to support their retention. If we are unable to help students quickly resolve any educational, technological or logistical issues they encounter, otherwise provide effective ongoing support to students or deliver high-quality, engaging educational content, students may withdraw from the offering, which would negatively impact our revenue.

In addition, student retention could be compromised by the following factors, many of which are largely outside of our control:

- Lack of support from faculty members in our university clients' degree programs. It takes a significant time commitment and dedication from our university clients' faculty members to work with us to develop or to independently develop course content for their degree programs and other courses designed for an online learning environment. Our university clients' faculty may be unfamiliar with the development and production process, may not understand the time commitment involved, or may otherwise be resistant to changing the ways in which they present the same content in an on-campus class. Our ability to maintain high student retention will depend in part on our ability to convince our university clients' faculty of the value in the time and effort they will spend developing the course content. Lack of support from faculty could cause the quality of our degree programs to decline, which could contribute to decreased student satisfaction and retention in our Degree Program Segment.
- Student dissatisfaction. Enrolled students may drop out of our offerings based on their individual perceptions of the value they are getting from the offering. For example, we may face retention challenges as a result of students' dissatisfaction with our university clients' faculty, changing views of the value of our offerings and perceptions of employment prospects following completion of the offering.
- Personal factors. Personal factors, such as ability to continue to pay tuition, ability to meet the rigorous demands of the offering, and lack of time to continue classes, all of which are generally beyond our control, may impact a student's willingness and ability to stay enrolled in an offering.

If student retention is compromised by any of these factors, it could significantly reduce the revenue that we generate from our offerings, which would negatively impact our return on investment for the particular offering and could compromise our ability to grow our business and achieve profitability.

The loss, or material underperformance, of any one of our offerings could harm our reputation, which could in turn affect our future revenue growth.

We rely on our reputation for delivering high-quality online degree programs and alternative credential offerings and recommendations from existing university clients to attract potential new university clients. Therefore, the loss of any single offering, or the failure of any university client to renew its agreement with us upon expiration, could harm our reputation and impair our ability to pursue our growth strategy and ultimately to become profitable.

The recent, significant decline in the market price of our common stock could adversely affect our business, results of operations, and financial position.

Our goodwill and other indefinite-lived intangible assets are tested for impairment annually, as of October 1, and more frequently if an event occurs or circumstances change that would more likely than not reduce the fair value below carrying value. We experienced a significant decline in the market price of our common stock subsequent to February 9, 2022 and management is evaluating whether this decline represents a triggering event for assessing the goodwill and indefinite-lived intangible asset balances for impairment in the first quarter of 2022. There is the potential for a non-cash charge in the first quarter of 2022 to recognize impairment losses on some or all of our goodwill and indefinite-lived intangible assets. If it is determined that an impairment loss should be recognized on goodwill or indefinite-lived intangible assets, our business, results of operations, and financial position could be adversely affected.

Risks Related to Our Operations and Our Growth Strategy

Our student acquisition efforts depend in large part upon a limited number of third-party advertising platforms.

Our marketing efforts make substantial use of paid search, social media, search engine optimization and custom website development and deployment and we rely on advertising through a limited number of third-party advertising platforms such as Google, Meta Platforms and LinkedIn, to direct traffic to, and recruit new students for, our offerings. Changes in the way these platforms operate - whether due to changes in law, changes in the practices of mobile operating system providers, or otherwise - or changes in their advertising prices, data use practices, or other terms have impacted the cost and efficiency of our student acquisition efforts in the past and could in the future make marketing our offerings more expensive, or more difficult. In addition, the elimination of a particular medium or platform on which we advertise, could limit our ability to direct traffic to our offerings and recruit new students on a cost-effective basis, any of which could have a material adverse effect on our business, results of operations and financial condition.

If internet search engines' methodologies are modified, our search engine optimization capability in connection with our student recruiting efforts could be harmed.

Our search engine optimization capability in connection with our student acquisition efforts substantially depends on various internet search engines, such as Google, to direct a significant amount of traffic to websites related to our offerings. Our ability to influence the number of visitors directed to these websites through search engines is not entirely within our control. For example, search engines frequently revise their algorithms in an attempt to optimize their search result listings. In this respect, we have experienced fluctuations in our search result listings and website traffic based on changes to search engine algorithms, and future algorithm changes by Google or any other search engines could cause the websites for our offerings to receive less favorable placements, which could reduce the number of prospective students who visit these websites and impact our ability to effectively utilize search engine optimization as part of our student acquisition strategies in the long-term. Further, if our competitors' search engine optimization efforts are more successful than ours, fewer prospective students may be directed to our websites.

In October 2020, the U.S. Department of Justice brought an antitrust lawsuit against Google claiming that Google improperly uses its monopoly over internet search to impede competition and harm consumers. We cannot predict the impact that this lawsuit may have on advertising costs or Google's future operations. Any reduction in the number of prospective students directed to our websites could negatively affect our ability to generate prospective students, and ultimately revenue, through our student acquisition activities.

If our security measures or those of our third-party service providers are breached or fail and result in unauthorized disclosure of data, we could lose clients, fail to attract new clients and be exposed to protracted and costly litigation.

Our platforms and computer systems store and transmit proprietary and confidential client, student, and company information, which may include personal information of students, prospective students, faculty and employees, that are subject to stringent legal and regulatory obligations. As a technology company, we have faced and continue to face an increasing number of threats to our platforms and computer systems, including unauthorized activity and access, system viruses, worms, malicious code, denial of service attacks, phishing attacks, ransomware attacks, social engineering attacks, and organized cyberattacks, any of which could breach our security and create a data exfiltration condition and/or disrupt our platform and our clients' offerings. The techniques used by computer hackers and cyber criminals to obtain unauthorized access to data or to sabotage computer systems are growing in sophistication, change frequently and generally are not detected until after an incident has occurred. We have experienced, and may in the future experience, an increasing number of cybersecurity threats to our platform and computer systems and to the systems of our third-party service providers and our efforts to maintain the security and integrity of our platform, and the cybersecurity measures taken by our third-party service providers may be unable to anticipate, detect or prevent all attempts to compromise our systems. While there can be no assurances of effectiveness, we have implemented certain safeguards and processes to thwart hackers, and all related activity, and protect the data in our platforms and computer systems. If our, or our third-party service providers', security measures are breached or fail as a result of third-party action, employee error, malfeasance or otherwise, it could result in the loss or misuse of proprietary and confidential university, student (including prospective student), employee or company information, which could subject us to material liability, or materially interrupt our business, potentially over an extended period of time. Any such event could harm our reputation, adversely affect our ability to attract new clients and students, cause existing clients to scale back their offerings or elect not to renew their agreements, cause prospective students not to enroll or existing students to not stay enrolled in our offerings, or subject us to third-party lawsuits, regulatory fines or other action or liability. Further, any reputational damage resulting from breach of our security measures could create distrust of our company by prospective clients or students. In addition, our insurance coverage may not be adequate to cover losses associated with such events, and in any case, such insurance may not cover all costs, expenses or losses we could incur to respond to and remediate a security breach. As a result,

we may be required to expend significant additional resources to protect against the threat of these disruptions and security breaches or to alleviate problems caused by such disruptions or breaches.

Data protection laws in jurisdictions around the world require companies and institutions to notify impacted individuals of data breach incidents, usually in writing. Under the terms of our contracts with our university clients, we would be responsible for the costs of investigating and disclosing data breaches to the university clients' students, if required by law. In addition to costs associated with investigating and fully disclosing a data breach, we could be subject to substantial monetary fines or private claims by affected parties and our reputation would likely be harmed.

Disruption to or failures of our platform could reduce university client and student satisfaction with our offerings and could harm our reputation.

The performance and reliability of our platform is critical to our operations, reputation and ability to attract new university clients, as well as our student acquisition and retention efforts. Our university clients rely on our platform to provide their offerings online, and students access our platform on a frequent basis as an important part of their educational experience. Because our platform is complex and incorporates a variety of hardware and proprietary and third-party software, our platform may have errors or defects that could result in unanticipated downtime for our university clients and students. Web- and mobile-based applications frequently contain undetected errors when first introduced or when new versions or enhancements are released, and we have from time to time found errors and defects in our technology and new errors and defects may be detected in the future. In addition, we have experienced and may in the future experience temporary system interruptions to our platform for a variety of reasons, including network failures, power failures, problems with third-party firmware and software updates, as well as an overwhelming number of users trying to access our platform. Any errors, defects, disruptions or other performance problems with our platform could damage our or our university clients' reputations, decrease student satisfaction and retention and impact our ability to attract new students and university clients. If any of these problems occur, our university clients could attempt to terminate their agreements with us or make indemnification or other claims against us. In addition, sustained or recurring disruptions in our platform could adversely affect our and our university clients' compliance with applicable regulations and accrediting body standards.

We rely upon Amazon Web Services to host certain aspects of our platform and any disruption of or interference with our use of Amazon Web Services could impair our ability to deliver our platform to clients and students, resulting in client and student dissatisfaction, damage to our reputation, and harm to our business.

Our online learning platform and certain of our other technology and services are hosted on data centers provided by Amazon Web Services, or AWS. Given this, along with the fact that we cannot easily switch our AWS operations to another cloud provider, any disruption of, or interference with our use of, AWS would impact our operations and our business would be adversely impacted. AWS may terminate its agreement with us upon 30 days' notice. Additionally, AWS has the right to terminate the agreement immediately with notice to us in certain scenarios, such as if AWS believes providing the services could create a substantial economic or technical burden or material security risk for AWS, or in order to comply with the law or requests of governmental entities. If any of our arrangements with AWS is terminated, we could experience interruptions in our platform as well as delays and additional expenses in arranging new facilities and services.

Our operations depend, in part, on AWS's abilities to protect their data center hosting facilities against damage or interruption from natural disasters, power or telecommunications failures, criminal acts and similar events. The occurrence of spikes in usage volume, a natural disaster, an act of terrorism, vandalism or sabotage, a decision to close a facility without adequate notice, or other unanticipated problems at a facility could result in lengthy interruptions in the availability of our platform, which would result in harm to our business. In the event of a system failure, the backup systems and disaster recovery services provided by AWS may be insufficient or fail. Also, in the event of damage or interruption, our insurance policies may not adequately compensate us for any losses that we may incur. These factors in turn could further reduce our revenue, subject us to liability or cause our clients to fail to renew or terminate their contracts, any of which could harm our business.

Our internal information technology systems are critical to our business. System integration and implementation issues could disrupt our operations, which could have a material adverse impact on our business or result in significant deficiencies or material weaknesses in our internal controls.

We rely on the efficient and uninterrupted operation of complex information technology systems, including systems for billing, human resources, enterprise resource planning, and customer relationship management. As our business has grown in size and complexity, the growth has placed, and will continue to place, significant demands on our internal information technology systems. To effectively manage this growth, we must commit significant financial resources and personnel to maintain and enhance existing systems and develop or acquire new systems to keep pace with continuing changes in our business and information-processing technology as well as evolving industry, regulatory, and accounting standards. If the information we rely upon to run our businesses is determined to be inaccurate or unreliable, or if we fail to properly maintain or enhance our internal information technology systems, we could have operational disruptions, significant deficiencies, or material weaknesses in our internal controls, incur increased operating and administrative expenses, lose our ability to produce timely and accurate financial reports, or suffer other adverse consequences

If the mobile solutions available to our students and clients are not effective, the use of our platform could decline.

Students have been increasingly accessing our offerings and marketplace on mobile devices through our mobile applications in recent years. The smaller screen size and reduced functionality associated with some mobile devices may make the use of our platform more difficult or our clients may believe that online learning through such mobile devices is not effective. If we are not able to provide our clients with the functionality to deliver a rewarding experience on mobile devices, our ability to attract students to our offerings may be harmed and, consequently, our business may suffer.

As new mobile devices and mobile features are released, we may encounter problems in developing or supporting apps for them. In addition, supporting new devices and mobile device operating systems may require substantial time and resources.

The success of our mobile apps could also be harmed by factors outside our control, such as:

- actions taken by mobile app distributors;
- unfavorable treatment received by our mobile apps, especially as compared to competing apps, such as the placement of our mobile apps in a mobile app download store;
- increased costs in the distribution and use of our mobile apps; or
- changes in mobile operating systems, such as iOS and Android, that degrade functionality of our mobile website or mobile apps or that give preferential treatment to competitive offerings.

If our clients or students encounter difficulty accessing or using, or if they choose not to use, our mobile platform, our growth prospects and our business may be adversely affected.

If we fail to manage our growth effectively, the success of our business model will be compromised.

We have experienced rapid growth in a relatively short period of time, which has placed, and will continue to place, a significant strain on our administrative and operational infrastructure and may require us to expand personnel on certain teams, as well as our facilities and infrastructure. We will also be required to refine our operational, financial and management controls and reporting systems and procedures. If we fail to manage the growth of our business efficiently, our costs and expenses may increase more than we plan and we may not successfully expand our university client base, enhance our platform, develop new offerings with new and existing university clients, attract a sufficient number of students in a cost-effective manner, satisfy the requirements of our existing university clients, respond to competitive challenges or otherwise execute our business plan. Accordingly, our historical revenue growth rate may not continue in the future.

Our ability to manage any significant growth of our business effectively will depend on a number of factors, including our ability to:

- effectively recruit, integrate, train and motivate any new employees, while retaining existing employees;
- maintain the beneficial aspects of our corporate culture and effectively execute our business plan;
- implement systems enhancements and continue to improve our operational, financial and management controls;
- protect and further develop our strategic assets, including our intellectual property rights; and
- make sound business decisions in light of the scrutiny associated with operating as a public company.

These activities will require significant capital expenditures and place significant demands on our management and our operational and financial infrastructure.

We may not be able to effectively manage any future growth in a cost-effective or timely manner, or at all, which could negatively affect the quality of our platform, our reputation, results of operations and overall business.

We may expand by acquiring or investing in other companies or technologies, which may divert our management's attention, result in dilution to our shareholders and consume resources that are necessary to sustain our business.

We have in the past acquired and may in the future acquire complementary products, services, technologies or businesses. Negotiating these transactions can be time-consuming, difficult and expensive, and our ability to complete these transactions may be subject to conditions or approvals that are beyond our control. In addition, we may not be able to identify desirable acquisition targets, may incorrectly estimate the value of an acquisition target or may not be successful in entering into an agreement with any particular target. Consequently, these transactions, even if undertaken and announced, may not close.

An acquisition, investment, or new business relationship may result in unforeseen operating difficulties, expenditures and integration challenges including the following:

- diversion of management's attention from ongoing business concerns and performance;
- managing a larger combined company;
- maintaining employee morale and retaining key management and other employees;
- retaining existing business and operational relationships and attracting new business and operational relationships;
- consolidating corporate and administrative infrastructures and eliminating duplicative operations and inconsistencies in standards, controls, procedures and policies;
- coordinating geographically separate organizations;
- unanticipated issues in integrating information technology, communications and other systems;
- undetected errors or unauthorized use of a third party's code in the products of the acquired companies or in the technology acquired;
- breaches of our cybersecurity measures if there are cybersecurity issues we are not aware of at the time of the acquisition;
- entry into highly competitive markets in which we have no or limited direct prior experience and where competitors have stronger market positions;
- exposure to unknown liabilities, including claims and disputes by third parties against the companies we acquire.

Many of these factors will be outside of the combined company's control and any one of them could result in delays, increased costs, decreased revenue and diversion of management's time and energy, which could materially affect our financial position, results of operations and cash flows.

If we experience difficulties with the integration process following an acquisition, the anticipated benefits of the acquisition may not be realized fully or at all, or may take longer to realize than expected. Moreover, the anticipated benefits of any acquisition, investment, or business relationship may not be realized.

In addition, in connection with an acquisition, investment or new business relationship we may:

- issue additional equity securities that would dilute current shareholders;
- use cash that we may need in the future to operate our business;
- incur debt on terms unfavorable to us or that we are unable to repay or that may place burdensome restrictions on our operations;
- incur large charges or substantial liabilities; or
- become subject to adverse tax consequences.

Any of these outcomes could harm our business and operating results. In addition, a significant portion of the purchase price of companies we have acquired and may acquire in the future may be allocated to goodwill and indefinite-lived intangible assets, which must be assessed for impairment at least annually. If our acquisitions do not ultimately yield expected returns, we may be required to make changes to our operating results based on our impairment assessment process. For example, an interim goodwill impairment test performed in 2019 indicated that the carrying value of Trilogy exceeded its fair value. As a result, we recorded an impairment charge of $70.4 million on our consolidated statements of operations and comprehensive loss for the year ended December 31, 2019. As of December 31, 2021, our goodwill balance was $834.5 million and indefinite-lived intangible asset was $255.0 million, a significant portion of which relate to the edX Acquisition.

We face competition from established and emerging companies, which could divert clients or students to our competitors, result in pricing pressure and significantly reduce our revenue.

We expect that the online learning market will continue to expand and that the number of degree and non-degree offerings available online will proliferate.

Particularly in the Degree Program Segment, the number of new competitive entrants into the online learning market has expanded rapidly in recent years. As the number of online degree programs expands, we face increasing competition to enroll students in our offerings. This expansion has also resulted in an increase in the number of regional online degree program offerings for potential students. In addition to making enrollment decisions based on factors such as program quality and university brand strength, we have observed potential students giving preference to universities located in their region, which has further impacted the competitive landscape in our Degree Program Segment.

In our Alternative Credential Segment, which has a lower barrier to entry, we face increasing competition from other providers of massive open online courses, which directly compete with our open course offerings, but have also expanded their offerings to include certificate offerings, nano-degrees and similar non-degree alternatives. We also face competition from companies that provide corporate training programs and online courses taught outside the university environment (e.g., by experts in various fields). Many of these competitors can also leverage the strength of their consumer facing brands to attract students to their offerings at a low cost.

We expect existing competitors and new entrants to the online learning market to revise and improve their business models constantly in response to challenges from competing businesses, including ours. If these or other market participants introduce new or improved delivery of online education and technology-enabled services that we cannot match or exceed in a timely or cost-effective manner, our ability to grow our revenue and achieve profitability could be compromised.

Some of our competitors and potential competitors have significantly greater resources than we do. Increased competition may result in pricing pressure for us in terms of the percentage of tuition and fees we are able to negotiate to receive. The competitive landscape may also result in longer and more complex sales cycles with a prospective university client or a decrease in our market share among select nonprofit colleges and universities seeking to offer online educational offerings, any of which could negatively affect our revenue and future operating results and our ability to grow our business.

A number of competitive factors could cause us to lose potential client and student opportunities or force us to offer our platform on less favorable economic terms, including:

- competitors may develop service offerings that our potential clients or students find to be more compelling than ours;
- 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 students than we can;
- current and potential competitors may establish cooperative relationships among themselves or with third parties to enhance their products and expand their markets, and our 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; and
- colleges and universities may choose to continue using or to develop their own online learning solutions in-house, rather than pay for our platform.

We may not be able to compete successfully against current and future competitors. In addition, competition may intensify as our competitors raise additional capital and as established companies in other market segments or geographic markets expand into our market segments or geographic markets. If we cannot compete successfully against our competitors, our ability to grow our business and achieve profitability could be impaired.

If for-profit postsecondary institutions, which offer online education alternatives different from ours, or online program management providers perform poorly or continue to attract negative publicity, it could tarnish the reputation of online education as a whole, which could impair our ability to grow our business.

For-profit postsecondary institutions, many of which provide course offerings predominantly online, remain under intense regulatory and other scrutiny, which has led to media attention that has portrayed that sector in an unflattering light. Some for-profit online school operators have been subject to governmental investigations alleging the misuse of public funds, financial irregularities, exaggerated promises to students, and failure to achieve positive outcomes for students, including the inability to obtain employment in their fields. These allegations have attracted significant adverse media coverage and have prompted ongoing legislative hearings and actions as well as regulatory responses at both the state and federal level. These investigations have focused on specific companies and individuals, and the entire industry in the case of marketing and recruiting practices by for-profit higher education companies. Even though we do not market our platform to for-profit institutions, and have a different business model from them, this negative media attention may nevertheless foster skepticism about online higher education generally and our company specifically. Allegations of abuse of federal financial aid funds and other statutory violations against for-profit higher education companies, even if unfounded, could negatively impact our opportunity to succeed due to increased regulation or decreased demand for our offerings. Our company has been the subject of articles and inquiries by critics of for-profit education models generally, and such critics have advocated for changes in law and regulation at the state and federal level that would be adverse to our business model and have sought information and increased oversight regarding the business practices of online program management companies. Such critics have sometimes compared our business to that of entities that were formally for-profit institutions and that subsequently converted to non-profit status, and the conflation of these newer business models with our own may increase scrutiny of our business by Congress, DOE or other regulatory agencies. Any of these factors could negatively impact our ability to increase our university client base and grow our offerings and our revenue, which would make it difficult to continue to grow our business.

If we do not retain our senior management team and key employees, we may not be able to sustain our growth or achieve our business objectives.

Our future success is substantially dependent on the continued service of our senior management team. In this respect, our senior management team is heavily involved in the university client identification and sales process, and their expertise is critical in navigating the complex approval processes of large nonprofit colleges and universities. We do not maintain key-person insurance on any of our employees, including our senior management team. The loss of the services of any individual on our senior management team, or failure to find a suitable successor, could make it more difficult to successfully operate our business and achieve our business goals.

Our future success also depends heavily on the retention of our marketing and sales, technology and content development and support teams to continue to attract and retain students, thereby generating revenue for us. In particular, our highly-skilled technology and content development employees provide the technical expertise underlying our technology and technology-enabled services that support our university clients' offerings and the students enrolled in these offerings. We have experienced intense competition for these employees, and we may be unable to attract or retain these key personnel that are critical to our success, resulting in harm to our relationships with university clients, loss of expertise or know-how and unanticipated recruitment and training costs.

In addition, as a result of business acquisitions, current and prospective employees of 2U and any acquired company may experience uncertainty about their future roles following the acquisition. If our employees or the employees of any acquired company depart because of issues relating to uncertainty or perceived difficulties of integration, our ability to realize the anticipated benefits of an acquisition could be adversely impacted.

We maintain offices outside of the United States, have international residents that apply to and enroll in our offerings and plan to expand our international business, which exposes us to risks inherent in international operations.

Since 2017, and more recently as a result of the edX Acquisition, we have significantly increased our international operations, including the number of international applicants and students in our offerings. One element of our growth strategy is to continue expanding our international operations and to continue expanding our global student and client base. Our current international operations and future initiatives will involve a variety of risks that could constrain our operations and compromise our growth prospects, including:

- the need to localize and adapt online offerings for specific countries, including translation into foreign languages and ensuring that these offerings enable our university clients to comply with local education laws and regulations;
- difficulties in staffing and managing foreign operations, including different pricing environments, longer sales cycles, longer accounts receivable payment cycles and collections issues;

- lack of familiarity with and unexpected changes in foreign regulatory requirements;
- challenges inherent in efficiently managing an increased number of employees over large geographic distances, including the need to implement appropriate systems, policies, benefits and compliance programs;
- new and different sources of competition, and practices which may favor local competitors;
- weaker protection for intellectual property and other legal rights than in the United States and practical difficulties in enforcing intellectual property and other rights outside of the United States;
- compliance challenges related to the complexity of multiple, conflicting and changing governmental laws and regulations, including labor and employment, tax, education, privacy and data protection, and anti-bribery laws and regulations, such as the U.S. Foreign Corrupt Practices Act and the U.K. Bribery Act;
- increased financial accounting and reporting burdens and complexities;
- restrictions on the transfer of funds;
- adverse tax consequences, including liabilities for indirect taxes or the potential for required withholding taxes for our overseas employees;
- terrorist attacks, public health crises, acts of violence or war and adverse environmental conditions;
- a country's response to the COVID-19 pandemic or economic and political measures taken to contain the spread of COVID-19 as well as any resurgence of the COVID-19 pandemic;
- unstable regional, economic or political conditions; and
- fluctuations in currency exchange rates or restrictions on foreign currency and resulting effects on our revenue and expenses.

Our expansion efforts may not be successful. Our experience with attracting university clients and students in the U.S. may not be relevant to our ability to attract clients and students in other markets. If we invest substantial time and resources to expand our international operations and are unable to attract university clients and students successfully and in a timely manner, our business and operating results will be harmed.

Our operations in South Africa expose us to risks that could have an adverse effect on our business.

We have a significant employee base in South Africa. We may incur costs complying with labor laws, rules and regulations in South Africa, including laws that regulate work time, provide for mandatory compensation in the event of termination of employment for operational reasons, and impose monetary penalties for non-compliance with administrative and reporting requirements in respect of affirmative action policies. Our reliance on a workforce in South Africa also exposes us to disruptions in the business, political, and economic environment in that region, as well as natural disasters, public health crises and other environmental conditions. Maintenance of a stable political environment is important to our operations in South Africa, and terrorist attacks and acts of violence or war may directly affect our physical facilities and workforce or contribute to general instability. Our operations in South Africa require us to comply with complex local laws and regulatory requirements and expose us to foreign currency exchange rate risk. The economy of South Africa in the past has been, and in the future may continue to be, characterized by rates of inflation and interest rates that are substantially higher than those prevailing in the United States, which could increase our South-African-based costs and decrease our operating margins. Our operations in South Africa may also subject us to trade restrictions, exchange control limitations, reduced or inadequate protection for intellectual property rights, security breaches, and other factors that may adversely affect our business. Negative developments in any of these areas could increase our costs of operations or otherwise harm our business.

We engage some individuals classified as independent contractors, not employees, and if U.S. or international regulatory authorities mandate that they be classified as employees, our business would be adversely impacted.

We engage independent contractors and are subject to U.S. and international regulations and guidelines regarding independent contractor classification. These regulations and guidelines are subject to judicial and agency interpretation, and it could be determined that our current or former independent contractor classifications are inapplicable. Further, if legal standards for classification of independent contractors change, it may be necessary to modify our compensation structure for these personnel, including by paying additional compensation or reimbursing expenses. In addition, if our independent contractors are determined to have been misclassified as independent contractors, we would incur additional exposure under U.S. and international law, workers' compensation, unemployment benefits, labor, employment and tort laws, including for prior periods, as well as potential liability for employee benefits and tax withholdings. Any of these outcomes could result in

substantial costs to us, could significantly impair our financial condition and our ability to conduct our business as we choose, and could damage our reputation and our ability to attract and retain other personnel.

We rely on certain third-party providers of software and services integral to the operations of our business.

We rely on software that we license from third parties and services provided by third parties to offer certain components of our technology and services. In addition, we may need to obtain future licenses or services from third parties necessary for the continued provision of our technology and services, which might not be available to us on acceptable terms, or at all. If our agreements with third-party software or services vendors are not renewed or the third-party software or services become obsolete, fail to function properly, are defective or otherwise fail to provide quality service or address our or our clients' needs, there is no assurance that we would be able to replace the functionality provided by the third-party software or service provider with software or services from alternative providers. Any of these factors could have a material adverse effect on our financial condition, cash flows or results of operations.

Risks Related to the edX Acquisition and the Combined Company

We may experience difficulties in integrating the operations of edX into our business and in realizing the expected benefits of the edX Acquisition.

The success of the edX Acquisition depends in part on our ability to realize the anticipated business opportunities from combining the operations of edX with our business in an efficient and effective manner. Following the closing of the edX Acquisition, we are integrating the edX business with our existing business, which is a complex and time-consuming process. Our failure to meet the challenges involved in successfully integrating the operations of edX or to otherwise realize any of the anticipated benefits of the edX Acquisition, including additional cost savings and synergies, could impair our operations. It is possible that this integration and our efforts to realize the expected benefits of the edX Acquisition could result in material challenges, including, without limitation:

- the disruption of each company's ongoing businesses, including as a result of diverting management's attention to integration efforts;
- unanticipated issues in integrating operations and systems, including administrative and information technology infrastructure and financial reporting and internal control systems;
- the burden of complying with a wide variety of laws, including additional privacy, marketing and international trade and economic sanctions related laws, some of which did not apply to edX as a non-profit before the closing of the edX Acquisition;
- managing a larger combined company;
- maintaining employee morale and retaining key management and other employees;
- maintaining the reputation and brand of edX, including as a result of the edX business ceasing to be operated by a non-profit entity;
- the possibility of faulty assumptions underlying expectations regarding the integration process or expected synergies;
- inability to realize the expected operating leverage, marketing efficiencies and other strategic benefits anticipated
- inability to maintain and grow the edX enterprise business;
- coordinating geographically separate organizations;
- tax costs, liabilities or inefficiencies;
- additional regulatory scrutiny focused on edX or the combined company; and
- unforeseen expenses associated with the integration of the edX business.

Many of these factors are outside of our control and any one of them could result in delays, increased costs, decreases in revenues and diversion of management's time and energy, which could adversely affect our ability to achieve the anticipated benefits of the edX Acquisition and could harm our financial performance. The initial anticipated cost savings, synergies and other benefits of the edX Acquisition assume a successful integration of edX's operations and are based on projections and other assumptions, which are inherently uncertain. If we are unable to successfully or timely integrate the operations of edX with our business, we may be unable to realize the anticipated benefits resulting from the edX Acquisition, and our business, results of operations and financial condition could be materially and adversely affected. Even if integration is successful,

anticipated cost savings, synergies and other benefits may not be achieved. If, among other things, we are unable to achieve the anticipated strategic benefits or synergies, or if the integration costs related to the edX Acquisition are greater than expected, the market price of our common stock may decline. The market price of our common stock also may decline if we do not achieve the perceived benefits of the edX Acquisition as rapidly or to the extent anticipated by financial or industry analysts or if the effect of the edX Acquisition on our financial results is not consistent with the expectations of financial or industry analysts.

We have incurred substantial transaction and integration expenses related to the edX Acquisition and expect to incur additional integration expenses related to edX that could negatively impact our financial results and cash flows.

We have incurred, and expect to continue to incur, a number of non-recurring costs associated with the edX Acquisition and associated integration activities. For example, we expect to incur costs related to formulating and implementing integration plans, including facilities and systems consolidation costs and employment-related costs. We continue to assess the magnitude of these costs, and additional unanticipated costs may be incurred in the integration process. Any expected efficiencies to offset these costs may not be achieved in the near term, or at all.

We do not control and may be unable to predict the future path of the Licensed edX Platform.

Certain of our offerings are hosted on the open source learner management platform that is owned by the non-profit entity that survived the edX Acquisition (the "Licensed Platform"). We do not own the Licensed Platform and we do not control and may be unable to predict the future path of open source technology development of the Licensed Platform, including the ongoing development of open source components used in the Licensed Platform, which could reduce the appeal of our offerings hosted on the Licensed Platform and damage our reputation. If open source software programmers, many of whom we do not employ, or our own internal programmers do not continue to develop and enhance the Licensed Platform, we may be unable to meet student or university requirements.

If students do not expand beyond the free offerings available on our platform, our ability to grow our business and improve our results of operations may be adversely affected.

Many of our students initially access the free or audit track of the open courses available on our platform. Our growth strategy depends in part on our ability to persuade those students to enroll in the paid certificate track of the open courses available on our platform or in one of our other degree programs, executive education programs, boot camps or micro-credential courses. If students do not expand beyond free offerings, our ability to grow our business may be adversely affected.

Risks Related to Our Indebtedness and Capital Structure

Our substantial indebtedness could adversely affect our ability to raise additional capital to fund our operations, limit our ability to react to changes in the economy or our industry, expose us to interest rate risk and prevent us from meeting our obligations with respect to our indebtedness.

As of December 31, 2021, we had approximately $960.3 million of indebtedness on a consolidated basis. See Note 9 in the "Notes to Consolidated Financial Statements" included in Part II, Item 8 of this Annual Report on Form 10-K.

Our substantial indebtedness could have important consequences. For example, it could:

- limit our ability to obtain additional financing for working capital, capital expenditures, acquisitions, investments and other general corporate purposes;
- require a substantial portion of our cash from operating activities to be dedicated to debt service payments and reduce the amount of cash available for working capital, capital expenditures, investments or acquisitions and other general corporate purposes;
- place us at a competitive disadvantage compared to certain of our competitors who have less debt;
- hinder our ability to adjust rapidly to changing market conditions;
- limit our ability to secure adequate bank financing in the future with reasonable terms and conditions; and
- increase our vulnerability to, and limit our flexibility in planning for or reacting to, a potential downturn in general economic conditions or in one or more of our businesses.

The Indenture and the Term Loan Agreement contain, and the agreements governing indebtedness we may incur in the future may contain, affirmative and negative covenants that limit our ability to engage in activities that may be in our long-term best interests. Our failure to comply with those covenants could result in an event of default which, if not cured or waived, could result in the acceleration of all of our debt.

In addition, we may need to amend agreements that use LIBOR as a benchmark for establishing the rate. On March 5, 2021, the authority that regulates LIBOR announced that it intends to stop compelling banks to submit rates for the calculation of one, three- and six-month LIBOR after June 30, 2023. It is unclear whether new methods of calculating such LIBOR periods will be established such that they continue to exist after June 30, 2023. The U.S. Federal Reserve, in conjunction with the Alternative Reference Rates Committee, has recommended replacing U.S. dollar LIBOR periods with a newly created term index based on the secured overnight financing rate, commonly referred to as 'Term SOFR'; provided, that, our Term Loan Agreement, after the cessation of such LIBOR periods, shall use firstly 'Term SOFR' plus a customary market adjustment and if Term SOFR is no longer available, overnight SOFR plus a customary market adjustment. It is not possible to predict the effect of these changes, other reforms or the establishment of alternative reference rates in the United Kingdom, the United States or elsewhere.

Despite current indebtedness levels and existing restrictive covenants, we may still incur additional indebtedness that could further exacerbate the risks associated with our substantial financial leverage.

We may incur significant additional indebtedness in the future under the agreements governing our indebtedness. We will not be restricted under the terms of the Indenture from incurring additional debt. Although the Term Loan Agreement contains, and any future indebtedness may contain, restrictions on the incurrence of additional indebtedness, these restrictions are subject to a number of thresholds, qualifications and exceptions, and the additional indebtedness incurred in compliance with these restrictions could be substantial. Additionally, these restrictions could permit us to incur obligations that, although preferential to our common stock in terms of payment, do not constitute indebtedness.

Furthermore, any future indebtedness may prohibit or otherwise restrict us from making any cash payments on the conversion or repurchase of the Notes. Our failure to make cash payments upon the conversion or repurchase of the Notes as required under the terms of the Notes would permit holders of the Notes to accelerate our obligations under the Notes. In addition, any future indebtedness that we may incur may contain financial and other restrictive covenants that limit our ability to operate our business, raise capital or make payments under our other indebtedness. If we fail to comply with such covenants or to make payments under our indebtedness when due, then we would be in default under that indebtedness, which could, in turn, result in that indebtedness becoming immediately payable in full.

The Term Loan Agreement contains a financial covenant that may limit our operational flexibility.

In connection with the edX Acquisition, we entered into the Term Loan Agreement, which requires us to comply with several customary financial and other restrictive covenants, such as maintaining leverage ratios in certain situations, maintaining insurance coverage, and restricting our ability to make certain investments. We are also required to maintain minimum Recurring Revenues (as defined in the Term Loan Agreement) as of the last day of any period of four consecutive fiscal quarters of the Company commencing with fiscal quarter ending September 30, 2021 through the Maturity Date (as defined in the Term Loan Agreement), which may limit our ability to engage in new lines of business, make certain investments, pay dividends, or enter into various transactions.

This covenant may limit the flexibility of our operations, and failure to meet this financial covenant could result in a default under the Term Loan Agreement. If such a default were to occur, the lenders would have the right to terminate their commitments to provide loans under the Term Loan Agreement and declare any and all borrowings outstanding, together with accrued and unpaid interest and fees, to be immediately due and payable. In addition, the lenders would have the right to proceed against the collateral in which we granted a first priority security interest to them, which consists of substantially all our assets. If the debt under the Term Loan Agreement were to be accelerated, we may not have sufficient cash or be able to borrow sufficient funds to refinance the debt or sell sufficient assets to repay the debt, which could immediately materially and adversely affect our business, financial condition, and results of operations.

To service our indebtedness, we will require a significant amount of cash, and our ability to generate cash depends on many factors beyond our control.

Our ability to make cash payments on and to refinance our indebtedness will depend upon our financial condition and operating performance, which are subject to prevailing economic and competitive conditions and to financial, business, legislative, regulatory and other factors beyond our control.

If we are unable to generate sufficient cash from operating activities or are otherwise unable to obtain funds necessary to meet required payments of principal, premium, if any, and interest on our indebtedness, or amounts paid upon conversion of the Notes, or if we fail to comply with the various covenants in the instruments governing our indebtedness and we are unable to obtain waivers from the required lenders or noteholders, we could be in default under the terms of the agreements governing such indebtedness. In the event of such default, the holders of our indebtedness could elect to declare all the funds borrowed to be due and payable, together with accrued and unpaid interest. As a result, we could be forced into bankruptcy or liquidation.

We may be unable to raise the funds necessary to repurchase the Notes for cash following a "fundamental change," or to pay any cash amounts due upon conversion, and our other indebtedness may limit our ability to repurchase the Notes or pay cash upon their conversion.

Holders of the Notes may, subject to certain exceptions, require us to repurchase their Notes following a "fundamental change" (as defined in the Indenture) at a cash repurchase price generally equal to the principal amount of the Notes to be repurchased, plus accrued and unpaid interest, if any. In addition, upon conversion, we will satisfy part or all of our conversion obligation in cash unless we elect to settle conversions solely in shares of our common stock. We may not have enough available cash or be able to obtain financing at the time we are required to repurchase the Notes or pay the cash amounts due upon conversion. In addition, applicable law, regulatory authorities and the agreements governing our other indebtedness may restrict our ability to repurchase the Notes or pay the cash amounts due upon conversion. Our failure to repurchase Notes or to pay the cash amounts due upon conversion when required will constitute a default under the Indenture. A default under the Indenture or the fundamental change itself could also lead to a default under agreements governing our other indebtedness, which may result in that other indebtedness becoming immediately payable in full. We may not have sufficient funds to satisfy all amounts due under the other indebtedness and the Notes.

Conversion of the Notes may dilute the ownership interest of existing stockholders or may otherwise depress the price of our common stock.

The conversion of some or all of the Notes may dilute the ownership interests of existing stockholders to the extent we deliver shares upon any conversion of the Notes. Any sales in the public market of the common stock issuable upon such conversion could adversely affect prevailing market prices of our common stock. In addition, the existence of the Notes may encourage short selling by market participants because the conversion of the Notes could be used to satisfy short positions. The anticipated conversion of the Notes into shares of our common stock could also depress the price of our common stock.

Provisions in the Notes, Indenture and in the Term Loan Agreement could delay or prevent an otherwise beneficial takeover of us.

Certain provisions in the Notes and the Indenture could make a third-party attempt to acquire us more difficult or expensive. For example, if a takeover constitutes a "fundamental change" (as defined in the Indenture), then noteholders will have the right to require us to repurchase their Notes for cash. In addition, if a takeover constitutes a "make-whole fundamental change" (as defined in the Indenture), then we may be required to temporarily increase the conversion rate. In either case, and in other cases, our obligations under the Notes and the Indenture, as well as the Term Loan Agreement, under which a "change of control" is an event of default resulting in acceleration of all indebtedness thereunder, could increase the cost of acquiring us or otherwise discourage a third party from acquiring us or removing incumbent management, including in a transaction that noteholders or holders of our common stock may view as favorable.

The accounting method for convertible debt securities that may be settled in cash, such as the Notes, could have a material effect on our reported financial results.

In August 2020, the Financial Accounting Standards Board ("FASB") issued ASU 2020-06, *Accounting for Convertible Instruments and Contract on an Entity's Own Equity (Subtopic 815-40)* ("ASU 2020-06"), which amends the accounting standards for convertible debt instruments that may be settled entirely or partially in cash upon conversion. ASU 2020-06 eliminates requirements to separately account for liability and equity components of such convertible debt instruments and eliminates the ability to use the treasury stock method for calculating diluted earnings per share for convertible instruments whose principal amount may be settled using shares. Instead, ASU 2020-06 requires (i) the entire amount of the security to be presented as a liability on the balance sheet and (ii) application of the if-converted method for calculating diluted earnings per share. Under the if-converted method, diluted earnings per share will generally be calculated assuming that all the Notes were converted solely into shares of common stock at the beginning of the reporting period, unless the result would be anti-dilutive, which could adversely affect our diluted earnings per share. However, if the principal amount of the convertible debt security being converted is required to be paid in cash and only the excess is permitted to be settled in shares, the if-converted method will produce a similar result as the treasury stock method prior to the adoption of ASU 2020-06 for such convertible debt security.

We will adopt ASU 2020-06 in the first quarter of 2022, using the modified retrospective basis, effective as of January 1, 2022. Following adoption of this ASU, we will no longer separate the liability and equity components of the Notes on our balance sheet.

The capped call transactions may affect the value of our common stock.

In connection with the Notes, we entered into capped call transactions with certain option counterparties. The capped call transactions are expected generally to reduce the potential dilution upon any conversion of the Notes and/or offset any cash

payments we are required to make in excess of the principal amount of converted Notes, as the case may be, with such reduction and/or offset subject to a cap.

The option counterparties or their respective affiliates may modify their hedge positions by entering into or unwinding various derivatives with respect to our common stock and/or purchasing or selling our common stock or other securities of ours in secondary market transactions from time to time (and are likely to do so following any conversion of the Notes, any repurchase of the Notes by us on any fundamental change repurchase date, any redemption date or any other date on which the Notes are retired by us, in each case, if we exercise our option to terminate the relevant portion of the capped call transactions). This activity could also cause or avoid an increase or a decrease in the market price of our common stock.

In addition, if any such capped call transactions are terminated for any reason, the option counterparties or their respective affiliates may unwind their hedge positions with respect to our common stock, which could adversely affect the value of our common stock.

Furthermore, the option counterparties are financial institutions, and we will be subject to the risk that any or all of them might default under the capped call transactions. Our exposure to the credit risk of the option counterparties will not be secured by any collateral. Past global economic conditions have resulted in the actual or perceived failure or financial difficulties of a number of financial institutions. If an option counterparty becomes subject to insolvency proceedings, we will become an unsecured creditor in those proceedings with a claim equal to our exposure at that time under the capped call transactions with such option counterparty. Our exposure will depend on many factors but, generally, an increase in our exposure will be correlated to an increase in the market price and in the volatility of our common stock. In addition, upon a default by an option counterparty, we may suffer adverse tax consequences and more dilution than we currently anticipate with respect to our common stock. We can provide no assurances as to the financial stability or viability of the option counterparties.

We might not be able to utilize a portion of our net operating loss carryforwards, which could adversely affect our profitability.

As of December 31, 2021, we had federal net operating loss carryforwards due to prior period losses, which, if not utilized, will begin to expire in 2029. Our gross state net operating loss carryforwards are equal to or less than the federal net operating loss carryforwards and expire over various periods based on individual state tax laws. These net operating loss carryforwards could expire unused and be unavailable to offset future income tax liabilities, which could adversely affect our profitability. In addition, under Section 382 of the Internal Revenue Code of 1986, as amended, if a corporation undergoes an "ownership change," which is generally defined as a greater than 50% change, by value, in its equity ownership over a three-year period, the corporation's ability to use its pre-change net operating loss carryforwards and other pre-change tax attributes to offset its post-change income may be limited. Similar rules may apply under state tax laws. During the three-year period ended December 31, 2016, we determined that such an ownership change occurred. Absent a subsequent ownership change, however, all of our historical net operating losses should be available. Therefore, the occurrence of the ownership change during the three-year period ended December 31, 2016 is not expected to limit our ability to carry forward historical net operating losses before expiration. We may experience ownership changes in the future as a result of subsequent shifts in our stock ownership. If a future ownership change occurs and limits our ability to use our historical net operating loss carryforwards, it would harm our future financial statement results by increasing our future tax obligations. We also have net operating loss carryforwards in South Africa and the United Kingdom and there is no guarantee that entities in these countries will generate enough taxable income to fully utilize them.

We may need additional capital in the future to pursue our business objectives. Additional capital may not be available on favorable terms, or at all, which could compromise our ability to grow our business.

We may need to raise additional funds to respond to business challenges or opportunities, accelerate our growth, develop new offerings or enhance our platform. Our continued access to sources of liquidity depends on multiple factors, including global economic conditions, the condition of global financial markets, the availability of sufficient amounts of financing and our operating performance, all of which may be impacted by the COVID-19 pandemic. If we seek to raise additional capital, it may not be available on favorable terms or may not be available at all. In addition, under our Term Loan Agreement, we may be restricted from using the net proceeds of financing transactions for our operating objectives. Lack of sufficient capital resources could significantly limit our ability to manage our business and to take advantage of business and strategic opportunities. Any additional capital raised through the sale of equity or debt securities with an equity component would dilute our stock ownership. If adequate additional funds are not available if and when needed, we may be required to delay, reduce the scope of, or eliminate material parts of our business strategy.

Risks Related to Regulation of Our Business and That of Our University Clients

Our business model relies on university client institutions complying with federal and state laws and regulations.

Higher education is heavily regulated. All of our university clients in the United States and certain university clients outside of the United States participate in Title IV federal student financial assistance programs under the HEA of 1965, as amended, or HEA, and are subject to extensive regulation by the DOE, as well as various state agencies, licensing boards and accrediting commissions. To participate in the Title IV programs, an institution must receive and maintain authorization by the appropriate state education agencies, be accredited by an accrediting commission recognized by the DOE, and be certified by the DOE as an eligible institution. If a university client participating in Title IV was found to be in non-compliance with any of these laws, regulations, standards or policies, the university client could lose some or all of its access to Title IV program funds, lose the ability to offer certain programs or lose its ability to operate in certain states, any of which could cause our revenue from that university client's program to decline.

The regulations, standards and policies applicable to our university clients change frequently and are often subject to interpretation. Changes in, or new interpretations of, applicable laws, regulations or standards could compromise our university clients' accreditation, authorization to operate in various states, permissible activities or use of federal funds under Title IV programs. We cannot predict with certainty how the requirements applied by our university clients' regulators will be interpreted, or whether our university clients will be able to comply with these requirements in the future.

Certain requirements of Title II and Title III of the Americans with Disabilities Act apply to us and our university clients and Section 504 of the Rehabilitation Act of 1974 applies to our university clients that receive federal funding. Further, in the absence of definitive federal rulemaking, the Web Content Accessibility Guidelines 2.1, a set of recommendations and technical standards for making websites accessible to individuals with disabilities published by the World Wide Web Consortium, have become the effective standard for learner-facing aspects of our platform. We may not be successful in ensuring that our offerings and services comply with these changing statutory and regulatory requirements, which could make our solutions less attractive to our clients and students, and we expect to incur ongoing costs of compliance.

Our activities are subject to federal and state laws and regulations and other requirements.

Although we are not an institution of higher education, we are required to comply with certain education laws and regulations as a result of our role as a service provider to higher education institutions, either directly or indirectly through our contractual arrangements with university clients. Failure to comply with these laws and regulations could result in breach of contract and indemnification claims and could cause damage to our reputation and impair our ability to grow our business and achieve profitability.

Activities of the U.S. Congress or Department of Education could result in adverse legislation or regulatory actions or investigations.

The process of reauthorization of the HEA began in 2014 and is expected to continue until the HEA is updated. Congressional hearings will continue to be scheduled by the U.S. Senate Committee on Health, Education, Labor and Pensions, the U.S. House of Representatives Committee on Education and the Workforce and other Congressional committees regarding various aspects of the education industry, including accreditation matters, student debt, student recruiting, cost of tuition, distance learning, competency-based learning, student success and outcomes and other matters. Future hearings may include a discussion of the role of online program management companies.

The increased scrutiny and results-based accountability initiatives in the education sector, as well as ongoing policy differences in Congress regarding spending levels and other issues, could lead to significant changes in connection with the reauthorization of the HEA or otherwise. These changes may place new or additional regulatory burdens on postsecondary schools generally, and specific initiatives may be targeted at or have an impact upon companies like us that serve higher education. The adoption of any laws or regulations that limit our ability to provide our services to our university clients could compromise our ability to drive revenue through their programs or make our platform less attractive to them. Congress could also enact laws or authorize regulations that require us to modify our practices in ways that could increase our costs, including as a result of new regulatory burdens.

In addition, regulatory activities and initiatives of the DOE may have similar consequences for our business even in the absence of Congressional action. For example, DOE initiated two new rulemaking processes in 2021 that may impact our partners. While neither proceeding is expected to directly impact our business model, we cannot predict the impact that these and other, future DOE initiatives may have on us, our reputation or operating results.

Our business model, which depends on our ability to receive a share of tuition revenue as payment from our university clients, has been validated by a DOE "dear colleague" letter, but such validation is not codified by statute or regulation and may be subject to change.

Each institution that participates in Title IV programs agrees it will not "provide any commission, bonus, or other incentive payment based in any part, directly or indirectly, upon success in securing enrollments or the award of financial aid, to

any person or entity who is engaged in any student recruitment or admission activity, or in making decisions regarding the award of Title IV, HEA program funds." Virtually all of our university clients participate in Title IV Programs.

Although this rule, referred to as the incentive compensation rule, generally prohibits entities or individuals from receiving incentive-based compensation payments for the successful recruitment, admission or enrollment of students, the DOE provided official policy guidance in 2011 permitting tuition revenue-sharing arrangements known as the "bundled services rule." Our current business model relies in part on the bundled services rule to enter into tuition revenue-sharing agreements with our university clients.

Because the bundled services rule was promulgated in the form of agency guidance issued by the DOE in the form of a "dear colleague" letter, or DCL, and is not codified by statute or regulation, there is risk that the rule could be altered or removed without customary administrative procedural requirements, such as adequate prior notice, that accompany formal agency rulemaking. Although the DCL remains the longstanding policy of the DOE, the bundled services rule could be reviewed, altered or vacated in the future. In addition, the legal weight the DCL would carry in litigation over the propriety of any specific compensation arrangements under the HEA or the incentive compensation rule is uncertain. We can offer no assurances as to how the DCL would be interpreted by a court. The revision, removal or invalidation of the bundled services rule by Congress, the DOE or a court, whether in an action involving our company or our university clients, or in action that does not involve us, could require us to change our business model and renegotiate the terms of many of our university client contracts and could compromise our ability to generate revenue.

If we or our subcontractors or agents violate the incentive compensation rule, we could be liable to our university clients for substantial fines, sanctions or other liabilities.

Even though the DCL clarifies that tuition revenue-sharing arrangements with our university clients are permissible, we are still subject to other provisions of the incentive compensation rule that prohibit us from offering to our employees who are involved with or responsible for recruiting or admissions activities any bonus or incentive-based compensation based on the successful identification, admission or enrollment of students into any institution. If we or our subcontractors or agents violate the incentive compensation rule, we could be liable to our university clients for substantial fines, sanctions or other liabilities, including liabilities related to "whistleblower" claims under the federal False Claims Act. Any such claims, even if without merit, could require us to incur significant costs to defend the claim, distract management's attention and damage our reputation.

If we or our subcontractors or agents violate the misrepresentation rule, or similar federal and state regulatory requirements, we could face fines, sanctions and other liabilities.

We are required to comply with other regulations promulgated by the DOE that affect our student acquisition activities, including the misrepresentation rule. The misrepresentation rule is broad in scope and applies to statements our employees, subcontractors or agents may make about the nature of a university client's program, a university client's financial charges or the employability of a university client's program graduates. A violation of this rule, FTC rules or other federal or state regulations applicable to our marketing activities by an employee, subcontractor or agent performing services for university clients could lead to governmental investigations and sanctions, hurt our reputation, result in the termination of university client contracts, require us to pay fines or other monetary penalties or require us to pay the costs associated with indemnifying a university client from private claims or government investigations.

If our university clients fail to maintain their state authorizations, or we or our university clients violate other state laws and regulations, students in their offerings could be adversely affected and we could lose our ability to operate in that state and provide services to these university clients.

Our university clients must be authorized in certain states to offer online educational offerings, engage in recruiting and operate externships, internships, clinical training or other forms of field experience, depending on state law. The loss of or failure to obtain state authorization would, among other things, limit the ability of a university client to enroll students in that state, render the university client and its students ineligible to participate in Title IV programs in that state, diminish the attractiveness of the university client's offering and ultimately compromise our ability to generate revenue and become profitable.

In addition, if we or any of our university clients fail to comply with any state agency's rules, regulations or standards beyond authorizations, the state agency or state attorney general could limit the ability of the university client to offer educational offerings in that state or limit our ability to perform our contractual obligations to our university client in that state.

If our university clients fail to maintain institutional or programmatic accreditation for their offerings, our revenue could be materially affected.

The loss or suspension of a university client's accreditation or other adverse action by the university client's institutional or programmatic accreditor would render the institution or its offerings ineligible to participate in Title IV programs, could prevent the university client from offering certain educational offerings and, for certain degree-granting programs, could make it impossible for the graduates of the university client's program to obtain employment in the profession for which they trained. If any of these results occurs, it could hurt our ability to generate revenue from that offering.

Our future growth could be impaired if our university clients fail to obtain timely approval from applicable regulatory agencies to offer new programs, make substantive changes to existing programs or expand their programs into or within certain states.

Our university clients are required to obtain the appropriate approvals from the DOE and applicable state and accrediting regulatory agencies for new programs or locations, which may be conditioned, delayed or denied in a manner that could impair our strategic plans and future growth. Regulatory constraints have resulted in delays to various approvals our university clients are requesting, and such delays could in turn delay the timing of our ability to generate revenue from our university clients' programs.

If more state agencies require specialized approval of our university clients' offerings, our operating costs could increase significantly, approval times could lag, or we could be prohibited from operating in certain states.

In addition to state licensing agencies, our university clients may be required to obtain approval from professional licensing boards in certain states to offer specialized programs in specific fields of study. Currently, relatively few states require institutions to obtain professional board approval for their online educational offerings. However, more states could pass laws requiring our university clients' offerings, such as graduate programs in teaching or nursing, to obtain approval from state professional boards. If a significant number of states pass additional laws requiring schools to obtain professional board approval, the cost of obtaining all necessary state approvals could dramatically increase, which could make our platform less attractive to university clients, and these university clients could be barred from operating in some states entirely.

Evolving regulations and legal obligations related to data privacy, data protection and information security and our actual or perceived failure to comply with such obligations, could have an adverse effect on our business.

The legislative and regulatory framework for privacy and data security is rapidly evolving and likely is to remain uncertain for the foreseeable future. In providing our platform to university clients and in operating our business, we collect and process regulated personal information from students, faculty, prospective students and employees. Our handling of this personal information is subject to a variety of laws and regulations, which have been adopted by federal, state and foreign governments to regulate the collection, distribution, use and storage of personal information. Any failure or perceived failure by us to comply with these privacy laws and regulations or any security incident that results in the unauthorized release or transfer of this personal information in our possession, could result in government enforcement actions, litigation, fines and penalties or adverse publicity, all of which could have an adverse effect on our reputation and business.

Various federal, state and foreign legislative, regulatory or other governmental bodies have adopted laws or regulations concerning privacy, security, data storage and data protection that could materially adversely impact our business. Moreover, much of the personal information we collect and process is regulated by multiple privacy laws across various jurisdictions. For example, the General Data Protection Regulation ("GDPR"), which took effect in May 2018, introduced robust new requirements for the protection of personal data of individuals in the European Union ("EU") and substantial fines for non-compliance, including fines up to 4% of a Company's annual global revenue. However, with the withdrawal of the United Kingdom ("UK") from the EU in 2020, we must also now comply with the local laws of that jurisdiction such as the UK Data Protection Act 2018 and the UK General Data Protection Regulation. This introduces the risk of possible enforcement from a separate data protection authority, with its distinct power to impose substantial fines for non-compliance. As another example, in July 2020, South Africa's privacy law known as the Protection of Personal Information Act became effective, mandating new requirements for processing of personal information by entities domiciled in South Africa, and our Company must comply with these laws.

We are also subject to evolving EU rules on data transfer, as we may transfer personal data from the European Economic Area to other jurisdictions. The invalidation of the EU-U.S. Privacy Shield framework in July 2020 and introduction of updated Standard Contractual Clauses (SCC) in 2021 for alternative means of cross-border data transfer, introduces additional complexity and risk to our compliance measures.

In the U.S., the California Consumer Privacy Act ("CCPA") took effect in January 2020. Pursuant to the CCPA, we are required, among other things, to meet certain enhanced notice requirements to California residents regarding our use or disclosure of their personal information, allow California residents to opt-out of certain uses and disclosures of their personal

information without penalty, and provide Californians with other choices related to personal data in our possession. The California Attorney General may seek substantial monetary penalties and injunctive relief in the event of our non-compliance with the CCPA. The CCPA also allows for private lawsuits from Californians in the event of certain data breaches.

We also expect that there will continue to be new proposed laws, regulations, rulings and industry standards concerning privacy, security, data storage and data protection in the U.S., the EU and other jurisdictions, and we cannot yet determine the impact such future laws, regulations, rulings and standards may have on our business. For example, the European ePrivacy Directive (Directive 2002/58/EC, as amended by Directive 2009/136/EC), which obliges EU member states to introduce certain national laws regulating privacy in the electronic communications sector, will soon be replaced by the ePrivacy Regulation. As the text of the ePrivacy Regulation is still under development and in draft form, and as further guidance is issued and interpretations of both the ePrivacy Regulation and the GDPR develop, it is difficult to assess the impact of either on our business or operations, but it may require us to modify our data practices and policies. In addition, in 2021 new privacy laws were passed in China, Brazil and other jurisdictions, and many countries are considering updates to their current data protection regulations, including Australia and India.

In the U.S., various states have proposed privacy laws that represent a trend towards stronger privacy protections and greater data transparency. In January 2023, the California Consumer Privacy Act, which includes significant amendments to the CCPA, becomes operative, thereby placing additional obligations on us to protect personal information, to offer enhanced data rights to Californians, and to provide notice regarding our data sharing practices. Likewise, both Colorado and Virginia passed consumer privacy laws in 2021. Without an overarching federal law driving privacy compliance in the U.S., the risk is high of a patchwork of privacy legislation formed by individual state laws, similar to the states' approach to breach notification obligations. This could not only increase costs for compliance but also raise the risk of enforcement by individual state attorneys general.

Complying with these and other changing requirements could cause us to incur substantial costs, or require us to change our business practices, any of which could materially adversely affect our business and operating results.

We are required to comply with the Family Educational Rights and Privacy Act, or FERPA, and failure to do so could harm our reputation and negatively affect our business.

FERPA generally prohibits an institution of higher education participating in Title IV programs from disclosing personally identifiable information from a student's education records without the student's consent. Our university clients and their students disclose to us certain information that originates from or comprises a student education record under FERPA. As an entity that provides services to institutions participating in Title IV programs, we are indirectly subject to FERPA, and we may not transfer or otherwise disclose any personally identifiable information from a student record to another party other than in a manner permitted under the statute. If we violate FERPA, it could result in a material breach of contract with one or more of our university clients and could harm our reputation. Further, in the event that we disclose student information in violation of FERPA, the DOE could require a university client to suspend our access to its student information for at least five years.

In our Alternative Credential Segment, we are subject to risks and compliance rules and regulations related to the third-party credit card payment processing platform integrated within our websites or otherwise used by our business.

Students typically use a credit or debit card to pay application and enrollment fees and to make tuition payments for the offerings in our Alternative Credential Segment that are not free. We are subject to payment card association operating rules, certification requirements and rules governing electronic funds transfers, which could change or be reinterpreted to make it difficult or impossible for us to comply. We believe that we and the payment processing service providers we use are compliant in all material respects with the Payment Card Industry Data Security Standard. However, there is no guarantee that such compliance will be maintained or that compliance will prevent illegal or improper use of our systems that are integrated with our payment processing providers. If we or any of the third-party payment processors we use fail to be in compliance with applicable credit card rules and regulations, we may be required to migrate to an alternate payment processor which could result in transaction downtime during the migration and/or a loss of students and have a material adverse effect on our business, financial condition and results of operations.

We are subject to governmental export, import and sanctions controls that could impair our ability to compete in international markets and subject us to liability if we are not in full compliance with applicable laws.

Our business activities are subject to various restrictions under U.S. export and similar laws and regulations, including the U.S. Department of Commerce's Export Administration Regulations and various economic and trade sanctions regulations administered by the U.S. Treasury Department's Office of Foreign Assets Controls. The U.S. export control laws and U.S. economic sanctions laws include restrictions or prohibitions on the sale of certain services to U.S. embargoed or sanctioned countries, governments, persons, and entities. In addition, various countries regulate the import of certain technology and have

enacted or could enact laws that could limit our ability to provide students access to our platform or could limit our students' ability to access or use our services in those countries.

Changes in our platform, or future changes in export and import regulations, may prevent our international students from utilizing our platform or, in some cases, prevent the export or import of our platform to certain countries, governments, or persons altogether. Any change in export or import regulations, economic sanctions, or related legislation or changes in the countries, governments, persons, or technologies targeted by such regulations, could result in decreased use of our platform by, or in our decreased ability to export or sell subscriptions to our platform to, existing or potential students internationally. Any decreased use of our platform or limitation on our ability to export or sell our platform would adversely affect our business, results of operations, and financial results.

Risks Related to Intellectual Property

We operate in an industry with extensive intellectual property litigation. Claims of infringement against us may hurt our business.

Our success depends, in part, upon our ability to avoid infringing intellectual property rights owned by others and being able to resolve claims of intellectual property infringement without major financial expenditures or adverse consequences. The technology and software fields generally are characterized by extensive intellectual property litigation and many companies that own, or claim to own, intellectual property have aggressively asserted their rights. In addition, we face potential copyright and trademark infringement from the content we produce in connection with our marketing activities, including in websites related to our offerings. From time to time, we may be subject to legal proceedings and claims relating to the intellectual property rights of others, and we expect that third parties will assert intellectual property claims against us, particularly as we expand the complexity and scope of our business. In addition, our university client agreements require us to indemnify our university clients against claims that our platform infringes the intellectual property rights of third parties.

Future litigation may be necessary to defend ourselves or our university clients from intellectual property infringement claims or to establish our proprietary rights. Some of our competitors have substantially greater resources than we do and would be able to sustain the costs of complex intellectual property litigation to a greater degree and for longer periods of time than we could. In addition, patent holding companies that focus solely on extracting royalties and settlements by enforcing patent rights may target us. Regardless of whether claims that we are infringing patents or other intellectual property rights have any merit, these claims are time-consuming and costly to evaluate and defend and could:

- hurt our reputation;
- adversely affect our relationships with our current or future university clients;
- cause delays or stoppages in providing our platform;
- divert management's attention and resources;
- require technology changes to our software that could cause us to incur substantial cost;
- subject us to significant liabilities; and
- require us to cease some or all of our activities.

In addition to liability for monetary damages against us, which may include attorneys' fees, treble damages in the event of a finding of willful infringement, or, in some circumstances, damages against our university clients, we may be prohibited from developing, commercializing or continuing to provide some or all of our bundled technology-enabled platform unless we obtain licenses from, and pay royalties to, the holders of the patents or other intellectual property rights, which may not be available on commercially favorable terms, or at all.

We may incur liability, or our reputation may be harmed, as a result of the activities of our university clients and students or the content in our online learning platforms.

We may be subject to potential liability for the activities of our university clients or students in connection with the data they post or store in our online learning platforms. For example, university personnel or students, or our employees or independent contractors, may post to our online learning platforms various articles or other third-party content for use in class discussions or within asynchronous lessons.

Various U.S. federal statutes may apply to us with respect to these activities. For example, the Digital Millennium Copyright Act of 1998, or DMCA and the Communications Decency Act, or CDA, have provisions that limit our liability for certain content posted by third parties on our platforms.

Although statutes and case law in the U.S. have generally shielded us from liability for these activities to date, court rulings in pending or future litigation may narrow the scope of protection afforded us under these laws. In addition, laws governing these activities are unsettled in many international jurisdictions. As a result, we could incur liability to third parties for the unauthorized duplication, distribution or other use of third-party content. Any such claims could subject us to costly litigation and impose a significant strain on our financial resources and management personnel regardless of whether the claims have merit. Our various liability insurance coverages may not cover potential claims of this type adequately or at all, and we may be required to alter or cease our uses of such material, which may include changing or removing content from courses or altering the functionality of our online learning platform, or to pay monetary damages.

Additionally, university personnel or students, or our employees or independent contractors could use our online learning platform to store or process regulated personal information without our knowledge. In the event that our systems experience a data security incident, or an individual or entity accesses information without, or in excess of, proper authorization, we could be subject to data security incident notification laws, as described elsewhere, which may require prompt remediation and notification to individuals. If we are unaware of the data and information stored on our systems, we may be unable to appropriately comply with all legal obligations, and we may be exposed to governmental enforcement or prosecution actions, private litigation, fines and penalties or adverse publicity and these incidents could harm our reputation and business.

Our failure to protect our intellectual property rights could diminish the value of our platform, weaken our competitive position and reduce our revenue.

We regard the protection of our intellectual property, which includes trade secrets, copyrights, trademarks and domain names, as critical to our success. We protect our proprietary information from unauthorized use and disclosure by entering into confidentiality agreements with any party that may come in contact with such information. We also seek to ensure that we own intellectual property created for us by signing agreements with employees, independent contractors, consultants, companies and any other third party that may create intellectual property for us that assigns any copyright and patent rights to us. However, these arrangements and the other steps we have taken to protect our intellectual property may not prevent the misappropriation of our proprietary information or deter independent development of similar technologies by others.

We pursue the registration of our domain names, trademarks and service marks in the United States and in jurisdictions outside the United States. However, third parties may knowingly or unknowingly infringe on our trademark or service mark rights, third parties may challenge our trademark or service mark rights, and pending or future trademark or service mark applications may not be approved. In addition, effective trademark protection may not be available in every country in which we operate or intend to operate. In any or all cases, we may be required to expend significant time and expense to prevent infringement or enforce our rights.

Monitoring unauthorized use of our intellectual property is difficult and costly. Our efforts to protect our proprietary rights may not be adequate to prevent misappropriation of our intellectual property. Further, we may not be able to detect unauthorized use of, or take appropriate steps to enforce, our intellectual property rights. Our competitors may also independently develop similar technology. In addition, the laws of many countries may not protect our proprietary rights to as great an extent as do the laws of the United States. Further, the laws in the United States and elsewhere change rapidly, and any future changes could adversely affect us and our intellectual property rights. Our failure to meaningfully protect our intellectual property could result in competitors offering services that incorporate our most technologically advanced features, which could seriously reduce demand for our platform. In addition, we may in the future need to initiate litigation such as infringement or administrative proceedings, to protect our intellectual property rights. Litigation, whether we are a plaintiff or a defendant, can be expensive, time-consuming and may divert the efforts of our technical staff and managerial personnel, whether or not such litigation results in a determination that is unfavorable to us. In addition, litigation is inherently uncertain, and thus we may not be able to stop our competitors from infringing upon our intellectual property rights.

The use of "open source" software in our platform could negatively affect our ability to offer our platform and subject us to possible litigation.

A portion of our platform incorporates so-called "open source" software, and we may incorporate additional open source software in the future. Certain open source licenses may, in certain circumstances, require us to offer our platform that incorporates the open source software for no cost, to make available source code for modifications or derivative works we create based upon, incorporating or using the open source software and to license such modifications or derivative works under the terms of the particular open source license. Our efforts to monitor the use of open source software in our platform to ensure that no open source software is used in such a way as to require us to disclose our source code when we do not wish to do so, may be unable to prevent such use from occurring. In addition, if a third-party software provider has incorporated certain types of open source software into software we license from such third party without our knowledge, we could, under certain circumstances, be required to comply with the foregoing conditions. If an author or other third party that distributes open source software that we use were to allege that we had not complied with the conditions of one or more of these licenses, we could be

required to incur significant legal expenses defending against such allegations and could be subject to significant damages, including being enjoined from offering the component of our platform that contained the open source software and being required to comply with the foregoing conditions, which could disrupt our ability to offer certain components of our platform.

We could also be subject to suits by parties claiming ownership of what we believe to be open source software. The terms of many open source licenses to which we are subject have not been interpreted by U.S. or foreign courts. Accordingly, there is a risk that those licenses could be construed in a manner that imposes unanticipated conditions or restrictions on our ability to offer our platform. Litigation could be costly for us to defend, have a negative effect on our operating results and financial condition and require us to devote additional research and development resources to change our products.

Individuals that appear in content hosted on our online learning platform may claim violation of their rights.

Faculty and students that appear in video segments hosted on our online learning platform may claim that proper assignments, licenses, consents and releases were not obtained for use of their likenesses, images or other contributed content. Our contracts typically require that our university clients ensure that proper assignments, licenses, consents and releases are obtained for their course material, but we cannot know with certainty that they have obtained all necessary rights. Moreover, the laws governing rights of publicity and privacy, and the laws governing faculty ownership of course content, are imprecise and adjudicated on a case-by-case basis, such that the enforcement of agreements to transfer the necessary rights is unclear. As a result, we could incur liability to third parties for the unauthorized duplication, display, distribution or other use of this material. Any such claims could subject us to costly litigation and impose a significant strain on our financial resources and management personnel regardless of whether the claims have merit. Our various liability insurance coverages may not cover potential claims of this type adequately or at all, and we may be required to alter or cease our use of such material, which may include changing or removing content from courses, or to pay monetary damages. Moreover, claims by faculty and students could damage our reputation, regardless of whether such claims have merit.

Risks Related to Ownership of Our Common Stock

Our operating results have fluctuated in the past and may do so in the future, which could cause our stock price to decline.

Our operating results have historically fluctuated due to seasonality and changes in our business, and our future operating results may vary significantly due to a variety of factors, many of which are beyond our control. You should not rely on period-to-period comparisons of our operating results as an indication of our future performance. Factors that may cause fluctuations in our operating results include, but are not limited to, the following:

- the timing of our costs incurred in connection with the launch of new degree programs and the delay in receiving revenue from these new programs, which delay may last for several years;
- seasonal variation driven by the semester schedules for our university clients' degree programs and seasonal engagement patterns of students on the edX marketplace, which may vary from year to year;
- changes in the student enrollment and retention levels in our university clients' offerings;
- changes in our key metrics or the methods used to calculate our key metrics;
- changes in tuition rates;
- the timing and amount of our marketing and sales expenses;
- costs necessary to improve and maintain our platform;
- fluctuations in foreign currency exchange rates;
- the impact of the COVID-19 pandemic, including on the global economy, educational institutions and our results of operations;
- costs related to any acquisition and integration of business and technology;
- our ability to effectively integrate businesses and technologies that we acquire;
- impairment of goodwill or intangible assets; and
- changes in the prospects of the economy generally, which could alter current or prospective university clients' or students' spending priorities or could increase the time it takes us to launch new offerings.

Our operating results may fall below the expectations of market analysts and investors in some future periods, which could cause the market price of our common stock to decline substantially.

The trading price of the shares of our common stock may be volatile, and purchasers of our common stock could incur substantial losses.

The trading price of the shares of our common stock may be volatile. The stock market in general, and the market for technology companies in particular, have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. As a result of this volatility, investors may not be able to sell their common stock at or above the price paid for the shares. The market price for our common stock may be influenced by many factors, including:

- actual or anticipated variations in our operating results;
- variations between our actual operating results and the expectations of securities analysts, investors and the financial community;
- changes in financial estimates by us or by any securities analysts who might cover our stock or our failure to meet these financial estimates;
- conditions or trends in our industry, the stock market or the economy;
- the level of demand for our stock, including the amount of short interest in our stock;
- stock market price and volume fluctuations of comparable companies and, in particular, those that operate in the software and information technology industries;
- announcements by us or our competitors of new product or service offerings, significant acquisitions, strategic partnerships or divestitures;
- announcements of investigations or regulatory scrutiny of our operations or lawsuits filed against us;
- capital commitments;
- investors' general perception of our company and our business;
- actions instituted by activist shareholders or others;
- lawsuits threatened or filed against us;
- recruitment or departure of key personnel; and
- sales of our common stock, including sales by our directors and officers or specific stockholders; and
- other factors such as political or social unrest, terrorist attacks, other hostilities, natural disasters and potential public health crises, such as COVID-19.

Activist shareholders who disagree with the composition of our board of directors, our strategy or the way we are managed may seek to effect change through various strategies that range from private engagement to publicity campaigns, proxy contests, efforts to force transactions not supported by our board of directors and litigation. Responding to these actions may be costly and time-consuming, disrupt our operations, divert the attention of our board of directors, management and employees and interfere with the execution of our strategic plan. A contested election could also require us to incur substantial legal and public relations fees and proxy solicitation expenses. The perceived uncertainty as to our future direction resulting from activist strategies could also affect the market price and volatility of our common stock.

As described in Part I, Item 3 of this Annual Report on Form 10-K, certain stockholders have initiated class action lawsuits against us and certain of our employees and directors. Our defense against this litigation has caused and will continue to cause us to incur additional expenses and continue to divert management's attention and resources from our business.

Provisions in our corporate charter documents and under Delaware law may prevent or frustrate attempts by our stockholders to change our management and hinder efforts to acquire a controlling interest in us, and the market price of our common stock may be lower as a result.

Provisions in our amended and restated certificate of incorporation and amended and restated bylaws may make it difficult for a third party to acquire, or attempt to acquire, control of our company, even if a change in control is considered favorable by you and other stockholders. For example, our board of directors has the authority to issue up to 5,000,000 shares of preferred stock. The board of directors can fix the price, rights, preferences, privileges, and restrictions of the preferred stock

without any further vote or action by our stockholders. An issuance of shares of preferred stock may result in the loss of voting control to other stockholders, which could delay or prevent a change in control transaction. As a result, the market price of our common stock and the voting and other rights of our stockholders may be adversely affected.

Our charter documents also contain other provisions that could have an anti-takeover effect, including:

- only one of our three classes of directors is elected each year;
- stockholders are not entitled to remove directors other than by a 662/3% vote and only for cause;
- stockholders are not permitted to take actions by written consent;
- stockholders are not permitted to call a special meeting of stockholders;
- our board of directors is allowed to adopt, amend or repeal our bylaws; and
- stockholders are required to give us advance notice of their intention to nominate directors or submit proposals for consideration at stockholder meetings.

In addition, we are subject to the anti-takeover provisions of Section 203 of the Delaware General Corporation Law, which regulates corporate acquisitions by prohibiting Delaware corporations from engaging in specified business combinations with particular stockholders of those companies. These provisions could discourage potential acquisition proposals and could delay or prevent a change in control transaction. They could also have the effect of discouraging others from making tender offers for our common stock, including transactions that may be in your best interests. These provisions may also prevent changes in our management or limit the price that investors are willing to pay for our stock.

Our amended and restated certificate of incorporation provides that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware and the state and federal courts located within the State of Delaware are the exclusive forum for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to choose the judicial forum for disputes with us or our directors, officers, stockholders, or employees and, in turn, discourage lawsuits against our directors, officers, or employees.

Our amended and restated certificate of incorporation provides that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware (or, if the Court of Chancery does not have jurisdiction, another state or federal court in the State of Delaware) will be the sole and exclusive forum for any derivative action or proceeding brought on our behalf; any action asserting a claim of breach of a fiduciary duty owed by any of our directors, stockholders, officers, or other employees to us or our stockholders; any action arising pursuant to any provision of the DGCL, our amended and restated certificate of incorporation, or our bylaws; and any action asserting a claim that is governed by the internal affairs doctrine. This exclusive forum provision would not apply to any action brought to enforce a duty or liability created by the Exchange Act or any other claim for which the federal courts of the United States have exclusive jurisdiction.

This exclusive forum provision may limit a stockholder's ability to bring a claim in a judicial forum of its choosing for disputes with us or our current or former directors, officers, stockholders, or other employees, which may discourage such lawsuits against us and our current and former directors, officers, stockholders, and other employees. Alternatively, if a court were to find the exclusive forum provision in our amended and restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur further significant additional costs associated with resolving such action in other jurisdictions, all of which could have a material adverse effect on our business, financial condition, and results of operations.

Concentration of ownership of our common stock among our existing executive officers, directors and large stockholders may prevent smaller stockholders from influencing significant corporate decisions.

Our executive officers, directors and current beneficial owners of 5% or more of our common stock and their respective affiliates, in the aggregate, beneficially own a substantial percentage of our outstanding common stock. These persons, acting together, are able to significantly influence all matters requiring stockholder approval, including the election and removal of directors, any merger, consolidation, sale of all or substantially all of our assets, or other significant corporate transaction. The interests of this group of stockholders may not coincide with our interests or the interests of other stockholders.

Because we do not anticipate paying any cash dividends on our common stock in the foreseeable future, capital appreciation, if any, will be your sole source of gains and you may never receive a return on your investment.

We have not declared or paid cash dividends on our common stock to date. We currently intend to retain our future earnings, if any, to fund the development and growth of our business. In addition, the terms of our Term Loan Agreement preclude, and the terms of any future debt agreements are likely to similarly preclude, us from paying dividends. As a result,

capital appreciation, if any, of our common stock will be your sole source of gain for the foreseeable future. Investors seeking cash dividends should not purchase our common stock.

General Risk Factors

Increased scrutiny and changing expectations from investors, customers, employees, and others regarding our environmental, social and governance practices and reporting could cause us to incur additional costs, devote additional resources and expose us to additional risks, which could adversely impact our reputation, customer acquisition and retention, access to capital and employee retention.

Companies across all industries are facing increasing scrutiny related to their environmental, social and governance, or ESG, practices and reporting. Investors, customers, employees and other stakeholders have focused increasingly on ESG practices and placed increasing importance on the implications and social cost of their investments, purchases and other interactions with companies. For example, many investment funds focus on positive ESG business practices and sustainability scores when making investments and may consider a company's ESG or sustainability scores as a reputational or other factor in making an investment decision. In addition, investors, particularly institutional investors, use these scores to benchmark companies against their peers and if a company is perceived as lagging, these investors may engage with such company to improve ESG disclosure or performance and may also make voting decisions on this basis. With this increased focus and demand, public reporting regarding ESG practices is becoming more broadly expected. If our ESG practices and reporting do not meet investor, customer, or employee expectations, which continue to evolve, our brand and reputation may be negatively impacted. Any disclosure we make may include our policies and practices on a variety of ESG matters, including corporate governance, environmental compliance, employee health and safety practices, human capital management, and workforce inclusion and diversity. It is possible that stakeholders may not be satisfied with our ESG reporting, our ESG practices or our speed of adoption. We could also incur additional costs and devote additional resources to monitor, report and implement various ESG practices. If we fail, or are perceived to be failing, to meet the standards included in any sustainability disclosure or the expectations of our various stakeholders, it could negatively impact our reputation, access to capital and employee retention.

If we fail to maintain proper and effective internal controls, our ability to produce accurate financial statements on a timely basis could be impaired.

We are subject to the reporting requirements of the Securities Exchange Act of 1934, the Sarbanes-Oxley Act and the rules and regulations of the Nasdaq Global Select Market. The Sarbanes-Oxley Act requires, among other things, that we maintain effective disclosure controls and procedures and internal control over financial reporting. We are required to perform system and process evaluation and testing of our internal control over financial reporting to allow management to report on the effectiveness of our internal control over financial reporting in our Form 10-K filing for that year, as required by Section 404 of the Sarbanes-Oxley Act. This may require us to incur substantial additional professional fees and internal costs to further expand our accounting and finance functions and expend significant management efforts.

We may in the future discover material weaknesses in our system of internal financial and accounting controls and procedures that could result in a material misstatement of our financial statements. In addition, our internal control over financial reporting will not prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to errors or fraud will not occur or that all control issues and instances of fraud will be detected.

If we are not able to comply with the requirements of Section 404 of the Sarbanes-Oxley Act in a timely manner, or if we are unable to maintain proper and effective internal controls, we may not be able to produce timely and accurate financial statements. If that were to happen, the market price of our stock could decline and we could be subject to sanctions or investigations by the stock exchange on which our common stock is listed, the Securities and Exchange Commission, or SEC, or other regulatory authorities.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Our headquarters are located in Lanham, Maryland, where we occupy approximately 309,000 square feet under a lease that expires in 2028. Our other material properties are 216,000 square feet of leased office space in Cape Town, South Africa, 166,000 square feet of leased office space in Denver, Colorado and 80,000 square feet of leased office space in Brooklyn, New York. All of our material properties are used to support both of our business segments.

We intend to adjust our facility occupancy commensurate with our business needs and believe that we will be able to do so on commercially reasonable terms.

Item 3. Legal Proceedings

As disclosed in Note 7 in the “Notes to Consolidated Financial Statements” included in Part II, Item 8 of this Annual Report on Form 10-K, the Company is involved in various claims and legal proceedings arising in the ordinary course of business and the disclosure in Note 7 relating to certain legal proceedings is incorporated herein by reference.

Item 4. Mine Safety Disclosures

None.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

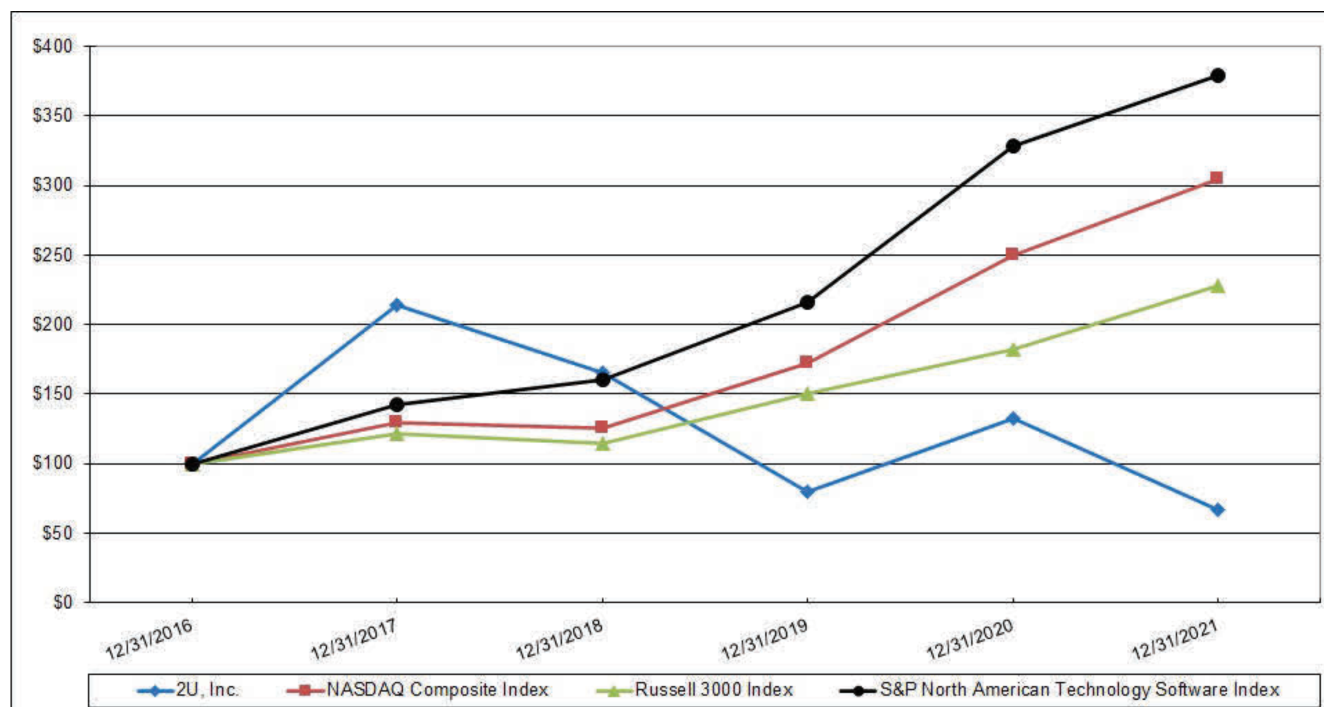
Our common stock has been listed on the Nasdaq Global Select Market since March 28, 2014, under the symbol "TWOU."

As of February 25, 2022, there were 46 stockholders of record of our common stock. The actual number of stockholders is greater than this number of record holders and includes stockholders who are beneficial owners but whose shares are held in street name by brokers and other nominees. This number of holders of record also does not include stockholders whose shares may be held in trust by other entities.

Stock Performance Graph

The graph set forth below compares the cumulative total stockholder return on our common stock with that of the Nasdaq Composite Index, the Russell 3000 Index and the S&P North American Technology Software Index for the five years ended December 31, 2021. The graph assumes that $100 was invested at the close of market on the last trading day of the fiscal year ended December 31, 2016 in the common stock of 2U, Inc., the Nasdaq Composite Index, the Russell 3000 Index and the S&P North American Technology Software Index. We have not paid any cash dividends and, therefore, the cumulative total return calculation on our common stock is based solely upon our stock price appreciation or depreciation and does not include any reinvestment of cash dividends. The data for the Nasdaq Composite Index, the Russell 3000 Index and the S&P North American Technology Software Index assumes reinvestments of gross dividends. The comparisons shown in the graph below are based upon historical data, and are not necessarily indicative of, nor intended to forecast, the potential future stock performance of our common stock.

Comparison of Cumulative Total Return
Through December 31, 2021
Assumes Initial Investment of $100



The information presented above in the stock performance graph shall not be deemed to be "soliciting material" or to be "filed" with the SEC or subject to Regulation 14A or 14C, except to the extent that we subsequently specifically request that such information be treated as soliciting material or specifically incorporate it by reference into a filing under the Securities Act of 1933, as amended, or a filing under the Securities Exchange Act of 1934, as amended.

Item 6. [Reserved]

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

You should read the following discussion and analysis of our financial condition and results of operations in conjunction with our consolidated financial statements and the related notes and other financial information included elsewhere in this Annual Report on Form 10-K. Some of the information contained in this discussion and analysis or set forth elsewhere in this report, including information with respect to our plans and strategy for our business, includes forward-looking statements that involve risks and uncertainties. You should review "Special Note Regarding Forward-Looking Statements" and Item 1A "Risk Factors" in this report for a discussion of important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

This section of this Form 10-K does not address certain items regarding the year ended December 31, 2019. For a discussion of our results of operations and liquidity and capital resources for the year ended December 31, 2019, including a year-over-year comparison between the years ended December 31, 2020 and 2019, refer to "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in Part II, Item 7 of our Annual Report on Form 10-K for the year ended December 31, 2020.

Overview

We are a leading online education platform company. Our mission is to expand access to high-quality educational opportunities that unlock human potential. In November 2021, we acquired substantially all of the assets of edX Inc. (the "edX Acquisition"), including the edX brand, website and marketplace. As a result of the edX Acquisition, we expanded our digital education offerings to include open courses and micro-credential offerings at the undergraduate and graduate levels and added an education consumer marketplace, edx.org, with over 42 million registered learners.

Following the completion of the edX Acquisition, we now serve more than 230 top-ranked global universities and other leading institutions, and offer more than 3,600 high-quality online learning opportunities, including open courses, executive education offerings, boot camps, micro-credentials, professional certificates as well as undergraduate and graduate degree programs.

With the edX Acquisition, we are now positioned as one of the world's most comprehensive free-to-degree online learning platforms. We believe our platform and robust consumer marketplace provide our clients with the digital infrastructure to launch world-class online education offerings and allow students to easily access high-quality, job-relevant education offerings without the barriers of cost or location.

We have two reportable segments: the Degree Program Segment and the Alternative Credential Segment.

In our Degree Program Segment, we provide the technology and services to nonprofit colleges and universities to enable the online delivery of degree programs. Students enrolled in these programs are generally seeking an undergraduate or graduate degree of the same quality they would receive on campus.

In our Alternative Credential Segment, we provide premium online open courses, executive education programs, technical, skills-based boot camps and micro-credential programs at the undergraduate and graduate levels through relationships with nonprofit colleges and universities and other leading institutions. Students enrolled in these offerings are generally seeking to reskill or upskill for career advancement or personal development through shorter duration, lower-priced offerings.

COVID-19 Update

The COVID-19 pandemic continues to have widespread impacts on society and the global economy. Our focus remains on ensuring the health and safety of our employees and clients, while ensuring the continuity of our business. We have adapted our business practices to allow our global workforce to continue to work from home on a voluntary basis. In addition, many of our in-person offerings and other campus-based experiences are offered in a virtual format, including the field placement components in certain of our clinical graduate programs. Our course production capabilities allow faculty to record studio-quality asynchronous content remotely.

We continue to closely monitor the impact of the COVID-19 pandemic on our business. The pandemic initially accelerated the need for online learning and training, but has also created new and different demand dynamics in the market. At the beginning of the pandemic, we experienced increased demand from new and existing university clients and students as universities moved classes online. We do not know if the university client and student demand levels we have experienced during the pandemic will continue. More recently, we have seen some of these pandemic-related trends subside in certain areas of our business. We have experienced fluctuations in our student retention rates and in our marketing costs. In particular, our marketing costs were lower earlier in the pandemic and began to increase in the second half of 2021. In addition, during the past year, competition for talent has increased, resulting in higher employee turnover and additional costs to attract and retain employees.

We cannot estimate the impact of COVID-19 on future demand or cost levels or on our business or economic conditions generally, due to numerous uncertainties, including uncertainties regarding the duration or reemergence of the outbreak in various regions, including the potential impact of variants of the virus, actions that may be taken by governmental authorities, future fluctuations in demand and cost levels and labor market conditions. For a discussion of additional risks related to COVID-19, see Part I, Item 1A. "Risk Factors."

Certain Trends and Uncertainties

The following represents a summary of certain trends and uncertainties, which could have a significant impact on our financial condition and results of operations. This summary is not intended to be a complete list of potential trends and uncertainties and should be considered along with the factors identified in the section titled "Risk Factors" of this Annual Report on Form 10-K and elsewhere in this report.

- The risk of a data security breach or service disruption has increased as the frequency, intensity and sophistication of attempted attacks and intrusions from around the world have increased. While we make significant efforts to maintain the security and integrity of our services and computer systems, our cybersecurity measures and the cybersecurity measures taken by our third-party software and service providers may be unable to anticipate, detect or prevent all attempts to compromise our systems. In particular, during the COVID-19 pandemic, the risk of cyber-attacks or other privacy or data security incidents may be heightened as a result of our employees and third-party service providers working remotely from networks that may be less secure.
- We and our university clients are subject to certain education laws and regulations that are frequently revised, repealed or expanded. Any administration may change certain DOE rules or policies in accordance with its policy priorities. The outcome of the process to re-authorize the HEA, any DOE rulemakings, or other law and policy changes may alter the regulatory landscape of the higher education industry, and thereby impact the manner in which we conduct business and serve our university clients.
- Following the onset of the COVID-19 pandemic, we experienced increased demand for our technology and services from university clients, increased demand for our offerings from students, and a decrease in our marketing costs. Although we believe that the COVID-19 pandemic accelerated the trend towards adoption of online education that was already in process prior to the pandemic, we have recently seen demand and marketing cost fluctuate. We do not know the impact that COVID-19 will have on future demand or cost levels.
- We believe the edX Acquisition will combine our industry-leading marketing capabilities with the edX marketplace will result in a scalable and sustainable marketing advantage and drive marketing cost efficiencies. We are in the early stages of the edX integration. If we are unable to successfully or timely integrate the operations of edX, or if we are unable to realize the anticipated benefits resulting from the edX Acquisition, our results of operations and financial condition could be materially and adversely affected.

Our Business Model and Components of Operating Results

The key elements of our business model and components of our operating results are described below.

Revenue Drivers

In our Degree Program Segment, we derive substantially all of our revenue from revenue-share arrangements with our university clients under which we receive a contractually specified percentage of the amounts students pay them to enroll in degree programs. In our Alternative Credential Segment, we derive substantially all of our revenue from tuition and fees from students taking our executive education programs and boot camps. Revenue in each segment is primarily driven by the number of student enrollments in our offerings.

Operating Expense

Marketing and Sales

Our most significant expense relates to marketing and sales activities to attract students to our offerings across both of our segments. This includes the cost of Search Engine Optimization, Search Engine Marketing and Social Media Optimization, as well as personnel and personnel-related expense for our marketing and recruiting teams.

In our Degree Program Segment, our marketing and sales expense in any period generates student enrollments eight months later, on average. We then generate revenue as students progress through their programs, which generally occurs over a two-year period following initial enrollment. Accordingly, our marketing and sales expense in any period is an investment to

generate revenue in future periods. Therefore, we do not believe it is meaningful to directly compare current period revenue to current period marketing and sales expense. Further, in this segment we believe that our marketing and sales expense in future periods will generally decline as a percentage of the revenue reported in those same periods as our revenue base from returning students in existing programs increases.

In our Alternative Credential Segment, our marketing and sales expense in any period generates student enrollments as much as 24 weeks later. We then generate revenue as students progress through their courses, which typically occurs over a two- to six-month period following initial enrollment.

Curriculum and Teaching

Curriculum and teaching expense consists primarily of amounts due to universities for licenses to use their brand names and other trademarks in connection with our executive education and boot camp offerings. The payments are based on contractually specified percentages of the tuition and fees we receive from students in those offerings. Curriculum and teaching expense also includes personnel and personnel-related expense for our executive education and boot camp instructional staff.

Servicing and Support

Servicing and support expense consists primarily of personnel and personnel-related expense associated with the management and operations of our educational offerings, as well as supporting students and faculty members. Servicing and support expense also includes expenses to support our platform, facilitate in-program field placements and student immersions, and assist with compliance requirements.

Technology and Content Development

Technology and content development expense consists primarily of personnel and personnel-related expense associated with the ongoing improvement and maintenance of our platform, as well as hosting and licensing expenses. Technology and content expense also includes the amortization of capitalized technology and content.

General and Administrative

General and administrative expense consists primarily of personnel and personnel-related expense for our centralized functions, including executive management, legal, finance, human resources, and other departments that do not provide direct operational services. General and administrative expense also includes professional fees and other corporate expenses.

Net Interest Income (Expense)

Net interest income (expense) consists primarily of interest expense from our long-term debt and interest income from our cash and cash equivalents. Interest expense also includes the amortization of debt issuance costs.

Loss on Debt Extinguishment

Loss on debt extinguishment consists of amounts recorded related to the retirement of our debt obligations.

Other Income (Expense), Net

Other income (expense), net consists primarily of foreign currency gains and losses, gains and losses related to the sale of investments and other non-operating income and expense.

Income Taxes

Our income tax provisions for all periods consist of U.S. federal, state and foreign income taxes. Our effective tax rate for the period is based on a mix of higher-taxed and lower-taxed jurisdictions.

Results of Operations

Consolidated Operating Results

Comparison of Years Ended December 31, 2021 and 2020

The following table presents selected consolidated statement of operations and comprehensive loss data for each of the periods indicated.

	Year Ended December 31,					
	2021		2020		Period-to-Period Change	
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Amount	Percentage
	(dollars in thousands)					
Revenue	$ 945,682	100.0 %	$ 774,533	100.0 %	$ 171,149	22.1 %
Costs and expenses						
Curriculum and teaching	130,817	13.8	107,968	13.9	22,849	21.2
Servicing and support	138,548	14.7	125,851	16.2	12,697	10.1
Technology and content development	179,061	18.9	155,949	20.1	23,112	14.8
Marketing and sales	456,096	48.2	390,174	50.4	65,922	16.9
General and administrative	208,598	22.1	173,526	22.4	35,072	20.2
Total costs and expenses	1,113,120	117.7	953,468	123.0	159,652	16.7
Loss from operations	(167,438)	(17.7)	(178,935)	(23.0)	11,497	6.4
Interest income	1,475	0.2	1,354	0.2	121	9.0
Interest expense	(51,222)	(5.4)	(27,317)	(3.5)	(23,905)	87.5
Loss on debt extinguishment	(1,101)	(0.1)	(11,671)	(1.5)	10,570	(90.6)
Other income (expense), net	22,324	2.4	(1,429)	(0.2)	23,753	*
Loss before income taxes	(195,962)	(20.6)	(217,998)	(28.0)	22,036	10.1
Income tax benefit	1,196	0.1	1,514	0.2	(318)	21.1
Net loss	$(194,766)	(20.5)%	$(216,484)	(27.8)%	$ 21,718	10.0 %

* Not meaningful for comparative purposes.

Revenue. Revenue for the year ended December 31, 2021 increased $171.1 million, or 22.1%, to $945.7 million as compared to $774.5 million in 2020. Revenue from our Degree Program Segment increased $105.6 million, or 21.7%, primarily due to growth in full course equivalent ("FCE") enrollments of 39,102, or 19.7% and a 1.7% increase in average revenue per FCE enrollment, from $2,456 to $2,497. Revenue from our Alternative Credential Segment increased $65.5 million, or 22.8%, primarily due to a 15.3% increase in average revenue per FCE enrollment, from $3,561 to $4,105, and growth in FCE enrollments of 5,251, or 6.5%.

Curriculum and Teaching. Curriculum and teaching expense increased $22.8 million, or 21.2%, to $130.8 million as compared to $108.0 million in 2020. This increase was primarily due to an increase of $17.4 million for amounts owed to university clients resulting from revenue growth of our offerings in our Alternative Credential Segment. In addition, expense for instructional staff increased $4.0 million to support to higher FCE enrollments.

Servicing and Support. Servicing and support expense increased $12.7 million, or 10.1%, to $138.5 million as compared to $125.9 million in 2020. This increase was primarily due to an $11.5 million increase in personnel and personnel-related expense and a $0.9 million increase in student support costs to serve a greater number of students.

Technology and Content Development. Technology and content development expense increased $23.1 million, or 14.8%, to $179.1 million as compared to $155.9 million in 2020. This increase was primarily due to a $9.7 million increase in depreciation and amortization expense, a $7.4 million increase in expenses to support our platform and software applications, and a $4.9 million increase in personnel and personnel-related expense.

Marketing and Sales. Marketing and sales expense increased $65.9 million, or 16.9%, to $456.1 million as compared to $390.2 million in 2020. This increase was primarily due to a $59.6 million increase in marketing expense and a $4.8 million increase in personnel and personnel-related expense to support our revenue growth.

General and Administrative. General and administrative expense increased $35.1 million, or 20.2%, to $208.6 million as compared to $173.5 million in 2020. This increase was primarily due to a $14.6 million increase in transaction and integration expense, a $12.5 million increase in personnel and personnel-related expense, a $4.1 million increase in professional fees, a $3.5 million increase in provision for credit losses, a $2.7 million increase in depreciation and amortization expense, a $1.7 million increase in restructuring-related expense, and a $1.7 million increase in banking fees. Stockholder activism and litigation-related expense decreased by $5.0 million, primarily due to $5.6 million in legal fees associated with stockholder activism incurred during the year ended December 31, 2020 which did not recur in 2021. This decrease was partially offset by a $0.6 million increase in litigation-related expense.

Net Interest Income (Expense). Net interest expense was $49.7 million and $26.0 million for the years ended December 31, 2021 and 2020, respectively. The net interest expense for the year ended December 31, 2021 was primarily due to interest incurred on our Notes and our $575 million aggregate principal amount of term loan facilities that were issued in June 2021 and amended in November 2021. The net interest expense for the year ended December 31, 2020 was primarily due to interest incurred on our Notes that were issued in April 2020 and our $250 million senior secured term loan facility that was extinguished in April 2020.

Loss on Debt Extinguishment. Loss on debt extinguishment was $1.1 million and $11.7 million for the years ended December 31, 2021 and 2020, respectively. The loss on debt extinguishment for the year ended December 31, 2021 was due to the write-off of deferred financing costs and fees paid in connection with the termination of our $50 million credit agreement in June 2021. The loss on debt extinguishment for the year ended December 31, 2020 was due to the write-off of deferred financing costs and fees paid in connection with the extinguishment of our $250 million senior secured term loan facility in April 2020.

Other Income (Expense), Net. Other income (expense), net was $22.3 million and $(1.4) million for the years ended December 31, 2021 and 2020, respectively. This increase was primarily due to the gain recognized in connection with the sale of our investment in an education technology company.

Income Tax Benefit. For the year ended December 31, 2021, we recognized an income tax benefit of $1.2 million, and our effective tax rate was approximately 0.6%. This income tax benefit was due to net operating losses and the reversal of taxable temporary differences of the acquired intangibles, as well as realization of deferred tax assets in our Alternative Credential Segment. There was also a tax expense recorded to establish a deferred tax liability related to the tax amortization of acquired edX indefinite lived intangibles. For the year ended December 31, 2020, we recognized an income tax benefit of $1.5 million, and our effective tax rate was approximately 0.7%. This tax benefit was due to net operating losses and the reversal of taxable temporary differences of the acquired intangibles in our Alternative Credential Segment. We expect to continue to recognize an income tax benefit for our Alternative Credential Segment to the extent that this segment continues to generate pre-tax losses while carrying a net deferred tax liability. To date, we have not been required to pay U.S. federal income taxes because of our current and accumulated net operating losses.

Business Segment Operating Results

We define segment profitability as net income or net loss, as applicable, before net interest income (expense), other income (expense), net, taxes, depreciation and amortization expense, deferred revenue fair value adjustments, transaction costs, integration costs, restructuring-related costs, stockholder activism costs, certain litigation-related costs, consisting of fees for certain non-ordinary course litigation and other proceedings, impairment charges, losses on debt extinguishment, and stock-based compensation expense. Some of these items may not be applicable in any given reporting period and they may vary from period to period. Total segment profitability is a non-GAAP measure when presented outside of the financial statement footnotes. Total segment profitability is a key measure used by our management and board of directors to understand and evaluate our operating performance and trends, to develop short- and long-term operational plans and to compare our performance against that of other peer companies using similar measures. In particular, the exclusion of certain expenses in calculating total segment profitability can provide a useful measure for period-to-period comparisons of our business. Accordingly, we believe that total segment profitability provides useful information to investors and others in understanding and evaluating our operating results in the same manner as our management and board of directors.

The following table presents a reconciliation of total segment profitability to net loss for each of the periods indicated.

	Year Ended December 31,	
	2021	2020
	(in thousands)	
Net loss	$ (194,766)	$ (216,484)
Adjustments:		
Stock-based compensation expense	97,766	82,042
Other (income) expense, net	(22,324)	1,429
Net interest expense	49,747	25,963
Income tax benefit	(1,196)	(1,514)
Depreciation and amortization expense	108,448	96,469
Loss on debt extinguishment	1,101	11,671
Other*	27,801	16,497
Total adjustments	261,343	232,557
Total segment profitability	$ 66,577	$ 16,073

* Includes (i) transaction and integration expense of $16.9 million and $2.3 million for the years ended December 31, 2021 and 2020, respectively, (ii) restructuring-related expense of $8.5 million and $6.8 million for the years ended December 31, 2021 and 2020, respectively, and (iii) stockholder activism and litigation-related expense of $2.4 million and $7.4 million for the years ended December 31, 2021 and 2020, respectively.

Years Ended December 31, 2021 and 2020

The following table presents revenue by segment and segment profitability for each of the periods indicated.

	Year Ended December 31,		Period-to-Period Change	
	2021	2020	Amount	Percentage
	(dollars in thousands)			
Revenue by segment*				
Degree Program Segment	$ 592,288	$ 486,676	$ 105,612	22 %
Alternative Credential Segment	353,394	287,857	65,537	23 %
Total revenue	$ 945,682	$ 774,533	$ 171,149	22 %
Segment profitability				
Degree Program Segment	$ 126,141	$ 49,607	$ 76,534	154 %
Alternative Credential Segment	(59,564)	(33,534)	(26,030)	(78)%
Total segment profitability	$ 66,577	$ 16,073	$ 50,504	314 %

* Immaterial amounts of intersegment revenue have been excluded from the above results for the years ended December 31, 2021 and 2020.

Degree Program Segment profitability increased $76.5 million, or 154%, to $126.1 million as compared to $49.6 million in 2020. This increase was primarily due to revenue growth of $105.6 million and operational efficiency initiatives.

Alternative Credential Segment profitability decreased $26.0 million, or 78%, to $(59.6) million as compared to $(33.5) million in 2020. This decrease was primarily due to an increase in marketing and sales expense and the contribution of $11.7 million in operating expense from edX.

Key Business and Financial Performance Metrics

We use a number of key metrics to evaluate our business, measure our performance, identify trends affecting our business, formulate financial projections and make strategic decisions. In addition to adjusted EBITDA (loss), which we discuss

below, and revenue and the components of loss from operations in the section above entitled "Our Business Model and Components of Operating Results," we utilize FCE enrollments as a key metric to evaluate the success of our business.

Full Course Equivalent Enrollments

We measure FCE enrollments for each of the courses offered during a particular period by taking the number of students enrolled in that course and multiplying it by the percentage of the course completed during that period. We add the FCE enrollments for each course within each segment to calculate the total FCE enrollments per segment. This metric allows us to consistently view period-over-period changes in enrollments by accounting for the fact that many courses we enable straddle multiple fiscal quarters. For example, if a course had 25 enrolled students and 40% of the course was completed during a particular period, we would count the course as having 10 FCE enrollments for that period. Any individual student may be enrolled in more than one course during a period.

Average revenue per FCE enrollment represents our weighted-average revenue per course across the mix of courses being offered during a period in each of our operating segments. This number is derived by dividing the total revenue for a period for each of our operating segments by the number of FCE enrollments within the applicable segment during that same period. This amount may vary from period to period depending on the academic calendars of our university clients, the relative growth rates of our degree programs, executive education programs, and boot camps, as applicable, and varying tuition levels, among other factors.

The following table presents the FCE enrollments and average revenue per FCE enrollment in our Degree Program Segment and Alternative Credential Segment for each of the periods indicated.

	Year Ended December 31,	
	2021	2020
Degree Program Segment		
FCE enrollments	237,245	198,143
Average revenue per FCE enrollment	$ 2,497	$ 2,456
Alternative Credential Segment		
FCE enrollments	86,084	80,833
Average revenue per FCE enrollment	$ 4,105	$ 3,561

Adjusted EBITDA (Loss)

We define adjusted EBITDA (loss) as net income or net loss, as applicable, before net interest income (expense), other income (expense), net, taxes, depreciation and amortization expense, deferred revenue fair value adjustments, transaction costs, integration costs, restructuring-related costs, stockholder activism costs, certain litigation-related costs, consisting of fees for certain non-ordinary course litigation and other proceedings, impairment charges, losses on debt extinguishment, and stock-based compensation expense. Some of these items may not be applicable in any given reporting period and they may vary from period to period.

In the second quarter of 2021, we revised our definition of adjusted EBITDA (loss) to exclude other income (expense), net in connection with the recognition of a gain on the sale of our interest in an education technology company. We believe this change is meaningful to investors because we did not have this activity in prior periods, and as a result, excluding the impact of such a gain in 2021 facilitates a period-to-period comparison of our business. Prior to this revision, our definition of adjusted EBITDA excluded foreign currency gains or losses, which comprised the entirety of our other income (expense), net for all prior periods. The revision to the definition of adjusted EBITDA (loss) had no impact on our reported adjusted EBITDA (loss) for the year ended December 31, 2020.

Adjusted EBITDA (loss) is a key measure used by our management and board of directors to understand and evaluate our operating performance and trends, to develop short- and long-term operational plans and to compare our performance against that of other peer companies using similar measures. In particular, the exclusion of certain expenses that are not reflective of our ongoing operating results in calculating adjusted EBITDA (loss) can provide a useful measure for period-to-period comparisons of our business. Accordingly, we believe that adjusted EBITDA (loss) provides useful information to investors and others in understanding and evaluating our operating results in the same manner as our management and board of directors.

Adjusted EBITDA (loss) is not a measure calculated in accordance with U.S. GAAP, and should not be considered as an alternative to any measure of financial performance calculated and presented in accordance with U.S. GAAP. Our use of

adjusted EBITDA (loss) has limitations as an analytical tool, and you should not consider it in isolation or as a substitute for analysis of our financial results as reported under U.S. GAAP. Some of the limitations are:

- although depreciation and amortization expense are non-cash charges, the assets being depreciated and amortized may have to be replaced in the future, and adjusted EBITDA (loss) does not reflect cash capital expenditure requirements for such replacements or for new capital expenditure requirements;
- adjusted EBITDA (loss) does not reflect (i) changes in, or cash requirements for, our working capital needs; (ii) the impact of changes in foreign currency exchange rates; (iii) acquisition related gains or losses such as, but not limited to, post-acquisition changes in the value of contingent consideration reflected in operations; (iv) transaction and integration costs; (v) restructuring-related costs; (vi) impairment charges; (vii) stockholder activism costs; (viii) certain litigation-related costs; (ix) losses on debt extinguishment; (x) the impact of deferred revenue fair value adjustments; (xi) interest or tax payments that may represent a reduction in cash; or (xii) the non-cash expense or the potentially dilutive impact of equity-based compensation, which has been, and we expect will continue to be, an important part of our compensation plan; and
- other companies, including companies in our industry, may calculate adjusted EBITDA (loss) differently, which reduces its usefulness as a comparative measure.

Because of these and other limitations, you should consider adjusted EBITDA (loss) alongside other U.S. GAAP-based financial performance measures, including various cash flow metrics, net income (loss) and our other U.S. GAAP results. The following table presents a reconciliation of adjusted EBITDA (loss) to net loss for each of the periods indicated.

	Year Ended December 31,	
	2021	2020
	(in thousands)	
Net loss	$ (194,766)	$ (216,484)
Adjustments:		
Stock-based compensation expense	97,766	82,042
Other (income) expense, net	(22,324)	1,429
Net interest expense	49,747	25,963
Income tax benefit	(1,196)	(1,514)
Depreciation and amortization expense	108,448	96,469
Loss on debt extinguishment	1,101	11,671
Other*	27,801	16,497
Total adjustments	261,343	232,557
Adjusted EBITDA	$ 66,577	$ 16,073

* Includes (i) transaction and integration expense of $16.9 million and $2.3 million for the years ended December 31, 2021 and 2020, respectively, (ii) restructuring-related expense of $8.5 million and $6.8 million for the years ended December 31, 2021 and 2020, respectively, and (iii) stockholder activism and litigation-related expense of $2.4 million and $7.4 million for the years ended December 31, 2021 and 2020, respectively.

Liquidity and Capital Resources

As of December 31, 2021, our principal sources of liquidity were cash and cash equivalents totaling $232.9 million, which were held for working capital and general corporate purposes.

In April 2020, we issued the Notes in an aggregate principal amount of $380 million, including the exercise by the initial purchasers of an option to purchase additional Notes, in a private placement to qualified institutional buyers under Rule 144A of the Securities Act. The Notes are governed by an indenture (the "Indenture") between the Company and Wilmington Trust, National Association, as trustee. The Notes bear interest at a rate of 2.25% per annum, payable semi-annually in arrears on May 1 and November 1 of each year, beginning on November 1, 2020. The Notes mature on May 1, 2025, unless repurchased, redeemed or converted in accordance with their terms prior to such date. Prior to November 1, 2024, the Notes are convertible only upon satisfaction of certain conditions, and thereafter at any time until the close of business on the second scheduled trading date immediately before the maturity date. In connection with the Notes, we entered into privately negotiated capped call transactions with a premium cost of approximately $50.5 million. The capped call transactions are generally expected to reduce the potential dilution to our common stock upon any conversion of the Notes and/or to offset any cash payments we are required to make in excess of the principal amount of the converted Notes, with such reduction and/or offset subject to the cap. The net proceeds from the issuance of the Notes were $319.0 million after deducting the initial purchasers' discount, offering expenses and the cost of the capped call transactions. As of December 31, 2021, the conditions allowing holders of the Notes to convert had not been met and we have the right under the Indenture to determine the method of settlement at the time of conversion, and the Notes, therefore, are classified as a non-current on the consolidated balance sheets. Refer to Note 9 in the "Notes to Consolidated Financial Statements" included in Part II, Item 8 of this Annual Report on Form 10-K for more information regarding our Notes.

On April 23, 2020, we repaid our $250 million senior secured term loan facility in full (including interest and prepayment premium) and terminated our credit agreement with Owl Rock Capital Corporation. In connection with the extinguishment of our $250 million senior secured term loan facility, we recognized a charge of approximately $11.7 million in the second quarter of 2020.

On June 25, 2020, we entered into a $50 million credit agreement with Morgan Stanley Senior Funding, Inc., as administrative agent and collateral agent, and certain other lenders party thereto that provided for $50 million in revolving loans. In connection with entering into the Term Loan Agreement (as defined below) in June 2021, we terminated our $50 million credit agreement with Morgan Stanley Senior Funding, Inc. Refer to Note 9 in the "Notes to Consolidated Financial Statements" included in Part II, Item 8 of this Annual Report on Form 10-K for more information.

On August 6, 2020, we sold 6,800,000 shares of our common stock to the public. We received net proceeds of $299.8 million, which we use for working capital and other general corporate purposes.

In June 2021, we entered into a Term Loan Credit and Guaranty Agreement, dated June 28, 2021 ("the Term Loan Agreement"), with Alter Domus (US) LLC as administrative agent and collateral agent, to make term loans to us in the aggregate principal amount of $475 million (the "Term Loan Facilities"), which have an initial maturity date of December 28, 2024. Loans under this facility bear interest at a per annum rate equal to a base rate or adjusted Eurodollar rate, as applicable, plus the applicable margin of 4.75% in the case of the base rate loans and 5.75% in the case of the Eurodollar loans. We used the proceeds of the Term Loan Facilities to fund a portion of the edX Acquisition and to pay related costs, fees and expenses. On November 4, 2021, we entered into a First Amendment to Term Loan Credit and Guaranty Agreement and a Joinder Agreement, which amended the Term Loan Agreement (collectively, the "Amended Term Loan Facility") primarily to provide for an incremental facility to us in an original principal amount of $100 million. The proceeds of the Amended Term Loan Facility may be used for general corporate purposes. Refer to Note 9 in the "Notes to Consolidated Financial Statements" included in Part II, Item 8 of this Annual Report on Form 10-K for more information regarding our Amended Term Loan Facility.

We have financed our operations primarily through payments from university clients and students for our technology and services, the Amended Term Loan Facility, the Notes, and public and private equity financings. We believe that our existing cash and cash equivalents, together with cash generated from operations and available borrowing capacity under the Amended Term Loan Facility, will be sufficient to meet our working capital and capital expenditure requirements for the next 12 months. We regularly evaluate our liquidity position, debt obligations, and anticipated cash needs, and may consider capital raising and other market opportunities that may be available to us.

Our operations require us to make capital expenditures for content development, capitalized technology, and property and equipment and to service our debt. During the years ended December 31, 2021 and 2020, our capital asset additions were $72.0 million and $72.6 million, respectively.

We or our affiliates may, at any time and from time to time, seek to retire or purchase our outstanding debt through cash purchases and/or exchanges for equity or debt, in open-market purchases, privately negotiated transactions or otherwise. Such repurchases or exchanges, if any, will be upon such terms and at such prices as we may determine, and will depend on prevailing market conditions, our liquidity requirements, contractual restrictions and other factors. The amounts involved may be material.

Cash Flows

The following table summarizes our cash flows for the periods indicated (in thousands).

	Year Ended December 31,	
	2021	2020
Net cash (used in) provided by operating activities	$ (18,074)	$ 29,604
Net cash used in investing activities	(793,434)	(69,325)
Net cash provided by financing activities	544,860	367,506
Effect of exchange rate changes on cash	(2,309)	1,212
Net (decrease) increase in cash, cash equivalents and restricted cash	$ (268,957)	$ 328,997

Operating Activities

Cash flows from operating activities have typically been generated from our net income (loss) and by changes in our operating assets and liabilities, adjusted for non-cash expense items such as depreciation and amortization expense and stock-based compensation expense.

Net cash used in operating activities increased $47.7 million from net cash provided by operating activities of $29.6 million in 2020 to net cash used in operating activities of $18.1 million in 2021. This increase was the result of a net increase in the use of cash of $80.9 million related to changes in net operating assets and liabilities, partially offset by a decrease of $21.7 million in net loss, and a net increase of $11.6 million in non-cash adjustments.

Net cash used from net changes in operating assets and liabilities increased $80.9 million from net cash provided of $18.4 million in 2020 to net cash used of $62.6 million. This net increase in cash used was primarily due to $42.4 million of net changes in accounts payable, accrued expenses and other liabilities, an increase of $19.7 million in accounts receivable and other receivables as a result of revenue growth, a lower increase in deferred revenue of $16.7 million on a comparative basis to prior year, and an increase of $2.2 million in cash used for prepaid expense and other assets.

Non-cash adjustments increased $11.6 million from $227.7 million in 2020 to $239.3 million in 2021. This net increase was due to an increase of $49.9 million in non-cash adjustments, primarily driven by higher stock-based compensation and depreciation and amortization expense. This increase was partially offset by a $27.8 million gain recognized during 2021, with no corresponding gain in 2020, in connection with the sale of our investment in an education technology company, and a net decrease of $10.6 million in loss on debt extinguishment driven by the 2020 settlement of our $250 million senior secured term loan facility.

Investing Activities

Our investing activities primarily consist of strategic acquisitions, divestitures and purchases of property and equipment to support the overall growth of our business. We expect our investing cash flows to be affected by the timing of payments we make for capital expenditures and the strategic acquisition or other growth opportunities we decide to pursue.

Net cash used in investing activities increased $724.1 million from $69.3 million in 2020 to $793.4 million in 2021. This net increase in cash used was primarily due to $761.1 million in use of cash for the 2021 business acquisition of edX and an increase of $3.3 million in cash outflows for property and equipment purchases. These cash uses were partially offset by $38.8 million in proceeds from the sale of investments, including $37.8 million from the sale of our investment in an education technology company completed in 2021.

Financing Activities

Our financing activities primarily consist of long-term debt borrowings, the repayment of principal on long-term debt, tax withholding payments associated with the settlement of restricted stock units and the exercise of stock options.

Net cash provided by financing activities increased $177.4 million from $367.5 million in 2020 to $544.9 million in 2021. This net increase in cash provided was primarily due to the increase of $192.2 million in net proceeds received from

long-term debt borrowings, net of payments related to the initial purchaser's discount, offering expenses, prepayment premium penalty, debt issuance costs, and the cost of the capped call transactions. Refer to Note 9 in the "Notes to Consolidated Financial Statements" included in Part II, Item 8 of this Annual Report on Form 10-K for more information regarding our debt. In addition, the net increase in cash provided includes an increase of $2.3 million in cash proceeds received from the exercise of stock options. Cash proceeds were partially offset by an increase of $14.0 million in tax withholding payments associated with the settlement of restricted stock units and an increase of $3.4 million in payments on our long-term debt.

Contractual Obligations and Commitments

The following table summarizes our obligations under the Notes, deferred government grant obligations, non-cancelable operating leases, commitments to certain of our university clients in exchange for contract extensions and various marketing and other rights, and purchase obligations as of December 31, 2021. Future events could cause actual payments to differ from these amounts.

	Payment due by period				
Contractual Obligations	Less than 1 year	1 - 3 years	3 - 5 years	More than 5 years	Total
			(in thousands)		
Term loan facilities*	$ 43,434	$ 640,541	$ —	$ —	$ 683,975
Convertible senior notes**	8,550	17,100	384,275	—	409,925
Deferred government grant obligations	—	—	—	3,500	3,500
Operating lease obligations	24,200	43,324	35,945	69,674	173,143
Future minimum payments to university clients	1,725	1,250	1,250	1,900	6,125
Purchase obligations***	9,426	12,365	—	—	21,791
Total	$ 87,335	$ 714,580	$ 421,470	$ 75,074	$ 1,298,459

* Amounts represent principal and interest.

** Amounts represent principal and fixed-rate interest cash payments over the life of the convertible senior notes, including anticipated interest payments that are not recorded on our consolidated balance sheets. Any future settlement of convertible senior notes would impact our cash payments.

*** Other purchase orders made in the ordinary course of business are excluded from the table above. Any amounts for which we are liable under purchase orders are reflected on our consolidated balance sheets as accounts payable and accrued liabilities.

Contingent Payments

We have entered into agreements with certain of our university clients in our Degree Program Segment that require us to make future minimum payments in the event that certain program metrics are not achieved on an annual basis. We recognize any estimated contingent payments under these agreements as contra revenue over the period to which they relate, and record a liability in other current liabilities on our consolidated balance sheets.

In the first quarter of 2019, we entered into an agreement to make investments in an education technology company of up to $15.0 million, upon demand by the investee. During the second quarter of 2021, we sold our investment in this education technology company and were released from any further obligation to make additional investments.

See Note 7 in the "Notes to Consolidated Financial Statements" included in Part II, Item 8 and "Legal Proceedings" contained in Part I, Item 3 of this Annual Report on Form 10-K for additional information regarding contingencies.

Critical Accounting Policies and Significant Judgments and Estimates

This management's discussion and analysis of financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with U.S. GAAP. The preparation of these consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the consolidated financial statements, and the reported amounts of revenue and expenses during the reported period. In accordance with U.S. GAAP, we base our estimates on historical experience and on various other assumptions we believe to be reasonable under the circumstances. Actual results may differ from these estimates if conditions differ from our assumptions.

While our significant accounting policies are more fully described in Note 2 in the "Notes to Consolidated Financial Statements" included in Part II, Item 8 of this Annual Report on Form 10-K, we believe the following accounting policies are critical to the process of making significant judgments and estimates in preparation of our consolidated financial statements.

Revenue Recognition, Receivables and Provision for Credit Losses

We generate substantially all of our revenue from contractual arrangements, with either our university clients or students, to provide a comprehensive platform of tightly integrated technology and technology-enabled services that support our offerings.

Performance Obligations

A performance obligation is a promise in a contract to transfer a distinct good or service to the customer. A contract's transaction price is allocated to each distinct performance obligation and recognized as revenue when, or as, the performance obligation is satisfied. The transaction price is determined based on the consideration to which we will be entitled in exchange for transferring services to the customer. To the extent the transaction price includes variable consideration, we estimate the amount of variable consideration that should be included in the transaction price utilizing the expected value method. Variable consideration is included in the transaction price if, in our judgment, it is probable that a significant future reversal of cumulative revenue under the contract will not occur. Any estimates, including the effect of the constraint on variable consideration, are evaluated at each reporting period, and if necessary, we adjust our estimate of the overall transaction price. Revenue is then recognized over the remaining estimated period of performance using the cumulative catch-up method.

Our Degree Program Segment derives revenue primarily from contractually specified percentages of the amounts our university clients receive from their students in 2U-enabled degree programs for tuition and fees, less credit card fees and other specified charges we have agreed to exclude in certain university contracts. Our contracts with university clients in this segment typically have terms of 10 to 15 years and have a single performance obligation, as the promises to provide a platform of tightly integrated technology and services that university clients need to attract, enroll, educate and support students are not distinct within the context of the contracts. The single performance obligation is delivered as the university clients receive and consume benefits, which occurs ratably over a series of academic terms. The amounts received from university clients over the term of the arrangement are variable in nature in that they are dependent upon the number of students that are enrolled in the program within each academic term. These amounts are allocated to and are recognized ratably over the related academic term, defined as the period beginning on the first day of classes through the last. Revenue is recognized net of an allowance, which is established for our expected obligation to refund tuition and fees to university clients.

Our Alternative Credential Segment derives revenue primarily from contracts with students for the tuition and fees paid to enroll in, and progress through, our executive education programs and boot camps. Our executive education programs run between two and 16 weeks, while our boot camps run between 12 and 24 weeks. In this segment, our contracts with students include the delivery of the educational and related student support services and are treated as either a single performance obligation or multiple performance obligations, depending upon the offering being delivered. All performance obligations are satisfied ratably over the same presentation period, which is defined as the period beginning on the first day of the course through the last. We recognize the proceeds received, net of any applicable pricing concessions, from the students enrolled and share contractually specified amounts received from students with the associated university client, in exchange for licenses to use the university brand name and other university trademarks. These amounts are recognized as curriculum and teaching expenses on our consolidated statements of operations and comprehensive loss. Our contracts with university clients in this segment are typically shorter and less restrictive than our contracts with university clients in our Degree Program Segment.

We do not disclose the value of unsatisfied performance obligations for our Degree Program Segment because the variable consideration is allocated entirely to a wholly unsatisfied promise to transfer a service that forms part of a single performance obligation. We do not disclose the value of unsatisfied performance obligations for our Alternative Credential Segment because the performance obligations are part of contracts that have original durations of less than one year.

Payments to University Clients

Pursuant to certain of our contracts in the Degree Program Segment, we have made, or are obligated to make, payments to university clients at either the execution of a contract or at the extension of a contract in exchange for various marketing and other rights. Generally, these amounts are capitalized as other assets on our consolidated balance sheets, and amortized as contra revenue over the life of the contract, commencing on the later of when payment is due or when contract revenue recognition begins.

Receivables, Contract Assets and Liabilities

Balance sheet items related to contracts consist of accounts receivable, net, other receivables, net and deferred revenue on our consolidated balance sheets. Accounts receivable, net includes trade accounts receivable, which are comprised of billed and unbilled revenue. Our trade accounts receivable balances have terms of less than one year. Accounts receivable, net is stated at amortized cost net of provision for credit losses. Our methodology to measure the provision for credit losses requires an estimation of loss rates based upon historical loss experience adjusted for factors that are relevant to determining the expected collectability of accounts receivable. Some of these factors include current market conditions, delinquency trends, aging behavior of receivables and credit and liquidity quality indicators for industry groups, customer classes or individual customers. Our estimates are reviewed and revised periodically based on the ongoing evaluation of credit quality indicators. Historically, actual write-offs for uncollectible accounts have not significantly differed from prior estimates.

We recognize unbilled revenue when revenue recognition occurs in advance of billings. Unbilled revenue is recognized in our Degree Program Segment because billings to university clients do not occur until after the academic term has commenced and final enrollment information is available. Our unbilled revenue represents contract assets.

Other receivables, net are comprised of amounts due under tuition payment plans with extended payment terms from students enrolled in certain of our alternative credential offerings. These plans, which are managed and serviced by third-party providers, are designed to assist students with covering tuition costs after all other student financial assistance and scholarships have been applied. The associated receivables generally have payment terms that exceed one year and are recorded net of any implied pricing concessions, which are determined based on our collections history, market data and any time value of money component. There are no fees or origination costs included in these receivables.

Deferred revenue represents the excess of amounts billed or received as compared to amounts recognized in revenue on our consolidated statements of operations and comprehensive loss as of the end of the reporting period, and such amounts are reflected as a current liability on our consolidated balance sheets. Our deferred revenue represents contract liabilities. We generally receive payments from Degree Program Segment university clients early in each academic term and from Alternative Credential Segment students, either in full upon registration for the course or in full before the end of the course based on a payment plan, prior to completion of the service period. These payments are recorded as deferred revenue until the services are delivered or until our obligations are otherwise met, at which time revenue is recognized.

Business Combinations

The purchase price of an acquisition is allocated to the assets acquired, including intangible assets, and liabilities assumed, based on their respective fair values at the acquisition date. The excess of the cost of an acquired entity, net of the amounts assigned to the assets acquired and liabilities assumed, is recognized as goodwill. The net assets and results of operations of an acquired entity are included on our consolidated financial statements from the acquisition date.

The purchase price allocation process requires management to make significant estimates and assumptions, especially with respect to intangible assets. Although we believe the assumptions and estimates we have made are reasonable, they are based in part on historical experience, market conditions, and information obtained from management of the acquired companies and are inherently uncertain. Examples of critical estimates in valuing certain of the intangible assets we have acquired or may acquire in the future include but are not limited to the cash flows that an asset is expected to generate in the future, the appropriate weighted-average cost of capital, and the cost savings expected to be derived from acquiring an asset. Unanticipated events and circumstances may occur, which may affect the accuracy or validity of such assumptions, estimates or actual results.

On November 16, 2021, we completed the edX Acquisition for a preliminary purchase price of $773 million. Refer to Note 3 in the “Notes to Consolidated Financial Statements” included in Part II, Item 8 of this Annual Report on Form 10-K for more information regarding this transaction.

Long-Lived Assets

Amortizable Intangible Assets

Acquired Definite-lived Intangible Assets. We capitalize purchased definite-lived intangible assets, such as software, websites and domains, and amortize them on a straight-line basis over their estimated useful life. Historically, we have assessed the useful lives of these acquired intangible assets to be between three and 10 years.

Capitalized Technology. Capitalized technology includes certain purchased software and technology licenses, direct third-party costs, and internal payroll and payroll-related costs used in the creation of our internal-use software. Software development projects generally include three stages: the preliminary project stage (all costs are expensed as incurred), the application development stage (certain costs are capitalized and certain costs are expensed as incurred) and the post-

implementation/operation stage (all costs are expensed as incurred). Costs capitalized in the application development stage include costs of designing the application, coding, integrating our and the university's networks and systems, and the testing of the software. Capitalization of costs requires judgment in determining when a project has reached the application development stage and the period over which we expect to benefit from the use of that software. Once the software is placed in service, these amounts are amortized using the straight-line method over the estimated useful life of the software, which is generally three to five years.

Capitalized Content Development. We develop content for each offering on a course-by-course basis in collaboration with university client faculty and industry experts. Depending upon the offering, we may use materials provided by university clients and their faculty, including curricula, case studies, presentations and other reading materials. We are responsible for the creation of materials suitable for delivery through our online learning platform, including all expenses associated with this effort. With respect to the Degree Program Segment, the development of content is part of our single performance obligation and is considered a contract fulfillment cost.

The content development costs that qualify for capitalization are third-party direct costs, such as videography, editing and other services associated with creating digital content. Additionally, we capitalize internal payroll and payroll-related expenses incurred to create and produce videos and other digital content utilized in the university clients' offerings for delivery via our online learning platform. Capitalization ends when content has been fully developed by both us and the university client, at which time amortization of the capitalized content development begins. The capitalized costs for each offering are recorded on a course-by-course basis and included in amortizable intangible assets, net on our consolidated balance sheets. These amounts are amortized using the straight-line method over the estimated useful life of the respective course, which is generally four to five years. The estimated useful life corresponds with the planned curriculum refresh rate. This refresh rate is consistent with expected curriculum refresh rates as cited by faculty members for similar on-campus offerings.

Evaluation of Long-Lived Assets

We review long-lived assets, which consist of property and equipment, capitalized technology, capitalized content development and acquired finite-lived intangible assets, for impairment whenever events or changes in circumstances indicate the carrying value of an asset may not be recoverable. In order to assess the recoverability of the capitalized technology and content development, the amounts are grouped by the lowest level of independent cash flows. Recoverability of a long-lived asset is measured by a comparison of the carrying value of an asset or asset group to the future undiscounted net cash flows expected to be generated by that asset or asset group. If such assets are not recoverable, the impairment to be recognized is measured by the amount by which the carrying value of an asset exceeds the estimated fair value (discounted cash flow) of the asset or asset group. Our impairment analysis is based upon cumulative results and forecasted performance.

Goodwill and Other Indefinite-lived Intangible Assets

We review goodwill and other indefinite-lived intangible assets for impairment annually, as of October 1, and more frequently if an event occurs or circumstances change that would more likely than not reduce the fair value of goodwill or an indefinite-lived asset below its carrying value.

Goodwill

We test our goodwill at the reporting unit level, which is an operating segment or one level below an operating segment. We initially assess qualitative factors to determine if it is necessary to perform a quantitative goodwill impairment review. We review goodwill for impairment using a quantitative approach if we decide to bypass the qualitative assessment or determine that it is more likely than not that the fair value of a reporting unit is less than its carrying value based on a qualitative assessment. Upon completion of a quantitative assessment, we may be required to recognize an impairment based on the difference between the carrying value and the fair value of the reporting unit.

We determine the fair value of a reporting unit by utilizing a weighted combination of the income-based and market-based approaches.

The income-based approach requires us to make significant assumptions and estimates. These assumptions and estimates primarily include, but are not limited to, the selection of appropriate peer group companies, discount rates, terminal growth rates, and forecasts of revenue, operating income, depreciation and amortization expense, capital expenditures and future working capital requirements. When determining these assumptions and preparing these estimates, we consider each reporting unit's historical results and current operating trends, revenue, profitability, cash flow results and forecasts, and industry trends. These estimates can be affected by a number of factors including, but not limited to, general economic and regulatory conditions, market capitalization, the continued efforts of competitors to gain market share and prospective student enrollment patterns.

In addition, the value of a reporting unit using the market-based approach is estimated by comparing the reporting unit to other publicly-traded companies and/or to publicly-disclosed business mergers and acquisitions in similar lines of business. The value of a reporting unit is based on pricing multiples of certain financial parameters observed in the comparable companies. We also make estimates and assumptions for market values to determine a reporting unit's estimated fair value.

Changes in these estimates and assumptions could materially affect the determination of fair value and the goodwill impairment test result. As of December 31, 2021 and 2020, the goodwill balance was $834.5 million and $415.8 million, respectively. See Note 5 to our Consolidated Financial Statements in Item 8 of Part II of this annual report for more information regarding goodwill.

Based on our quantitative assessment performed during 2019 and the qualitative assessments performed as of October 1 in 2020 and 2021, we believe that the estimated fair values of the reporting units exceeded their carrying values by no less than 10%. It is possible that future changes in our circumstances, including potential impacts from COVID-19, or in the variables associated with the judgments, assumptions and estimates used in assessing the fair value of our reporting units, could require us to record impairment charges in the future. Subsequent to year-end and through the date of this filing, we experienced a significant decline in our market capitalization, from $1.5 billion to $0.8 billion. Management is evaluating whether this decline represents a triggering event for assessing the goodwill and indefinite-lived intangible asset balances for impairment in the first quarter of 2022. As of December 31, 2021, the balances of our goodwill and indefinite-lived intangible asset were $834.5 million and $255.0 million, respectively.

Other Indefinite-lived Intangible Assets

Our indefinite-lived intangible asset was acquired in November 2021 and represents the established edX trade name. Given the timing of the edX Acquisition, we will review this asset for impairment as of October 1, 2022, or earlier if an event occurs or circumstances change that would more likely than not reduce the fair value of this asset below its carrying value.

Stock-Based Compensation

We provide stock-based compensation awards consisting of restricted stock units ("RSUs"), performance restricted stock units ("PRSUs") and stock options to employees, directors and consultants. We measure all stock-based compensation awards at fair value as of the grant date. The fair values of RSUs and PRSUs containing performance-based vesting conditions are based on the fair value of our stock on the date of grant. We use a Black-Scholes option pricing model to estimate the fair value of stock option grants and a Monte Carlo valuation model to estimate the fair value of PRSUs containing market-based vesting conditions . We also maintain the 2017 Employee Stock Purchase Plan (the "ESPP") and estimate the fair value of each purchase right thereunder as of the grant date using a Black-Scholes option pricing model.

The Black-Scholes and Monte Carlo valuation models require the input of subjective assumptions, including the risk-free interest rate, expected life, expected stock price volatility and dividend yield. For stock option grants, the risk-free interest rate assumption is based upon observed interest rates for constant maturity U.S. Treasury securities consistent with the expected term of our employee stock options. The expected life represents the period of time the stock options are expected to be outstanding and is based on the "simplified method." Under the "simplified method," the expected life of an option is presumed to be the mid-point between the vesting date and the end of the contractual term. We use the "simplified method" due to the lack of sufficient historical exercise data to provide a reasonable basis upon which to otherwise estimate the expected life of the stock options. Expected volatility is based on the historical volatility of our common stock over the estimated expected life of the stock options. We assume no dividend yield because dividends are not expected to be paid in the near future, which is consistent with our history of not declaring or paying dividends to date.

For PRSUs subject to market-based vesting conditions, the risk-free interest rate assumption is based upon observed interest rates for constant maturity U.S. Treasury securities consistent with the expected life of the awards. The expected life is consistent with the performance measurement period of the awards. Expected volatility is based on the historical volatility of our common stock over the estimated expected life. We assume no dividend yield because dividends are not expected to be paid in the near future, which is consistent with our history of not declaring or paying dividends to date. The valuations determined by the Monte Carlo simulation utilize 50,000 future stock prices for us and our peer group. We have chosen this amount for the simulation as to minimize the standard modeling error and believe that the resulting distribution gives a reasonable estimate of the grant date fair value.

For awards subject only to service-based vesting conditions, we recognize stock-based compensation expense on a straight-line basis over the awards' requisite service period. For awards subject to both service and performance-based vesting conditions, we recognize stock-based compensation expense using an accelerated recognition method when it is probable that the performance condition will be achieved. For awards subject to both service and market-based vesting conditions, we recognize stock-based compensation expense using an accelerated recognition method over the requisite service period beginning with the date of the grant and ending upon completion of the service period, with stock-based compensation expense being recognized irrespective of the achievement of the market condition. For shares subject to the ESPP, we use the straight-line method to record stock-based compensation expense over the respective offering period.

Refer to Note 12 in the "Notes to Consolidated Financial Statements" included in Part II, Item 8 of this Annual Report on Form 10-K for more information regarding our stock-based compensation awards.

Recent Accounting Pronouncements

Refer to Note 2 in the "Notes to Consolidated Financial Statements" included in Part II, Item 8 of this Annual Report on Form 10-K for a discussion of the FASB's recent accounting pronouncements and their effect on us.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Market risk is the risk of loss to future earnings, values or future cash flows that may result from changes in the price of a financial instrument. The value of a financial instrument may change as a result of changes in interest rates, exchange rates, commodity prices, equity prices and other market changes. Our exposure to market risk related to changes in foreign currency exchange rates is deemed moderate as further described below. In addition, we do not use derivative financial instruments for speculative, hedging or trading purposes, although in the future we may enter into exchange rate hedging arrangements to manage the risks described in the succeeding paragraphs.

Interest Rate Risk

We are subject to interest rate risk through our borrowings under our Amended Term Loan Facility. Loans under this facility bear interest at a per annum rate equal to a base rate or adjusted Eurodollar rate, as applicable, plus the applicable margin of 4.75% in the case of the base rate loans and 5.75% in the case of the Eurodollar loans. As of December 31, 2021, borrowings under our Amended Term Loan Facility were $572.4 million. A hypothetical change in interest rates by 100 basis points would not have a material impact on our financial position.

Foreign Currency Exchange Risk

We transact material business in foreign currencies and are exposed to risks resulting from fluctuations in foreign currency exchange rates. Our primary exposures are related to non-U.S. dollar denominated revenue and operating expenses in South Africa and the United Kingdom. Accounts relating to foreign operations are translated into U.S. dollars using prevailing exchange rates at the relevant period end. As a result, we would experience increased revenue and operating expenses in our non-U.S. operations if there were a decline in the value of the U.S. dollar relative to these foreign currencies. Conversely, we would experience decreased revenue and operating expenses in our non-U.S. operations if there were an increase in the value of the U.S. dollar relative to these foreign currencies. Translation adjustments are included as a separate component of stockholders' equity.

For the years ended December 31, 2021 and 2020, our foreign currency translation adjustment was a loss of $6.1 million and a loss of $3.0 million, respectively. For the years ended December 31, 2021 and 2020, we recognized foreign currency exchange losses of $2.5 million and $1.4 million, respectively, included on our consolidated statements of operations and comprehensive loss.

The foreign exchange rate volatility of the trailing 12 months ended December 31, 2021 was 11% and 5% for the South African rand and British pound, respectively. The foreign exchange rate volatility of the trailing 12 months ended December 31, 2020 was 13% and 9% for the South African rand and British pound, respectively. A 10% fluctuation of foreign currency exchange rates would have had an immaterial effect on our results of operations and cash flows for all periods presented. The fluctuations of currencies in which we conduct business can both increase and decrease our overall revenue and expenses for any given fiscal period. Such volatility, even when it increases our revenue or decreases our expense, impacts our ability to accurately predict our future results and earnings.

Item 8. Financial Statements and Supplementary Data

2U, Inc.
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Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors
2U, Inc.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of 2U, Inc. and subsidiaries (the Company) as of December 31, 2021 and 2020, the related consolidated statements of operations and comprehensive loss, changes in stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2021, and the related notes and financial statement Schedule II—Valuation and Qualifying Accounts (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2021, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated March 1, 2022 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Determination of implied pricing concessions

As discussed in Note14 to the consolidated financial statements, the Company's Alternative Credential Segment recorded revenue of $353 million for the year ended December 31, 2021. As discussed in Note 2 to the consolidated financial statements, the transaction price in certain contracts with customers of the Alternative Credential Segment includes variable consideration, subject to a constraint, in the form of implied pricing concessions. The Company initially estimates the value of implied pricing concessions, including the effect of the constraint on variable consideration, at contract inception and updates the estimate in each reporting period based on the Company's own collection history data and market data.

We identified the assessment of the estimated implied pricing concessions as a critical audit matter. Significant auditor judgment was involved in evaluating the reliability of market data and the weighting applied to the Company's own collection history data and the market data used in estimating the overall rate of implied pricing concessions.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls related to the Company's process to estimate the overall rate of

implied pricing concessions, including controls related to the reliability of the market data and determination of the weighting applied to the Company's own collection history data and market data used in the estimate. We evaluated the reliability of the market data by considering the source and nature of the data. We evaluated the reasonableness of the weighting applied to the Company's own collection history data and market data by performing sensitivity analyses over those inputs and by comparing the Company's overall rate of implied pricing concessions to data published by certain agencies of the federal government.

Evaluation of acquisition-date fair value of acquired intangible assets

As discussed in Note 3 to the consolidated financial statements, on November 16, 2021, the Company acquired substantially all of the assets of edX, Inc. (edX) in a business combination. As a result of the transaction, the Company acquired trade names and university client relationships as intangible assets with acquisition-date fair value of $255 million and $104 million, respectively.

We identified the evaluation of the initial measurement of the trade names and university client relationships intangible assets acquired in the edX transaction as a critical audit matter. The estimated acquisition-date fair values of these intangible assets were sensitive to changes in significant assumptions used to measure their fair values. Specifically, there was a high degree of subjective auditor judgment involved in evaluating:

- the forecasted revenue growth, forecasted margins on earnings before interest, taxes, depreciation and amortization (EBITDA margins), and the discount rate used to value the trade names
- the forecasted revenue used to value the university client relationships.

The primary procedures we performed to address this critical audit matter included the following. We tested certain internal controls over the Company's acquisition-date valuation process to develop the significant assumptions discussed above. We evaluated the forecasted revenue growth and EBITDA margins used to value the trade names by comparing them to those of the Company's peers and edX's historical results. We evaluated the forecasted revenue used to value the university client relationships by comparing it to edX's historical results. In addition, we involved valuation professionals with specialized skills and knowledge, who assisted in:

- evaluating the Company's discount rate used to value the trade names by comparing it against a discount rate that was independently developed using publicly available third-party market data for comparable entities
- developing an estimate of the fair value of the trade names using the Company's forecasted cash flows and our independently developed discount rate and comparing the result to the Company's fair value estimate.

/s/ KPMG LLP

We have served as the Company's auditor since 2013.

McLean, Virginia
March 1, 2022

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors
2U, Inc.:

Opinion on Internal Control Over Financial Reporting

We have audited 2U, Inc. and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2021 and 2020, the related consolidated statements of operations and comprehensive loss, changes in stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2021, and the related notes and financial statement Schedule II—Valuation and Qualifying Accounts (collectively, the consolidated financial statements), and our report dated March 1, 2022 expressed an unqualified opinion on those consolidated financial statements.

The Company completed the edX Acquisition during 2021, and management excluded from its assessment of the effectiveness of the Company's internal control over financial reporting as of December 31, 2021, edX's internal control over financial reporting associated with 1% of total assets and 1% of total revenue included in the consolidated financial statements of the Company as of and for the year ended December 31, 2021. Our audit of internal control over financial reporting of the Company also excluded an evaluation of the internal control over financial reporting of edX, Inc.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Annual Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ KPMG LLP

McLean, Virginia
March 1, 2022

2U, Inc.
Consolidated Balance Sheets
(in thousands, except share and per share amounts)

	December 31, 2021	December 31, 2020
Assets		
Current assets		
Cash and cash equivalents	$ 232,932	$ 500,629
Restricted cash	16,977	18,237
Accounts receivable, net	67,287	46,663
Other receivables, net	29,439	1,076
Prepaid expenses and other assets	47,217	38,277
Total current assets	393,852	604,882
Other receivables, net, non-current	21,568	24,332
Property and equipment, net	48,650	52,734
Right-of-use assets	76,841	60,785
Goodwill	834,539	415,830
Intangible assets, net	665,523	312,770
Other assets, non-current	68,033	72,931
Total assets	$ 2,109,006	$ 1,544,264
Liabilities and stockholders' equity		
Current liabilities		
Accounts payable and accrued expenses	$ 166,458	$ 130,674
Deferred revenue	91,926	75,493
Lease liability	13,985	10,024
Other current liabilities	61,138	21,178
Total current liabilities	333,507	237,369
Long-term debt	845,316	273,173
Deferred tax liabilities, net	1,726	2,810
Lease liability, non-current	98,666	83,228
Other liabilities, non-current	636	6,694
Total liabilities	1,279,851	603,274
Commitments and contingencies (Note 7)		
Stockholders' equity		
Preferred stock, $0.001 par value, 5,000,000 shares authorized, none issued	—	—
Common stock, $0.001 par value, 200,000,000 shares authorized, 75,754,663 shares issued and outstanding as of December 31, 2021; 72,451,521 shares issued and outstanding as of December 31, 2020	76	72
Additional paid-in capital	1,735,628	1,646,574
Accumulated deficit	(890,638)	(695,872)
Accumulated other comprehensive loss	(15,911)	(9,784)
Total stockholders' equity	829,155	940,990
Total liabilities and stockholders' equity	$ 2,109,006	$ 1,544,264

See accompanying notes to consolidated financial statements.

2U, Inc.
Consolidated Statements of Operations and Comprehensive Loss
(in thousands, except share and per share amounts)

	Year Ended December 31,		
	2021	2020	2019
Revenue	$ 945,682	$ 774,533	$ 574,671
Costs and expenses			
Curriculum and teaching	130,817	107,968	63,270
Servicing and support	138,548	125,851	98,890
Technology and content development	179,061	155,949	115,473
Marketing and sales	456,096	390,174	342,395
General and administrative	208,598	173,526	131,020
Impairment charge	—	—	70,379
Total costs and expenses	1,113,120	953,468	821,427
Loss from operations	(167,438)	(178,935)	(246,756)
Interest income	1,475	1,354	5,800
Interest expense	(51,222)	(27,317)	(13,419)
Loss on debt extinguishment	(1,101)	(11,671)	—
Other income (expense), net	22,324	(1,429)	(707)
Loss before income taxes	(195,962)	(217,998)	(255,082)
Income tax benefit	1,196	1,514	19,860
Net loss	$ (194,766)	$ (216,484)	$ (235,222)
Net loss per share, basic and diluted	$ (2.61)	$ (3.22)	$ (3.83)
Weighted-average shares of common stock outstanding, basic and diluted	74,580,115	67,142,976	61,393,666
Other comprehensive income (loss)			
Foreign currency translation adjustments, net of tax of $0 for all periods presented	(6,127)	(2,980)	1,710
Comprehensive loss	$ (200,893)	$ (219,464)	$ (233,512)

See accompanying notes to consolidated financial statements.

2U, Inc.
Consolidated Statements of Changes in Stockholders' Equity
(in thousands, except share amounts)

	Common Stock		Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total Stockholders' Equity
	Shares	Amount				
Balance, December 31, 2018	57,968,493	$ 58	$ 957,631	$ (244,166)	$ (8,514)	$ 705,009
Issuance of common stock in connection with business combination, net of offering costs	4,608,101	5	184,317	—	—	184,322
Issuance of common stock in connection with settlement of restricted stock units, net of withholdings	502,795	—	(2,574)	—	—	(2,574)
Exercise of stock options	361,134	—	3,119	—	—	3,119
Issuance of common stock in connection with employee stock purchase plan	123,365	—	3,382	—	—	3,382
Issuance of common stock award	5,221	—	—	—	—	—
Stock-based compensation expense	—	—	51,504	—	—	51,504
Net loss	—	—	—	(235,222)	—	(235,222)
Foreign currency translation adjustment	—	—	—	—	1,710	1,710
Balance, December 31, 2019	63,569,109	63	1,197,379	(479,388)	(6,804)	711,250
Issuance of common stock in connection with a public offering of common stock, net of offering costs	6,800,000	7	299,789	—	—	299,796
Equity component of convertible senior notes, net of issuance costs	—	—	114,551	—	—	114,551
Purchases of capped calls in connection with convertible senior notes	—	—	(50,540)	—	—	(50,540)
Issuance of common stock in connection with settlement of restricted stock units, net of withholdings	1,582,362	2	(4,784)	—	—	(4,782)
Exercise of stock options	353,480	—	4,177	—	—	4,177
Issuance of common stock in connection with employee stock purchase plan	146,570	—	3,960	—	—	3,960
Stock-based compensation expense	—	—	82,042	—	—	82,042
Net loss	—	—	—	(216,484)	—	(216,484)
Foreign currency translation adjustment	—	—	—	—	(2,980)	(2,980)
Balance, December 31, 2020	72,451,521	72	1,646,574	(695,872)	(9,784)	940,990
Issuance of common stock in connection with settlement of restricted stock units, net of withholdings	2,839,887	4	(18,784)	—	—	(18,780)
Exercise of stock options, net	312,570	—	6,489	—	—	6,489
Issuance of common stock in connection with employee stock purchase plan	150,685	—	3,583	—	—	3,583
Stock-based compensation expense	—	—	97,766	—	—	97,766
Net loss	—	—	—	(194,766)	—	(194,766)
Foreign currency translation adjustment	—	—	—	—	(6,127)	(6,127)
Balance, December 31, 2021	75,754,663	$ 76	$ 1,735,628	$ (890,638)	$ (15,911)	$ 829,155

See accompanying notes to consolidated financial statements.

2U, Inc.
Consolidated Statements of Cash Flows
(in thousands)

	Year Ended December 31,		
	2021	2020	2019
Cash flows from operating activities			
Net loss	$ (194,766)	$ (216,484)	$ (235,222)
Adjustments to reconcile net loss to net cash (used in) provided by operating activities:			
Non-cash interest expense	25,403	16,267	1,153
Depreciation and amortization expense	108,448	96,469	69,843
Stock-based compensation expense	97,766	82,042	51,504
Non-cash lease expense	18,933	15,153	11,725
Loss on sublease	4,845	—	—
Provision for credit losses	8,036	4,642	1,425
Impairment charge	—	—	70,379
Loss on debt extinguishment	1,101	11,671	—
Gain on sale of investment	(27,762)	—	—
Other	2,515	1,443	1,982
Changes in operating assets and liabilities, net of assets and liabilities acquired:			
Accounts receivable, net	(31,756)	(17,877)	11,949
Other receivables	(27,001)	(21,148)	(1,354)
Prepaid expenses and other assets	(7,467)	(5,230)	(27,166)
Accounts payable and accrued expenses	21,212	41,959	11,542
Deferred revenue	9,388	26,061	10,014
Other liabilities, net	(26,969)	(5,364)	(29,748)
Net cash (used in) provided by operating activities	(18,074)	29,604	(51,974)
Cash flows from investing activities			
Purchase of a business, net of cash acquired	(761,118)	(949)	(388,004)
Additions of amortizable intangible assets	(60,546)	(62,784)	(64,923)
Purchases of property and equipment	(9,788)	(6,517)	(13,421)
Purchase of investments	(1,000)	—	(10,000)
Proceeds from investments	38,818	—	25,000
Advances made to university clients	—	—	(400)
Advances repaid by university clients	200	925	350
Net cash used in investing activities	(793,434)	(69,325)	(451,398)
Cash flows from financing activities			
Proceeds from issuance of common stock, net of offering costs	—	299,796	—
Proceeds from debt	569,477	371,681	244,724
Payments on debt	(4,334)	(837)	—
Extinguishment of long-term facility	—	(250,000)	—
Purchases of capped calls in connection with issuance of convertible senior notes	—	(50,540)	—
Prepayment premium on extinguishment of senior secured term loan facility	—	(2,528)	—
Payment of debt issuance costs	(11,575)	(3,419)	(1,953)
Tax withholding payments associated with settlement of restricted stock units	(18,780)	(4,784)	(2,574)
Proceeds from exercise of stock options	6,489	4,177	3,119
Proceeds from employee stock purchase plan share purchases	3,583	3,960	3,382
Payments for acquisition of intangible assets	—	—	(2,180)
Net cash provided by financing activities	544,860	367,506	244,518
Effect of exchange rate changes on cash	(2,309)	1,212	(1,049)
Net (decrease) increase in cash, cash equivalents and restricted cash	(268,957)	328,997	(259,903)
Cash, cash equivalents and restricted cash, beginning of period	518,866	189,869	449,772
Cash, cash equivalents and restricted cash, end of period	$ 249,909	$ 518,866	$ 189,869

See accompanying notes to consolidated financial statements.

1. Organization

2U, Inc. (together with its subsidiaries, the "Company") is an online education platform company. The Company's mission is to expand access to high-quality educational opportunities that unlock human potential.

On November 16, 2021, pursuant to the Membership Interest Purchase Agreement, dated June 28, 2021 (the "Purchase Agreement"), by and among the Company, edX Inc., a Massachusetts nonprofit corporation ("edX Inc.") and edX LLC (f/k/a Circuit Sub LLC), a Delaware limited liability company and a wholly owned subsidiary of edX Inc. ("edX"), edX Inc. contributed substantially all of its assets to edX and the Company acquired 100% of the outstanding membership interests of edX (the "edX Acquisition") including the edX brand, website, and marketplace.

As a result of the edX Acquisition, the Company expanded its digital education offerings to include open courses and micro-credential offerings at the undergraduate and graduate levels and added an education consumer marketplace, edx.org, with over 42 million registered learners. Substantially all of the results of edX's operations are included in the Alternative Credential Segment.

Following the completion of the edX Acquisition, the Company now serves more than 230 top-ranked global universities and other leading institutions, and offers more than 3,600 high-quality online learning opportunities, including open courses, executive education offerings, boot camps, micro-credentials, professional certificates as well as undergraduate and graduate degree programs. The Company expects edX to be the primary brand for its products and services and that edx.org will operate as its global online learning marketplace. Refer to Note 3 for further information about the edX Acquisition.

With the edX Acquisition, the Company is now positioned as one of the world's most comprehensive free-to-degree online learning platforms. The Company believes its platform and robust consumer marketplace provide clients with the digital infrastructure to launch world-class online education offerings and allow students to easily access high-quality, job-relevant education offerings without the barriers of cost or location.

The Company has two reportable segments: the Degree Program Segment and the Alternative Credential Segment.

The Company's Degree Program Segment provides the technology and services to nonprofit colleges and universities to enable the online delivery of degree programs. Students enrolled in these programs are generally seeking an undergraduate or graduate degree of the same quality they would receive on campus. In the first quarter of 2021, the Company changed the name of this segment from Graduate Program Segment to Degree Program Segment because this segment now includes undergraduate degree programs.

The Company's Alternative Credential Segment provides online executive education programs and technical, skills-based boot camps through relationships with nonprofit colleges and universities. Students enrolled in these offerings are generally seeking to reskill or upskill through shorter duration, lower-priced offerings that are relevant to the needs of industry and society. Following the edX Acquisition, we changed the name of our "short courses" in our Alternative Credential Segment to "executive education" to more clearly align with industry terminology.

2. Significant Accounting Policies

Basis of Presentation and Principles of Consolidation

The accompanying consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries and have been prepared in accordance with United States generally accepted accounting principles ("U.S. GAAP") and include the assets, liabilities, results of operations and cash flows of the Company. All significant intercompany accounts and transactions have been eliminated in consolidation.

Reclassifications

The Company has reclassified prior period amounts in the consolidated balance sheets and consolidated statements of cash flows to conform to the current period's presentation of other receivables. Within the Company's consolidated balance sheet as of December 31, 2020, the Company reclassified $1.1 million from prepaid expenses and other assets to other receivables, net and $24.3 million from other assets, non-current to other receivables, net, non-current. Within the Company's consolidated statements of cash flows for the years ended December 31, 2020 and 2019, the Company reclassified $21.1

2. Significant Accounting Policies (Continued)

million and $1.4 million, respectively, from changes in prepaid expenses and other assets to changes in other receivables. This reclassification had no impact on the previously reported operating cash flows.

The Company has reclassified certain other prior period amounts in the consolidation statements of cash flows to conform to current period presentation. These reclassifications had no impact on previously reported operating, financing, or financing cash flows.

Use of Estimates

The preparation of consolidated financial statements in accordance with U.S. GAAP requires management to make certain estimates and assumptions that affect the amounts reported herein. The Company bases its estimates and assumptions on historical experience and on various other factors that it believes to be reasonable under the circumstances. Significant items subject to such estimates include, but are not limited to, the measurement of provisions for credit losses, implied price concessions, acquired intangible assets, the recoverability of goodwill and indefinite-lived intangible assets, deferred tax assets, and the fair value of the convertible senior notes. Due to the inherent uncertainty involved in making estimates, particularly in light of the COVID-19 pandemic, actual results reported in future periods may be affected by changes in those estimates. The Company evaluates its estimates and assumptions on an ongoing basis.

Revenue Recognition, Receivables and Provision for Credit Losses

The Company generates substantially all of its revenue from contractual arrangements, with either its university clients or students, to provide a comprehensive platform of tightly integrated technology and technology-enabled services that support its offerings.

Performance Obligations

A performance obligation is a promise in a contract to transfer a distinct good or service to the customer. A contract's transaction price is allocated to each distinct performance obligation and recognized as revenue when, or as, the performance obligation is satisfied. The transaction price is determined based on the consideration to which the Company will be entitled in exchange for transferring services to the customer. To the extent the transaction price includes variable consideration, the Company estimates the amount of variable consideration that should be included in the transaction price utilizing the expected value method. Variable consideration is included in the transaction price if, in the Company's judgment, it is probable that a significant future reversal of cumulative revenue under the contract will not occur. Any estimates, including the effect of the constraint on variable consideration, are evaluated at each reporting period, and if necessary, the Company adjusts its estimate of the overall transaction price. Revenue is then recognized over the remaining estimated period of performance using the cumulative catch-up method.

The Degree Program Segment derives revenue primarily from contractually specified percentages of the amounts the Company's university clients receive from their students in 2U-enabled degree programs for tuition and fees, less credit card fees and other specified charges the Company has agreed to exclude in certain university contracts. The Company's contracts with university clients in this segment typically have terms of 10 to 15 years and have a single performance obligation, as the promises to provide a platform of tightly integrated technology and services that university clients need to attract, enroll, educate and support students are not distinct within the context of the contracts. The single performance obligation is delivered as the university clients receive and consume benefits, which occurs ratably over a series of academic terms. The amounts received from university clients over the term of the arrangement are variable in nature in that they are dependent upon the number of students that are enrolled in the program within each academic term. These amounts are allocated to and are recognized ratably over the related academic term, defined as the period beginning on the first day of classes through the last. Revenue is recognized net of an allowance, which is established for the Company's expected obligation to refund tuition and fees to university clients.

The Alternative Credential Segment derives revenue primarily from contracts with students for the tuition and fees paid to enroll in, and progress through, the Company's executive education programs and boot camps. The Company's executive education programs run between two and 16 weeks, while boot camps run between 12 and 24 weeks. In this segment, the Company's contracts with students include the delivery of the educational and related student support services and are treated as either a single performance obligation or multiple performance obligations, depending upon the offering being delivered. All performance obligations are satisfied ratably over the same presentation period, which is defined as the period beginning on the first day of the course through the last. The Company recognizes the proceeds received, net of any applicable pricing concessions, from the students enrolled and shares contractually specified amounts received from students with the

2. Significant Accounting Policies (Continued)

associated university client, in exchange for licenses to use the university brand name and other university trademarks. These amounts are recognized as curriculum and teaching expenses on the Company's consolidated statements of operations and comprehensive loss. The Company's contracts with university clients in this segment are typically shorter and less restrictive than the Company's contracts with university clients in the Degree Program Segment.

The Company does not disclose the value of unsatisfied performance obligations for the Degree Program Segment because the variable consideration is allocated entirely to a wholly unsatisfied promise to transfer a service that forms part of a single performance obligation. The Company does not disclose the value of unsatisfied performance obligations for the Alternative Credential Segment because the performance obligations are part of contracts that have original durations of less than one year.

Contract Acquisition Costs

The Company pays commissions to certain of its employees to obtain contracts with university clients in the Degree Program Segment. These costs are capitalized and recorded on a contract-by-contract basis and amortized using the straight-line method over the expected life, which is generally the length of the contract.

With respect to contract acquisition costs in the Alternative Credential Segment, the Company has elected to apply the practical expedient in Accounting Standards Codification ("ASC") Topic 606 to expense these costs as incurred, as the terms of contracts with students in this segment are less than one year.

Payments to University Clients

Pursuant to certain of the Company's contracts in the Degree Program Segment, the Company has made, or is obligated to make, payments to university clients at either the execution of a contract or at the extension of a contract in exchange for various marketing and other rights. Generally, these amounts are capitalized as other assets on the Company's consolidated balance sheets, and amortized as contra revenue over the life of the contract, commencing on the later of when payment is due or when contract revenue recognition begins.

Receivables, Contract Assets and Liabilities

Balance sheet items related to contracts consist of accounts receivable, net, other receivables, net, and deferred revenue on the Company's consolidated balance sheets. Accounts receivable, net includes trade accounts receivable, which are comprised of billed and unbilled revenue. The Company's trade accounts receivable balances have terms of less than one year. Accounts receivable, net is stated at amortized cost net of provision for credit losses. The Company's methodology to measure the provision for credit losses requires an estimation of loss rates based upon historical loss experience adjusted for factors that are relevant to determining the expected collectability of accounts receivable. Some of these factors include current market conditions, delinquency trends, aging behavior of receivables and credit and liquidity quality indicators for industry groups, customer classes or individual customers. The Company's estimates are reviewed and revised periodically based on the ongoing evaluation of credit quality indicators. Historically, actual write-offs for uncollectible accounts have not significantly differed from prior estimates.

The Company recognizes unbilled revenue when revenue recognition occurs in advance of billings. Unbilled revenue is recognized in the Degree Program Segment because billings to university clients do not occur until after the academic term has commenced and final enrollment information is available. The Company's unbilled revenue represents contract assets.

Other receivables, net are comprised of amounts due under tuition payment plans with extended payment terms from students enrolled in certain of the Company's alternative credential offerings. These plans, which are managed and serviced by third-party providers, are designed to assist students with covering tuition costs after all other student financial assistance and scholarships have been applied. The associated receivables generally have payment terms that range from 12 to 42 months and are recorded net of any implied pricing concessions, which are determined based on our collections history, market data and any time value of money component. There are no fees or origination costs included in these receivables.

Deferred revenue represents the excess of amounts billed or received as compared to amounts recognized in revenue on the Company's consolidated statements of operations and comprehensive loss as of the end of the reporting period, and such amounts are reflected as a current liability on the Company's consolidated balance sheets. The Company's deferred revenue represents contract liabilities. The Company generally receives payments from Degree Program Segment university clients early in each academic term and from Alternative Credential Segment students, either in full upon registration for the course or in full before the end of the course based on a payment plan, prior to completion of the service period. These payments are

2. Significant Accounting Policies (Continued)

recorded as deferred revenue until the services are delivered or until the Company's obligations are otherwise met, at which time revenue is recognized.

Marketing and Sales Costs

The Company's marketing and sales costs relate to activities to attract students to offerings across both of the Company's segments. This includes the cost of Search Engine Optimization, Search Engine Marketing and Social Media Optimization, as well as personnel and personnel-related expense for the Company's marketing and recruiting teams. For the years ended December 31, 2021, 2020 and 2019, expense related to the Company's marketing and advertising efforts of its own brand were not material. All such costs are expensed as incurred and reported in marketing and sales expense on the Company's consolidated statements of operations and comprehensive loss.

Stock-Based Compensation

The Company provides stock-based compensation awards consisting of restricted stock units ("RSUs"), performance restricted stock units ("PRSUs") and stock options to employees, directors and consultants. The Company measures all stock-based compensation awards at fair value as of the grant date. The fair values of RSUs and PRSUs containing performance-based vesting conditions are based on the fair value of the Company's stock on the date of grant. The Company uses a Monte Carlo valuation model to estimate the fair value of PRSUs containing market-based vesting conditions and uses a Black-Scholes option pricing model to measure the fair value of stock option grants. The Company also maintains the 2017 Employee Stock Purchase Plan (the "ESPP") and estimates the fair value of each purchase right thereunder as of the grant date using a Black-Scholes option pricing model.

For awards subject only to service-based vesting conditions, the Company recognizes stock-based compensation expense on a straight-line basis over the awards' requisite service period. For awards subject to both service and performance-based vesting conditions, the Company recognizes stock-based compensation expense using an accelerated recognition method when it is probable that the performance condition will be achieved. For awards subject to both service and market-based vesting conditions, the Company recognizes stock-based compensation expense using an accelerated recognition method over the requisite service period beginning with the date of the grant and ending upon completion of the service period, with stock-based compensation expense being recognized irrespective of the achievement of the market condition. The Company accounts for forfeitures as they occur. For shares subject to the ESPP, the Company uses the straight-line method to record stock-based compensation expense over the respective offering period.

Refer to Note 12 for further information about the Company's stock-based compensation awards.

Income Taxes

Income taxes are accounted for under the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that are included in the financial statements. Under this method, the deferred tax assets and liabilities are determined based on the differences between the financial statement and tax bases of the assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. The effect of a change in tax rates on the deferred tax assets and liabilities is recognized in earnings in the period when the new rate is enacted. Deferred tax assets are subject to periodic recoverability assessments. Valuation allowances are established, when necessary, to reduce deferred tax assets to the amount that more likely than not will be realized. The Company considers all positive and negative evidence relating to the realization of the deferred tax assets in assessing the need for a valuation allowance. The Company currently maintains a full valuation allowance against deferred tax assets in the U.S. and certain entities in the foreign jurisdictions.

The Company records a liability for unrecognized tax benefits resulting from uncertain tax positions taken or expected to be taken in a tax return. The Company accounts for uncertainty in income taxes using a two-step approach for evaluating tax positions. Step one, recognition, occurs when the Company concludes that a tax position, based solely on its technical merits, is more likely than not to be sustained upon examination. Step two, measurement, determines the amount of benefit that is more likely than not to be realized upon ultimate settlement with a taxing authority that has full knowledge of all relevant information. Derecognition of a tax position that was previously recognized would occur if the Company subsequently determines that a tax position no longer meets the more likely than not threshold of being sustained. The Company recognizes interest and penalties, if any, related to unrecognized tax benefits as income tax expense on the consolidated statements of operations and comprehensive loss.

2. Significant Accounting Policies (Continued)

Cash and Cash Equivalents

Cash and cash equivalents consist of bank checking accounts, money market accounts, investments in certificates of deposit that have an original maturity of three months or less and highly liquid marketable securities with maturities at the time of purchase of three months or less.

Restricted Cash

The Company maintains restricted cash as collateral for standby letters of credit for the Company's leased facilities and in connection with the deferred government grant obligations.

Fair Value Measurements

The carrying amounts of certain assets and liabilities, including cash and cash equivalents, receivables, advances to university clients, accounts payable and accrued expenses and other current liabilities, approximate their respective fair values due to their short-term nature.

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, based on the Company's principal or, in the absence of a principal, most advantageous, market for the specific asset or liability.

U.S. GAAP provides for a three-tier fair value hierarchy to classify and disclose all assets and liabilities measured at fair value on a recurring basis, as well as assets and liabilities measured at fair value on a non-recurring basis, in periods subsequent to their initial measurement. Generally, assets are recorded at fair value on a non-recurring basis as a result of impairment charges. The Company remeasures non-financial assets such as goodwill, intangible assets and other long-lived assets at fair value when there is an indicator of impairment, and records them at fair value only when recognizing an impairment loss. The fair value hierarchy requires the Company to use observable inputs when available, and to minimize the use of unobservable inputs when determining fair value. Refer to Notes 4 and 5 for further discussion of assets measured at fair value on a nonrecurring basis. The three tiers are defined as follows:

- *Level 1*—Observable inputs that reflect quoted market prices (unadjusted) for identical assets or liabilities in active markets;
- *Level 2*—Observable inputs, other than quoted prices in active markets, that are observable either directly or indirectly in the marketplace for identical or similar assets and liabilities; and
- *Level 3*—Unobservable inputs that are supported by little or no market data, which require the Company to develop its own assumptions about the assumptions market participants would use in pricing the asset or liability based on the best information available in the circumstances.

The Company has financial instruments, including cash deposits, receivables, accounts payable and debt. The carrying values for such financial instruments, other than the Company's convertible senior notes, each approximated their fair values as of December 31, 2021 and 2020. Refer to Note 9 for more information regarding the Company's convertible senior notes.

Long-Lived Assets

Property and Equipment

Property and equipment is stated at cost less accumulated depreciation and amortization. Expenditures for major additions, construction and improvements are capitalized. Depreciation and amortization is expensed using the straight-line method over the estimated useful lives of the related assets, which range from three to five years for computer hardware and five to seven years for furniture and office equipment. Leasehold improvements are depreciated on a straight-line basis over the lesser of the remaining term of the leased facility or the estimated useful life of the improvement, which generally ranges from four to approximately 11 years. Useful lives of significant assets are periodically reviewed and adjusted prospectively to reflect the Company's current estimates of the respective assets' expected utility. Repair and maintenance costs are expensed as incurred.

2. Significant Accounting Policies (Continued)

Amortizable Intangible Assets

Acquired Definite-lived Intangible Assets. The Company capitalizes purchased intangible assets, such as software, websites and domains, and amortizes them on a straight-line basis over their estimated useful life. Historically, the Company has assessed the useful lives of these acquired intangible assets to be between three and 10 years.

Capitalized Technology. Capitalized technology includes certain purchased software and technology licenses, direct third-party costs, and internal payroll and payroll-related costs used in the creation of our internal-use software. Software development projects generally include three stages: the preliminary project stage (all costs are expensed as incurred), the application development stage (certain costs are capitalized and certain costs are expensed as incurred) and the post-implementation/operation stage (all costs are expensed as incurred). Costs capitalized in the application development stage include costs of designing the application, coding, integrating the Company's and the university's networks and systems, and the testing of the software. Capitalization of costs requires judgment in determining when a project has reached the application development stage and the period over which the Company expects to benefit from the use of that software. Once the software is placed in service, these amounts are amortized using the straight-line method over the estimated useful life of the software, which is generally three to five years.

Capitalized Content Development. The Company develops content for each offering on a course-by-course basis in collaboration with university client faculty and industry experts. Depending upon the offering, the Company may use materials provided by university clients and their faculty, including curricula, case studies, presentations and other reading materials. The Company is responsible for the creation of materials suitable for delivery through the Company's online learning platform, including all expenses associated with this effort. With respect to the Degree Program Segment, the development of content is part of the Company's single performance obligation and is considered a contract fulfillment cost.

The content development costs that qualify for capitalization are third-party direct costs, such as videography, editing and other services associated with creating digital content. Additionally, the Company capitalizes internal payroll and payroll-related expenses incurred to create and produce videos and other digital content utilized in the university clients' offerings for delivery via the Company's online learning platform. Capitalization ends when content has been fully developed by both the Company and the university client, at which time amortization of the capitalized content development begins. The capitalized costs for each offering are recorded on a course-by-course basis and included in intangible assets, net on the Company's consolidated balance sheets. These costs are amortized using the straight-line method over the estimated useful life of the respective course, which is generally four to five years. The estimated useful life corresponds with the planned curriculum refresh rate. This refresh rate is consistent with expected curriculum refresh rates as cited by faculty members for similar on-campus offerings.

Evaluation of Long-Lived Assets

The Company reviews long-lived assets, which consist of property and equipment, capitalized technology, capitalized content development and acquired finite-lived intangible assets, for impairment whenever events or changes in circumstances indicate the carrying value of an asset may not be recoverable. In order to assess the recoverability of the capitalized technology and content development, the amounts are grouped by the lowest level of independent cash flows. Recoverability of a long-lived asset is measured by a comparison of the carrying value of an asset or asset group to the future undiscounted net cash flows expected to be generated by that asset or asset group. If such assets are not recoverable, the impairment to be recognized is measured by the amount by which the carrying value of an asset exceeds the estimated fair value (discounted cash flow) of the asset or asset group. The Company's impairment analysis is based upon cumulative results and forecasted performance.

Non-Cash Long-Lived Asset Additions

The Company had non-cash capital asset additions of $1.8 million and $3.3 million in property and equipment, during the years ended December 31, 2021 and 2020, respectively.

Goodwill and Other Indefinite-lived Intangible Assets

The Company reviews goodwill and other indefinite-lived intangible assets for impairment annually, as of October 1, and more frequently if an event occurs or circumstances change that would more likely than not reduce the fair value of goodwill or an indefinite-lived asset below its carrying value.

2. Significant Accounting Policies (Continued)

Goodwill

Goodwill is the excess of purchase price over the fair value of identified net assets of businesses acquired. The Company's goodwill balance relates to its acquisitions of GetSmarter in July 2017, Trilogy in May 2019 and edX in November 2021. The Company tests goodwill at the reporting unit level, which is an operating segment or one level below an operating segment. The Company initially assesses qualitative factors to determine if it is necessary to perform a quantitative goodwill impairment review. The Company reviews goodwill for impairment using a quantitative approach if it decides to bypass the qualitative assessment or determines that it is more likely than not that the fair value of a reporting unit is less than its carrying value based on a qualitative assessment. Upon completion of a quantitative assessment, the Company may be required to recognize an impairment based on the difference between the carrying value and the fair value of the reporting unit.

The Company determines the fair value of a reporting unit by utilizing a weighted combination of the income-based and market-based approaches.

The income-based approach requires the Company to make significant assumptions and estimates. These assumptions and estimates primarily include, but are not limited to, the selection of appropriate peer group companies, discount rates, terminal growth rates, and forecasts of revenue, operating income, depreciation and amortization expense, capital expenditures and future working capital requirements. When determining these assumptions and preparing these estimates, the Company considers each reporting unit's historical results and current operating trends, revenue, profitability, cash flow results and forecasts, and industry trends. These estimates can be affected by a number of factors including, but not limited to, general economic and regulatory conditions, market capitalization, the continued efforts of competitors to gain market share and prospective student enrollment patterns.

In addition, the value of a reporting unit using the market-based approach is estimated by comparing the reporting unit to other publicly traded companies and/or to publicly-disclosed business mergers and acquisitions in similar lines of business. The value of a reporting unit is based on pricing multiples of certain financial parameters observed in the comparable companies. The Company also makes estimates and assumptions for market values to determine a reporting unit's estimated fair value.

Based on the Company's quantitative assessment performed during 2019 and the qualitative assessments performed as of October 1 in 2020 and 2021, the Company believes that the estimated fair values of the reporting units exceeded their carrying values by no less than 10%. It is possible that future changes in the Company's circumstances, including potential impacts from COVID-19, or in the variables associated with the judgments, assumptions and estimates used in assessing the fair value of the Company's reporting units, could require the Company to record additional impairment charges in the future.

Other Indefinite-lived Intangible Assets

The Company's indefinite-lived intangible asset was acquired in November 2021 and represents the established edX trade name. Given the timing of the edX Acquisition, the Company will review this asset for impairment as of October 1, 2022, or earlier if an event occurs or circumstances change that would more likely than not reduce the fair value of this asset below its carrying value.

Equity Interests

As of December 31, 2020, the Company had a $10.0 million investment in an education technology company recorded within other assets, non-current on the consolidated balance sheets. This investment did not have a readily determinable fair value, and was accounted for as a cost method investment, which was subject to fair value remeasurement upon the occurrence of an observable event. During the second quarter of 2021, the Company sold its investment in this education technology company and recorded a gain on sale of $27.8 million. Refer to Note 7 for further information.

Employee Benefits

The Company offers a variety of benefits to its employees (e.g., health care, gym memberships and tuition reimbursement). The Company accounts for costs related to providing employee benefits as incurred, unless there is a service requirement, in which case, such costs are recognized over the service commitment period.

2. Significant Accounting Policies (Continued)

Convertible Senior Notes

In April 2020, the Company issued 2.25% convertible senior notes due May 1, 2025 (the "Notes") in an aggregate principal amount of $380 million, including the exercise by the initial purchasers of an option to purchase additional Notes, in a private offering. Refer to Note 9 for more information regarding the Notes.

The Notes are accounted for in accordance with Financial Accounting Standards Board ("FASB") ASC Subtopic 470-20, *Debt with Conversion and Other Options* ("ASC 470-20"). Pursuant to ASC 470-20, issuers of certain convertible debt instruments, such as the Notes, that have a net settlement feature and may be settled wholly or partially in cash upon conversion are required to separately account for the liability (debt) and equity (conversion option) components of the instrument. The carrying amount of the liability component of the instrument is computed by estimating the fair value of a similar liability without the conversion option using a market-based approach. The amount of the equity component is then calculated by deducting the fair value of the liability component from the principal amount of the instrument. The difference between the principal amount and the liability component represents a debt discount that is amortized to interest expense over the term of the Notes using the effective interest rate method. The equity component is not remeasured as long as it continues to meet the conditions for equity classification. In accounting for the issuance costs related to the Notes, the allocation of issuance costs incurred between the liability and equity components was based on their relative values.

Debt Issuance Costs

Debt issuance costs are incurred as a result of entering into certain borrowing transactions and are presented as a reduction from the carrying amount of the debt liability on the Company's consolidated balance sheets. Debt issuance costs are amortized over the term of the associated debt instrument. The amortization of debt issuance costs is included as a component of interest expense on the Company's consolidated statements of operations and comprehensive loss. If the Company extinguishes debt prior to the end of the underlying instrument's full term, some or all of the unamortized debt issuance costs may need to be written off, and a loss on extinguishment may need to be recognized. Refer to Note 9 for further information about the Company's debt.

Leases

For the Company's operating leases, an assessment is performed to determine if an arrangement is a lease at inception. Right-of-use ("ROU") assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent the Company's obligation to make lease payments arising from the lease. Operating lease ROU assets and lease liabilities are recognized at the lease commencement date based on the present value of lease payments over the lease term. As the information necessary to determine the rate implicit in the Company's leases is not readily available, the Company determines its incremental borrowing rate based on the information available at the lease commencement date in determining the present value of lease payments. The operating lease ROU asset also includes any prepaid lease payments made, less lease incentives. The Company's lease terms include options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option. Lease expense for lease payments is recognized on a straight-line basis over the lease term. The Company does not have any finance leases for any periods presented.

The Company has elected, as an accounting policy for its leases of real estate, to account for lease and non-lease components in a contract as a single lease component. In addition, the recognition requirements are not applied to leases with a term of 12 months or less. Rather, the lease payments for short-term leases are recognized on the consolidated statements of operations and comprehensive loss on a straight-line basis over the lease term.

Variable payments that depend on an index or a rate are initially measured using the index or rate at the lease commencement date. Such variable payments are included in the total lease payments when measuring the lease liabilities and ROU assets. The Company will only remeasure variable payments that depend on an index or a rate when the Company is remeasuring the lease liabilities due to any of the following occurring: (i) the lease is modified and the modification is not accounted for as a separate contract; (ii) a contingency, upon which some or all of the variable lease payments that will be paid over the remainder of the lease term are based, is resolved; (iii) there is a change in lease term; (iv) there is a change in the probability of exercising a purchase option; or (v) there is a change in the amount probable of being owed under residual value guarantees. Until the lease liabilities are remeasured due to one of the aforementioned events, additional payments for an increase in the index or rate will be recognized in the period in which they are incurred. Variable payments that do not depend on an index or a rate are excluded from the measurement of the lease liabilities and recognized in the consolidated statements of operations and comprehensive loss in the period in which the obligation for those payments is incurred.

2. Significant Accounting Policies (Continued)

Business Combinations

The purchase price of an acquisition is allocated to the assets acquired, including intangible assets, and liabilities assumed, based on their respective fair values at the acquisition date. Acquisition-related costs are expensed as incurred. The excess of the cost of an acquired entity, net of the amounts assigned to the assets acquired and liabilities assumed, is recognized as goodwill. The net assets and results of operations of an acquired entity are included on the Company's consolidated financial statements from the acquisition date.

Foreign Currency Translation

For the portion of the Company's non-U.S. business where the local currency is the functional currency, operating results are translated into U.S. dollars using the average rate of exchange for the period, and assets and liabilities are converted at the closing rates on the period end date. Gains and losses on translation of these accounts are accumulated and reported as a separate component of stockholder's equity and comprehensive loss.

For any transaction that is in a currency different from the entity's functional currency, the Company records a gain or loss based on the difference between the exchange rate at the transaction date and the exchange rate at the transaction settlement date (or rate at period end, if unsettled) as other income (expense), net on the consolidated statements of operations and comprehensive loss.

Concentration of Credit Risk

Financial instruments that subject the Company to significant concentrations of credit risk consist primarily of cash and cash equivalents and accounts receivable. All of the Company's cash is held at financial institutions that management believes to be of high credit quality. The Company's bank accounts exceed federally insured limits at times. The Company has not experienced any losses on cash to date. The Company maintains an allowance for doubtful accounts, if needed, based on collection history.

Recent Accounting Pronouncements

In October 2020, the FASB issued Accounting Standards Update ("ASU") No. 2020-10, *Codification Improvements*. The amendments in this ASU affect a wide variety of topics in the Accounting Standards Codification by either clarifying the codification or correcting unintended application of guidance. The amendments do not change U.S. GAAP and, therefore, are not expected to result in a significant change in current accounting practice. The Company adopted this ASU on January 1, 2021. Adoption of this standard did not have a material impact on the Company's consolidated financial statements or related disclosures.

In October 2021, the FASB issued ASU 2021-08 *Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers*. The new guidance requires companies to apply ASC Topic 606 to recognize and measure contract assets and contract liabilities with customers acquired in a business combination, which creates an exception to the general recognition principle in ASC Topic 805. In addition, the guidance clarifies that companies should apply the definition of a performance obligation in ASC Topic 606 when recognizing contract liabilities assumed in a business combination. The guidance is effective for fiscal years beginning after December 15, 2022 and interim periods within those years. Early adoption is permitted. The Company adopted the standard in the fourth quarter of 2021, effective January 1, 2021. Adoption of this standard is reflected in the preliminary purchase price allocation of the edX Acquisition. Refer to Note 3 for further information about the edX Acquisition.

In August 2020, the FASB issued ASU No. 2020-06, *Debt—Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging—Contracts in Entity's Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity's Own Equity.* This ASU simplifies the accounting for certain financial instruments with characteristics of liabilities and equity, including convertible instruments and contracts indexed to and potentially settled in an entity's own equity. The new guidance eliminates the beneficial conversion and cash conversion accounting models for convertible instruments. As a result, in more cases, convertible debt will be accounted for as a single instrument. The guidance also removes certain conditions for equity classification related to contracts in an entity's own equity and requires the application of the if-converted method for calculating diluted earnings per share. This ASU is effective for fiscal years beginning after December 15, 2021. Early adoption is permitted.

The Company will adopt this ASU on a modified retrospective basis in the first quarter of 2022, effective as of January 1, 2022. The Company expects that the adoption of this ASU will have a material effect on the Company's consolidated

2. Significant Accounting Policies (Continued)

financial statements. Although the Company continues to evaluate the effect of the ASU on the Company's consolidated financial statements, the adoption of this ASU is expected to result in an increase in long-term debt of approximately $81.7 million to reflect the full principal amount of the Notes outstanding, net of issuance costs, a reduction of approximately $114.6 million to additional paid-in capital to remove the equity component separately recorded for the conversion features associated with the Notes, a reduction in deferred tax liabilities of approximately $22.1 million, and a cumulative-effect adjustment to opening accumulated deficit of $32.8 million. After the adoption of this ASU, the Company's interest expense will be reduced as there will not be any further amortization of the debt discount due to the derecognition of the equity component that represents the value of the conversion option on the issuance date of the Notes. In addition, adoption of this ASU requires the use of the if-converted method for all convertible notes in the diluted net income (loss) per share calculation and the inclusion of the effect of potential share settlement of the convertible notes, if the effective is more dilutive. No impact to the number of potentially dilutive shares is expected upon adoption. Adoption of this standard is not expected to impact the Company's liquidity or cash flows.

In March 2020, the FASB issued ASU No. 2020-04, *Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting*. This ASU is intended to provide optional expedients and exceptions for applying U.S. GAAP to contract modifications and hedging relationships, subject to meeting certain criteria, to ease the potential accounting and financial reporting burden associated with the expected market transition from the London Interbank Offered Rate ("LIBOR") and other interbank offered rates to alternative reference rates. This ASU may be applied as of the beginning of any interim period that includes its effective date (i.e., March 12, 2020) through December 31, 2022. The Company will adopt this standard when LIBOR is discontinued and does not expect the adoption of this standard to have a material impact on its consolidated financial statements and related disclosures.

In January 2020, the FASB issued ASU No. 2020-01, *Investments—Equity Securities (Topic 321), Investments—Equity Method and Joint Ventures (Topic 323), and Derivatives and Hedging (Topic 815): Clarifying the Interactions between Topic 321, Topic 323, and Topic 815*. This ASU was issued to clarify the interaction of the accounting for equity securities under ASC 321 and investments accounted for under the equity method of accounting in ASC 323 and the accounting for certain forward contracts and purchased options accounted for under ASC 815. With respect to the interactions between ASC 321 and ASC 323, the amendments clarify that an entity should consider observable transactions that require it to either apply or discontinue the equity method of accounting when applying the measurement alternative in ASC 321, immediately before applying or discontinuing the equity method of accounting. The Company adopted this ASU on January 1, 2021. Adoption of this standard did not have a material impact on the Company's consolidated financial statements or related disclosures.

In December 2019, the FASB issued ASU No. 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes*, as part of its initiative to reduce complexity in the accounting standards. The amendments in this ASU include removal of certain exceptions to the general principles in Topic 740 related to recognizing deferred taxes for investments, performing intraperiod tax allocation and calculating income taxes in an interim period. The ASU also clarifies and simplifies other aspects of the accounting for income taxes, including the recognition of deferred tax liabilities for outside basis differences. The Company adopted this ASU on January 1, 2021. Adoption of this standard did not have a material impact on the Company's consolidated financial statements or related disclosures.

3. Business Combination

On November 16, 2021, the Company completed its acquisition of edX pursuant to a Membership Interest Purchase Agreement, dated as of June 28, 2021 (the "Purchase Agreement"). The total preliminary purchase price was $773.0 million in cash consideration, of which $23.0 million was distributed to an escrow account to satisfy indemnification claims and purchase price adjustments, as applicable. The preliminary purchase price is subject to customary adjustments based on, among other things, the finalization of working capital as of the closing date. The Company recorded $14.8 million and $0.3 million of acquisition costs in general and administrative expense related to this acquisition during the years ended December 31, 2021 and 2020, respectively.

The transaction was accounted for under the acquisition method of accounting and revenue of $5.2 million and operating expense of $14.4 million have been included in the Company's consolidated statement of operations since the date of acquisition.

Under the acquisition method of accounting, the total preliminary purchase price was allocated to edX's net tangible and intangible assets acquired and liabilities assumed based on their estimated fair values as of November 16, 2021. The

3. Business Combination (Continued)

allocation of the preliminary purchase price is pending the finalization of the acquired company's working capital as of the closing date and the finalization of the fair value of acquired deferred revenue and other liabilities, deferred income tax assets and liabilities, and assumed non-income tax liabilities.

The following table summarizes the preliminary purchase price allocation based on the estimated fair value of the assets acquired and liabilities assumed as of the date of the acquisition:

	Estimated Useful Life (in years)	Purchase Price Allocation
		(in thousands)
Cash and cash equivalents		$ 11,901
Accounts receivable		6,608
Prepaid expenses and other assets		11,379
Property and equipment, net		529
Right-of-use assets		2,868
Other assets, non-current		572
Accounts payable and accrued expenses		(17,024)
Deferred revenue		(20,264)
Lease liability		(2,868)
Other liabilities		(32,934)
Intangible assets:		
Developed technology	3	15,400
University client relationships	10	104,000
Enterprise client relationships	10	14,300
Trade names	indefinite	255,000
Goodwill		423,552
		$ 773,019

Of the total preliminary purchase price, the Company allocated $255.0 million and $133.7 million to indefinite-lived intangibles and definite-lived intangibles, respectively. The estimated values of the definite-lived intangibles is being amortized on a straight-line basis over the estimated useful lives. The methodologies utilized to determine the estimated fair values of the acquired intangible assets are Level 3 measurements.

The acquired indefinite-lived intangible asset represents the established edX trade name that we expect to be the primary brand for the Company's marketplace, educational offerings and services. Acquired client relationships represent agreements with existing clients as of the acquisition date. The fair values of the trade name and the client relationships were determined using the discounted cash flow method. Under this method, the Company's significant assumptions and estimates included expected future cash flows and the weighted-average cost of capital.

The acquired developed technology represents technology that had reached technological feasibility and for which development had been completed as of the date of the Acquisition. The Company utilized the relief-from-royalty valuation method to value the acquired technology. Under this method, the Company's significant assumptions and estimates included an estimated market royalty rate, remaining useful life, future revenue, and a rate of return utilized in the determination of a discounted present value.

The goodwill balance is primarily attributed to the assembled workforce, expanded market opportunities and operating synergies anticipated upon the integration of the operations of the Company and edX. The goodwill is expected to be deductible for tax purposes. Refer to Note 5 for details.

3. Business Combination (Continued)

The Company's unaudited pro forma combined financial information below is presented for illustrative purposes and does not purport to represent what the results of operations would actually have been if the business combination occurred as of the date indicated or what the results would be for any future periods. The following table presents the Company's unaudited pro forma combined revenue, pro forma combined net loss and pro forma combined net loss per share for the years ended December 31, 2021 and 2020, as if the acquisition of edX had occurred on January 1, 2020.

	Year Ended December 31,	
	2021	2020
	(in thousands)	
Pro forma revenue	$ 985,016	$ 818,700
Pro forma net loss	$ (273,889)	$ (323,277)
Pro forma net loss per share, basic and diluted	$ (3.67)	$ (4.81)

4. Property and Equipment, Net

The following table presents the components of property and equipment, net on the Company's consolidated balance sheets as of each of the dates indicated.

	December 31, 2021	December 31, 2020
	(in thousands)	
Computer hardware	$ 9,454	$ 9,053
Furniture and office equipment	16,739	18,041
Leasehold improvements	57,972	58,443
Leasehold improvements in process	5,667	2,184
Total	89,832	87,721
Accumulated depreciation and amortization	(41,182)	(34,987)
Property and equipment, net	$ 48,650	$ 52,734

Depreciation expense of property and equipment was $12.5 million, $13.4 million and $11.6 million for the years ended December 31, 2021, 2020 and 2019, respectively.

5. Goodwill and Intangible Assets

The following table presents the changes in the carrying amount of goodwill on the Company's consolidated balance sheets for the periods indicated.

	Alternative Credential Segment	Unassigned Goodwill	Total
		(in thousands)	
Balance as of December 31, 2019	$ 418,350	$ —	$ 418,350
Foreign currency translation adjustments and other	(2,520)	—	(2,520)
Balance as of December 31, 2020	415,830	—	415,830
Goodwill recognized in connection with business combination*	—	423,552	423,552
Foreign currency translation adjustments	(4,843)	—	(4,843)
Balance as of December 31, 2021	$ 410,987	$ 423,552	$ 834,539

* See Note 3 for a discussion of the Acquisition.

The Acquisition was completed within close proximity of the Company's year end and, as a result, the assignment of the preliminary goodwill balance of $423.6 million to the Company's reporting units has not been completed as of

5. Goodwill and Intangible Assets (Continued)

December 31, 2021. This preliminary goodwill balance will be assigned to the relevant reporting units in advance of the Company's next annual goodwill impairment test that will be performed as of October 1, 2022, or earlier, in the event of a triggering event for assessing the goodwill balance for impairment.

The Company experienced a sustained decline in its stock price during the third quarter of 2019, which management deemed a triggering event that required the Company to perform an interim goodwill impairment test as of September 1, 2019. The Company's test relied in part on the work of an independent valuation firm engaged to provide inputs as to the fair value of the reporting units and to assist in the related calculations and analysis. The results of the interim impairment test indicated that the carrying value of the boot camp business acquired in 2019 within the Company's Alternative Credential Segment exceeded the fair value by $70.4 million. The decrease in this reporting unit's fair value was primarily due to lower expectations of future performance due to the impact of changes in key management as well as an increased focus in integrating the operations of the newly acquired reporting unit, which impacted the estimated operating cash flows. As a result, the Company recorded an impairment charge of $70.4 million on the consolidated statements of operations and comprehensive loss in the third quarter of 2019. For purposes of testing the Company's goodwill for impairment, fair value measurements were determined primarily using a weighted combination of the income-based and market-based approaches. The income-based approach largely relied on inputs that were not observable to active markets, which would be deemed "Level 3" fair value measurements, as defined in the Fair Value Measurements section of Note 2. These inputs included the Company's expectations about future revenue growth, profitability, income tax rates, cash flows and the rate at which cash flows should be discounted, in order to determine this fair value estimate. The primary input used in the market-based approach was publicly-available data on the financial ratios of the Company's competitors. The carrying amount of goodwill in the Alternative Credential Segment included accumulated impairment charges of $70.4 million as of both December 31, 2021 and 2020.

The following table presents the components of intangible assets, net on the Company's consolidated balance sheets as of each of the dates indicated.

	Estimated Average Useful Life (in years)	December 31, 2021			December 31, 2020		
		Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
		(in thousands)					
Definite-lived intangible assets							
Capitalized technology	3-5	$ 199,766	$ (112,357)	$ 87,409	$165,254	$ (75,822)	$ 89,432
Capitalized content development	4-5	243,687	(125,599)	118,088	208,170	(88,168)	120,002
University client relationships	9-10	211,680	(34,995)	176,685	109,498	(23,376)	86,122
Enterprise client relationships	10	14,300	(179)	14,121	—	—	—
Trade names and domain names	5-10	27,161	(12,941)	14,220	26,697	(9,483)	17,214
Total definite-lived intangible assets		696,594	(286,071)	410,523	509,619	(196,849)	312,770
Indefinite-lived intangible assets							
Trade names	indefinite	255,000	—	255,000	—	—	—
Total indefinite-lived intangible assets		255,000	—	255,000	—	—	—
Total intangible assets, net		$ 951,594	$ (286,071)	$ 665,523	$509,619	$ (196,849)	$312,770

The amounts presented in the table above include $46.3 million and $38.6 million of in process capitalized technology and content development as of December 31, 2021 and December 31, 2020, respectively.

5. Goodwill and Intangible Assets (Continued)

The Company recorded amortization expense related to amortizable intangible assets of $95.9 million, $83.1 million and $58.3 million for the years ended December 31, 2021, 2020 and 2019, respectively.

The following table presents the estimated future amortization expense of the Company's amortizable intangible assets placed in service as of December 31, 2021.

	Future Amortization Expense
	(in thousands)
2022	$ 90,116
2023	75,153
2024	59,615
2025	35,305
2026	24,291
Thereafter	79,734
Total	$ 364,214

6. Other Balance Sheet Details

Prepaid expenses and other assets

As of December 31, 2021 and 2020, the Company had balances of $23.0 million and $14.0 million, respectively, of prepaid assets within prepaid expenses and other assets on the consolidated balance sheet.

Other Assets, Non-current

As of December 31, 2021 and 2020, the Company had balances of $7.0 million and $6.3 million, respectively, of deferred expenses incurred to integrate the software associated with its cloud computing arrangements, within other assets, non-current on the consolidated balance sheets. Such expenses are subject to amortization over the remaining contractual term of the associated cloud computing arrangement, with a useful life of between three to five years. The Company incurred $2.4 million, $1.3 million, and $0.3 million of such amortization for the years ended December 31, 2021, 2020, and 2019, respectively.

Accounts Payable and Accrued Expenses

The following table presents the components of accounts payable and accrued expenses on the Company's consolidated balance sheets as of each of the dates indicated.

	December 31, 2021	December 31, 2020
	(in thousands)	
Accrued university and instructional staff compensation	$ 36,806	$ 27,371
Accrued marketing expenses	26,469	24,682
Accrued transaction, integration and restructuring-related expenses	4,072	3,492
Accrued compensation and related benefits	49,143	52,820
Accounts payable and other accrued expenses	49,968	22,309
Total accounts payable and accrued expenses	$ 166,458	$ 130,674

Other Current Liabilities

As of December 31, 2021, the Company had a balance of $21.9 million within other current liabilities on the consolidated balance sheet, which represents proceeds received from students enrolled in certain of the Company's alternative credential offerings that are payable to associated university client.

In response to COVID-19, various government programs have been announced to provide financial relief for affected businesses. Under the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act"), which was enacted in the United States on March 27, 2020, the Company is allowed to defer payment of the employer's share of Social Security taxes incurred from March 27, 2020 through December 31, 2020. In addition, the CARES Act provides eligible employers with an employee retention tax credit for employees whose services were impacted by COVID-19. As of December 31, 2021, the amount of payroll taxes subject to deferred payment, net of employee retention tax credits of $0.5 million, was approximately $5.0 million. The balance is recorded within other current liabilities on the consolidated balance sheet.

7. Commitments and Contingencies

Legal Contingencies

The Company is involved in various claims and legal proceedings arising in the ordinary course of business. The Company accrues a liability when a loss is considered probable and the amount can be reasonably estimated. While the Company does not expect that the ultimate resolution of any existing claims and proceedings (other than the specific matters described below, if decided adversely), individually or in the aggregate, will have a material adverse effect on its financial position, an unfavorable outcome in some or all of these proceedings could have a material adverse impact on the results of operations or cash flows for a particular period. This assessment is based on the Company's current understanding of relevant facts and circumstances. With respect to current legal proceedings, the Company does not believe it is probable a material loss exceeding amounts already recognized has been incurred as of the date of the balance sheets presented herein. As such, the Company's view of these matters is subject to inherent uncertainties and may change in the future.

In re 2U, Inc., Securities Class Action

On August 7 and 9, 2019, Aaron Harper and Anne M. Chinn filed putative class action complaints against the Company, Christopher J. Paucek, the Company's CEO, and Catherine A. Graham, the Company's former CFO, in the United States District Court for the Southern District of New York, alleging violations of Sections 10(b) and 20(a) of the Exchange Act, and Rule 10b-5 promulgated thereunder, based upon allegedly false and misleading statements regarding the Company's business prospects and financial projections. The district court transferred the cases to the United States District Court for the District of Maryland, consolidated them under docket number 8:19-cv-3455 (D. Md.), and appointed Fiyyaz Pirani as the lead plaintiff in the consolidated action. On July 30, 2020, Mr. Pirani filed a consolidated class action complaint ("CAC"), adding Harsha Mokkarala, the Company's former Chief Marketing Officer, as a defendant. The CAC also asserts claims under Sections 11, 12(a)(2), and 15 of the Securities Act of 1933, as amended, against Mr. Paucek, Ms. Graham, members of the Company's board of directors, and the Company's underwriters, based on allegations related to the Company's secondary stock offering on May 23, 2018. The proposed class consists of all persons who acquired the Company's securities between February 26, 2018 and July 30, 2019. On October 27, 2020, defendants filed a motion to dismiss. On August 5, 2021, the court largely denied the defendants' motion to dismiss. On February 18, 2022, the court stayed discovery until April 19, 2022, pending mediation. The Company believes that the claims are without merit, and it intends to vigorously defend against these claims. However, due to the complex nature of the legal and factual issues involved, the outcome of this matter is not presently determinable.

Stockholder Derivative Suits

On April 30, 2020, Richard Theis filed a stockholder derivative complaint purportedly on behalf of the Company and against Christopher J. Paucek, the Company's CEO, Catherine A. Graham, the Company's former CFO, and the Company's board of directors in the United States District Court for the Southern District of New York, with docket number 20-cv-3360. The complaint alleges claims for breaches of fiduciary duty, insider sales and misappropriation of information, unjust enrichment, and violations of Section 14(a) of the Exchange Act, based upon allegedly false and misleading statements regarding the Company's business prospects and financial projections. On July 22, 2020, the court entered a joint stipulation staying the case pending resolution of the securities class action. On January 5, 2022, the court entered a joint stipulation staying the case for sixty days. Due to the complex nature of the legal and factual issues involved, the outcome of this matter is not presently determinable.

On August 21, 2020, Thomas Lucey filed a stockholder derivative complaint purportedly on behalf of the Company and against Christopher J. Paucek, the Company's CEO, Catherine A. Graham, the Company's former CFO, Harsha Mokkarala, the Company's former Chief Marketing Officer and the Company's board of directors in the United States District Court for the District of Maryland, with docket number 1:20-cv-02424-GLR. The complaint alleges claims for breaches of fiduciary duty, insider trading, and contribution for alleged violations of Sections 10(b) and 21D of the Exchange Act, based upon allegedly false and misleading statements regarding the Company's business prospects and financial projections. On September 3, 2020, the court entered a joint stipulation staying the case pending resolution of the securities class action. On January 5, 2022, the court entered a joint stipulation staying the case for sixty days. Due to the complex nature of the legal and factual issues involved, the outcome of this matter is not presently determinable.

On November 30, 2020, Leo Shumacher filed a stockholder derivative complaint purportedly on behalf of the Company and against Christopher J. Paucek, the Company's CEO, Catherine A. Graham, the Company's former CFO, Harsha Mokkarala, the Company's former Chief Marketing Officer, and the Company's board of directors in the Court of Chancery of

7. Commitments and Contingencies (Continued)

the State of Delaware, with docket number 2020-1019-AGB. The complaint alleges claims for breaches of fiduciary duty and unjust enrichment, based upon allegedly false and misleading statements regarding the Company's business prospects and financial projections. On January 6, 2021, the court entered a joint stipulation staying the case pending resolution of the securities class action. On January 10, 2022, the court entered a joint stipulation staying the case for sixty days. Due to the complex nature of the legal and factual issues involved, the outcome of this matter is not presently determinable.

Marketing and Sales Commitments

Certain agreements entered into between the Company and its university clients in the Degree Program Segment require the Company to commit to meet certain staffing and spending investment thresholds related to marketing and sales activities. In addition, certain agreements in the Degree Program Segment require the Company to invest up to agreed-upon levels in marketing the programs to achieve specified program performance. The Company believes it is currently in compliance with all such commitments.

Future Minimum Payments to University Clients

Pursuant to certain of the Company's contracts in the Degree Program Segment, the Company has made, or is obligated to make, payments to university clients in exchange for contract extensions and various marketing and other rights. Generally, these amounts are capitalized as other assets on the Company's consolidated balance sheets, and amortized as contra revenue over the life of the contract, commencing on the later of when payment is due or when contract revenue recognition begins.

The following table presents the estimated future minimum payments due to university clients as of December 31, 2021.

	Future Minimum Payments
	(in thousands)
2022	$ 1,725
2023	625
2024	625
2025	625
2026	625
Thereafter	1,900
Total future minimum payments to university clients	$ 6,125

Contingent Payments

The Company has entered into agreements with certain of its university clients in the Degree Program Segment that require the Company to make future minimum payments in the event that certain program metrics are not achieved on an annual basis. The Company recognizes any estimated contingent payments under these agreements as contra revenue over the period to which they relate, and records a liability in other current liabilities on the consolidated balance sheets.

In the first quarter of 2019, the Company entered into an agreement to make investments in an education technology company of up to $15.0 million, upon demand by the investee. During the second quarter of 2021, the Company sold its investment in this education technology company and was released from any further obligation to make additional investments.

8. Leases

The Company leases facilities under non-cancellable operating leases primarily in the United States, South Africa, the United Kingdom and Canada. The Company's operating leases have remaining lease terms of between less than one to 12 years, some of which include options to extend the leases for up to five years, and some of which include options to terminate the leases within one year. These options to extend the terms of the Company's operating leases were not deemed to be reasonably certain of exercise as of lease commencement and are therefore not included in the determination of their respective non-cancellable lease terms. The future lease payments due under non-cancellable operating lease arrangements contain fixed rent increases over the term of the lease. The Company also leases office equipment under non-cancellable leases.

8. Leases (Continued)

In October 2020, the Company entered into an agreement with an unrelated party to sublease a portion of the Company's office space in the United States. As of December 31, 2021, this sublease was classified as an operating lease and had a remaining term of 1.8 years, with scheduled annual rent increases and no option to extend or renew the sublease term. Sublease income is recognized on a straight-line basis over the sublease term as a reduction to expense incurred by the Company under the associated head lease.

In August 2021, the Company entered into an agreement with an unrelated party to sublease a portion of the Company's office space in Denver, Colorado, as part of its overall real estate management strategy. As of December 31, 2021, this sublease was classified as an operating lease and had a remaining term of 2.9 years with scheduled annual rent increases and no option to extend or renew the sublease term. Sublease income is recognized on a straight-line basis over the sublease term as a reduction to expense incurred by the Company under the associated master lease. In connection with the execution of this agreement, the Company recognized a loss on sublease of $4.8 million in the third quarter of 2021.

The following table presents the components of lease expense on the Company's consolidated statements of operations and comprehensive loss for each of the periods indicated.

	Year Ended December 31,	
	2021	2020
	(in thousands)	
Operating lease expense	$ 18,933	$ 15,153
Short-term lease expense	185	362
Variable lease expense	6,279	5,837
Sublease income	(489)	(36)
Total lease expense	$ 24,908	$ 21,316

As of December 31, 2021, for the Company's operating leases, the weighted-average remaining lease term was 7.7 years and the weighted-average discount rate was 11.2%. For the years ended December 31, 2021 and 2020, cash paid for amounts included in the measurement of operating lease liabilities was $21.7 million and $17.3 million, respectively. For the years ended December 31, 2021 and 2020, lease liabilities arising from obtaining right-of-use assets were $28.0 million and $26.7 million, respectively.

The following table presents the maturities of the Company's operating lease liabilities as of the date indicated, and excludes the impact of future sublease income totaling $4.4 million in aggregate.

	December 31, 2021
	(in thousands)
2022	$ 24,200
2023	21,789
2024	21,535
2025	17,716
2026	18,229
Thereafter	69,674
Total lease payments	173,143
Less: imputed interest	(60,492)
Total lease liability	$ 112,651

As of December 31, 2021, the Company had additional operating leases for facilities that have not yet commenced with future minimum lease payments of approximately $5.8 million. Each of these operating leases will commence during the fiscal year ending 2022 and have lease terms of approximately 8 years.

9. Debt

The following table presents the components of outstanding long-term debt on the Company's consolidated balance sheets as of each of the dates indicated.

	December 31, 2021	December 31, 2020
	(in thousands)	
Term loan facilities	$ 572,374	$ —
Convertible senior notes	380,000	380,000
Deferred government grant obligations	3,500	3,500
Other borrowings	4,423	1,343
Less: unamortized debt discount and issuance costs	(107,777)	(111,043)
Total debt	852,520	273,800
Less: current portion of long-term debt	(7,204)	(627)
Total long-term debt	$ 845,316	$ 273,173

The Company believes the carrying value of its long-term debt approximates the fair value of the debt as the terms and interest rates approximate the market rates, other than the 2.25% convertible senior notes due 2025 (the "Notes"), which had an estimated fair value of $403.3 million and $616.6 million as of December 31, 2021 and 2020, respectively. Each of the Company's long-term debt instruments were classified as Level 2 within the fair value hierarchy.

The Company's cash interest payments, net of amounts capitalized, were $25.5 million, $10.8 million and $5.3 million for the years ended December 31, 2021, 2020 and 2019, respectively.

Term Loan Credit and Guaranty Agreement

The Company entered into a Term Loan Credit and Guaranty Agreement, dated June 28, 2021 (the "Term Loan Agreement"), among the Company, as borrower, the subsidiaries of the Company party thereto, as guarantors, the lenders party thereto, and Alter Domus (US) LLC as administrative agent and collateral agent. Pursuant to the Term Loan Agreement, the lenders thereunder made term loans to the Company on June 29, 2021 (the "Funding Date") in the aggregate principal amount of $475 million (the "Term Loan Facilities"). The Term Loan Facilities have an initial maturity date of December 28, 2024 (the "Maturity Date"). Commencing on the Funding Date, loans under the Term Loan Facilities will bear interest at a per annum rate equal to a base rate or adjusted Eurodollar rate, as applicable, plus the applicable margin of 4.75% in the case of the base rate loans and 5.75% in the case of the Eurodollar loans. The Term Loan Agreement requires the Company to make quarterly principal repayments equal to 0.25% of the $475 million aggregate principal amount, beginning September 2021. If the loans under the Term Loan Facilities are prepaid prior to the second anniversary, subject to certain customary exceptions, the Company shall pay the Applicable Premium (as defined in the Term Loan Agreement) on the amount of the loans so prepaid.

On November 4, 2021, the Company entered into a First Amendment to Term Loan Credit and Guaranty Agreement and a Joinder Agreement, which amended the Term Loan Agreement (collectively, the "Amended Term Loan Facility") primarily to provide for an incremental facility to the Company in an original principal amount of $100 million. The Company is required to make quarterly principal repayments equal to 0.25% of this original principal amount beginning in December 2021. The proceeds of the Amended Term Loan Facility may be used for general corporate purposes.

The associated effective interest rate of the Amended Term Loan Facility for the year ended December 31, 2021 was approximately 7.56% and the associated interest expense was approximately $19.5 million.

The obligations under the Term Loan Agreement are guaranteed by certain of the Company's subsidiaries (the Company and the guarantors, collectively, the "Credit Parties"). The obligations under the Term Loan Agreement are secured, subject to customary permitted liens and other agreed-upon exceptions, by a perfected security interest in all tangible and intangible assets of the Credit Parties, except for certain customary excluded assets.

9. Debt (Continued)

The Term Loan Agreement contains customary affirmative covenants, including, among others, the provision of annual and quarterly financial statements and compliance certificates, maintenance of property, insurance, compliance with laws and environmental matters. The Term Loan Agreement contains customary negative covenants, including, among others, restrictions on the incurrence of indebtedness, granting of liens, making investments and acquisitions, paying dividends, repurchases of equity interests in the Company and entering into affiliate transactions and asset sales. The Term Loan Agreement contains a financial covenant that requires the Company to maintain minimum Recurring Revenues (as defined in the Term Loan Agreement) as of the last day of any period of four consecutive fiscal quarters of the Company commencing with fiscal quarter ending September 30, 2021 through the Maturity Date. The Term Loan Agreement also provides for customary events of default, including, among others: non-payment of obligations; bankruptcy or insolvency event; failure to comply with covenants; breach of representations or warranties; defaults on other material indebtedness; impairment of any lien on any material portion of the Collateral (as defined in the Term Loan Agreement); failure of any material provision of the Term Loan Agreement or any guaranty to remain in full force and effect; a change of control of the Company; and material judgment defaults. The occurrence of an event of default could result in the acceleration of obligations under the Term Loan Agreement.

If an event of default under the Term Loan Agreement occurs and is continuing, then, at the request (or with the consent) of the lenders holding a majority of the commitments and loans under the Term Loan Agreement, upon notice by the administrative agent to the borrowers, the obligations under the Term Loan Agreement shall become immediately due and payable. In addition, if the Credit Parties become the subject of voluntary or involuntary proceedings under any bankruptcy, insolvency or similar law, then any outstanding obligations under the Term Loan Agreement will automatically become immediately due and payable.

Credit Agreement

On June 25, 2020, the Company entered into a credit agreement (the “Credit Agreement”) with Morgan Stanley Senior Funding, Inc., as administrative agent and collateral agent, and certain other lenders party thereto that provided for $50 million in revolving loans (the “Loans”). The Credit Agreement allowed for incremental borrowings from time to time in an aggregate amount for all such incremental amounts not to exceed (i) the lesser of (x) $50 million and (y) an amount such that the aggregate principal amount of the lenders’ commitments under the revolving credit facility does not exceed $100 million, plus (ii) certain specified prepayments of indebtedness, plus (iii) an unlimited amount subject to satisfaction of a leverage ratio based compliance test.

The Loans bore interest, at the Company’s option, at variable rates based on (i) a customary base rate plus an applicable margin of 2.75% or (ii) an adjusted LIBOR rate (with a floor of 0.00%) for the interest period relevant to such borrowing plus an applicable margin of 3.75%. In connection with entering into the Term Loan Agreement in June 2021, the Company terminated the Credit Agreement and recognized a loss on debt extinguishment of $1.1 million in connection with the write-off of previously capitalized deferred financing costs and associated fees.

Convertible Senior Notes

In April 2020, the Company issued the Notes in an aggregate principal amount of $380 million, including the exercise by the initial purchasers of an option to purchase additional Notes, in a private placement to qualified institutional buyers under Rule 144A of the Securities Act of 1933, as amended. The net proceeds from the offering of the Notes were approximately $369.6 million after deducting the initial purchasers’ discounts, commissions and offering expenses payable by the Company.

The Notes are governed by an indenture (the “Indenture”) between the Company and Wilmington Trust, National Association, as trustee. The Notes bear interest at a rate of 2.25% per annum, payable semi-annually in arrears on May 1 and November 1 of each year, beginning on November 1, 2020. The Notes will mature on May 1, 2025, unless earlier repurchased, redeemed or converted. The interest expense related to the Notes, including amortization of the debt discount and debt issuance costs, was $30.9 million and $19.8 million for the years ended December 31, 2021 and 2020, respectively. The associated effective interest rate of the Notes was approximately 11.0% for each of the years ended December 31, 2021 and 2020.

The Notes are the senior, unsecured obligations of the Company and are equal in right of payment with the Company’s senior unsecured indebtedness, senior in right of payment to the Company’s indebtedness that is expressly subordinated to the Notes, effectively subordinated to the Company’s senior secured indebtedness (including indebtedness under the Term Loan Facilities), to the extent of the value of the collateral securing that indebtedness, and structurally subordinated to all indebtedness and other liabilities, including trade payables, and (to the extent the Company is not a holder thereof) preferred equity, if any, of the Company’s subsidiaries.

9. Debt (Continued)

In accounting for the issuance of the Notes, the Company separated the Notes into liability and equity components. The carrying amount of the liability component was calculated using a discount rate of 10.3%, which was determined by measuring the fair value of a similar debt instrument that does not have an associated convertible feature. The carrying amount of the equity component representing the conversion option, excluding debt issuance costs, was $117.8 million and was determined by deducting the fair value of the liability component from the par value of the Notes. The equity component is not remeasured as long as it continues to meet the conditions for equity classification. The Company allocated debt issuance costs of $7.2 million and $3.2 million to the debt and equity components, respectively. The excess of the principal amount of the liability component over its carrying amount, inclusive of debt issuance costs, represents the debt discount, which is amortized to interest expense at an annual effective interest rate over the contractual term of the Notes. As of December 31, 2021 and 2020, the unamortized debt discount was $88.7 million and $111.0 million, respectively, and the net carrying amount of the liability component of the Notes was $291.3 million and $269.0 million.

Holders may convert their Notes at their option in the following circumstances:

- during any calendar quarter commencing after the calendar quarter ending on September 30, 2020 (and only during such calendar quarter), if the last reported sale price per share of the Company's common stock, exceeds 130% of the conversion price for each of at least 20 trading days, whether or not consecutive, during the 30 consecutive trading days ending on, and including, the last trading day of the immediately preceding calendar quarter;
- during the five consecutive business days immediately after any 10 consecutive trading day period (such 10 consecutive trading day period, the "measurement period") in which the trading price per $1,000 principal amount of Notes for each trading day of the measurement period was less than 98% of the product of the last reported sale price per share of the Company's common stock on such trading day and the conversion rate on such trading day;
- upon the occurrence of certain corporate events or distributions on the Company's common stock, as provided in the Indenture;
- if the Company calls such Notes for redemption; and
- at any time from, and including, November 1, 2024 until the close of business on the second scheduled trading day immediately before the maturity date.

The initial conversion rate for the Notes is 35.3773 shares of the Company's common stock per $1,000 principal amount of Notes, which represents an initial conversion price of approximately $28.27 per share of the Company's common stock, and is subject to adjustment upon the occurrence of certain specified events as set forth in the Indenture. Upon conversion, the Company will pay or deliver, as applicable, cash, shares of the Company's common stock or a combination of cash and shares of the Company's common stock, at the Company's election. In the event of the Company calling the Notes for redemption or the holders of the Notes electing to convert their Notes, the Company will determine whether to settle in cash, common stock or a combination thereof. Upon the occurrence of a "make-whole fundamental change" (as defined in the Indenture), the Company will in certain circumstances increase the conversion rate for a specified period of time. As of December 31, 2021, the if-converted value of the Notes did not exceed the principal amount.

In addition, upon the occurrence of a "fundamental change" (as defined in the Indenture), holders of the Notes may require the Company to repurchase their Notes at a cash repurchase price equal to the principal amount of the Notes to be repurchased, plus accrued and unpaid interest, if any.

The Notes will be redeemable, in whole or in part, at the Company's option at any time, and from time to time, on or after May 5, 2023 and on or before the 40th scheduled trading day immediately before the maturity date, at a cash redemption price equal to the principal amount of the Notes to be redeemed, plus accrued and unpaid interest, if any, but only if the last reported sale price per share of the Company's common stock exceeds 130% of the conversion price on (i) each of at least 20 trading days, whether or not consecutive, during the 30 consecutive trading days ending on, and including, the trading day immediately before the date the Company sends the related redemption notice, and (ii) the trading day immediately before the date the Company sends such notice. In addition, calling any Note for redemption will constitute a "make-whole fundamental change" with respect to that Note, in which case the conversion rate applicable to the conversion of that Note will be increased in certain circumstances if such Note is converted after it is called for redemption. No sinking fund is provided for the Notes.

9. Debt (Continued)

As of December 31, 2021, the conditions allowing holders of the Notes to convert had not been met and the Company has the right under the Indenture to determine the method of settlement at the time of conversion, and the Notes, therefore, are classified as a non-current on the consolidated balance sheets.

In connection with the Notes, the Company entered into privately negotiated capped call transactions (the "Capped Call Transactions") with certain counterparties. The Capped Call Transactions are generally expected to reduce potential dilution to the Company's common stock upon any conversion of Notes and/or offset any cash payments the Company is required to make in excess of the principal amount of converted Notes, as the case may be, with such reduction and/or offset subject to a cap, based on the cap price of the Capped Call Transactions. The cap price of the Capped Call Transactions is initially $44.34 per share. The cost of the Capped Call Transactions was approximately $50.5 million.

In April 2020, the Company used a portion of the proceeds from the sale of the Notes to repay in full all amounts outstanding, and discharge all obligations in respect of, the $250 million senior secured term loan facility. The Company intends to use the remaining net proceeds from the sale of the Notes for working capital or other general corporate purposes, which may include capital expenditures, potential acquisitions and strategic transactions.

Deferred Government Grant Obligations

Government grants awarded to the Company in the form of forgivable loans are recorded within long-term debt on the Company's consolidated balance sheets until all contingencies are resolved and the grants are determined to be realized. The Company has a total of two outstanding conditional loan agreements with Prince George's County, Maryland and the State of Maryland for an aggregate amount of $3.5 million, each bearing an interest rate of 3% per annum. These agreements are conditional loan obligations that may be forgiven, provided that the Company attains certain conditions related to employment levels at 2U's Lanham, Maryland headquarters.

In July 2020, the Company amended its conditional loan agreement with Prince George's County to modify the terms of the employment level thresholds. The conditional loan with Prince George's County has a maturity date of June 22, 2027.

In January 2021, the Company amended its conditional loan agreement with the State of Maryland to modify the terms of the employment level thresholds and extend the maturity date to June 30, 2028.

The interest expense related to these loans for the years ended December 31, 2021 and 2020 was immaterial. As of December 31, 2021 and 2020, the Company's combined accrued interest balance associated with the deferred government grant obligations was $0.5 million and $0.4 million, respectively.

Letters of Credit

Certain of the Company's operating lease agreements entered into require security deposits in the form of cash or an unconditional, irrevocable letter of credit. As of December 31, 2021, the Company has entered into standby letters of credit totaling $16.2 million as security deposits for the applicable leased facilities and in connection with the deferred government grant obligations.

The Company maintains restricted cash as collateral for standby letters of credit for the Company's leased facilities and in connection with the deferred government grant obligations.

9. Debt (Continued)

Future Principal Payments

Future principal payments under the Amended Term Loan Facility, the Notes, and the government grants, as of the date indicated are as follows:

	December 31, 2021
	(in thousands)
2022	$ 5,753
2023	5,753
2024	560,869
2025	380,000
2026	—
Thereafter*	3,500
Total future principal payments	$ 955,875

* Amounts represent conditional loan obligations that may be forgiven, provided that the Company attains certain conditions related to employment levels at 2U's Lanham, Maryland headquarters.

10. Other Income (Expense)

The following table presents the components of other income (expense) on the Company's consolidated statements of operations and comprehensive loss for each of the periods indicated.

	Year Ended December 31,		
	2021	2020	2019
		(in thousands)	
Other income (expense):			
Gain on sale of investment	$ 27,762	$ —	$ —
Foreign currency loss	(2,491)	(1,429)	(707)
Other	(2,947)	—	—
Total	$ 22,324	$ (1,429)	$ (707)

During the year ended December 31, 2021, the Company recorded a gain of $27.8 million on the sale of its interest in an education technology company. Refer to Note 7 for further information.

11. Income Taxes

The following table presents the components of loss before income taxes on the Company's consolidated statements of operations and comprehensive loss for each of the periods indicated.

	Year Ended December 31,		
	2021	2020	2019
		(in thousands)	
Loss before income taxes:			
United States	$ (172,856)	$ (204,522)	$ (239,629)
Foreign	(23,106)	(13,476)	(15,453)
Total	$ (195,962)	$ (217,998)	$ (255,082)

11. Income Taxes (Continued)

The following table presents the components of the income tax benefit (provision) on the Company's consolidated statements of operations and comprehensive loss for each of the periods indicated.

	Year Ended December 31,		
	2021	2020	2019
		(in thousands)	
Current income tax (provision) benefit:			
United States federal and state	$ (240)	$ (347)	$ (97)
Foreign	(636)	(249)	3
Total current income tax provision	$ (876)	$ (596)	$ (94)
Deferred income tax (provision) benefit:			
United States federal and state	$ (389)	$ —	$ 17,459
Foreign	2,461	2,110	2,495
Total deferred income tax benefit	$ 2,072	$ 2,110	$ 19,954
Total income tax benefit	$ 1,196	$ 1,514	$ 19,860

The following table presents a reconciliation between the Company's statutory federal income tax rate and the effective tax rate for each of the periods indicated.

	Year Ended December 31,		
	2021	2020	2019
U.S. statutory federal income tax rate	21.0 %	21.0 %	21.0 %
Increase (decrease) resulting from:			
U.S. state income taxes, net of federal benefits	4.4	5.0	4.2
Foreign tax rate differential	0.1	0.3	0.2
Non-deductible expenses	(0.4)	(0.4)	(0.7)
Non-deductible compensation	(6.7)	(2.0)	(0.4)
Stock-based compensation	6.7	0.7	0.5
Change in valuation allowance	(26.5)	(23.9)	(10.9)
Change in tax rate	1.0	0.1	—
Non-deductible impairment	—	—	(5.8)
Other	1.0	(0.1)	(0.3)
Effective tax rate	0.6 %	0.7 %	7.8 %

11. Income Taxes (Continued)

The following table presents the significant components of deferred tax assets and liabilities on the Company's consolidated balance sheets as of each of the dates indicated.

	As of December 31,	
	2021	2020
	(in thousands)	
Deferred tax assets:		
Accrued expenses and other	$ 12,095	$ 8,772
Accrued compensation and related benefits	10,285	12,552
Property and equipment	100	—
Stock-based compensation	21,729	18,811
Deferred income	2,096	1,113
Lease liability	24,463	24,775
Interest expense carryforwards	12,868	5,393
Foreign net operating loss carryforwards	6,981	3,499
U.S. net operating loss carryforwards	208,585	186,089
Valuation allowance	(190,779)	(137,767)
Total deferred tax assets	$ 108,423	$ 123,237
Deferred tax liabilities:		
Prepaid expenses and other	$ (322)	$ (197)
Property and equipment	—	(1,684)
Right-of-use assets	(15,310)	(16,116)
Intangibles	(70,865)	(79,164)
Deferred rent	(414)	(912)
Nondeductible interest on debt discount	(22,083)	(27,974)
Total deferred tax liabilities	(108,994)	(126,047)
Net deferred tax liabilities	$ (571)	$ (2,810)

As of December 31, 2021, the Company had a U.S. net operating loss ("NOL") carryforward of approximately $793.9 million, of which $265.0 million expires between 2029 and 2037. In accordance with the Tax Cuts and Jobs Act of 2017 (the "Tax Act"), U.S. NOLs arising in a tax year ending after 2017 will not expire. The Company has generated $528.9 million of U.S. NOLs in tax years ending after 2017. The gross amount of the state NOL carryforwards is equal to or less than the federal NOL carryforwards and expires over various periods based on individual state tax laws. The Company also has an NOL carryforward of $27.3 million in its foreign jurisdictions, of which $1.2 million begins to expire in 2038 and the remainder will not expire. A full valuation allowance has been established to offset its net deferred tax assets in the U.S., and certain foreign jurisdictions as the Company has not generated taxable income since inception and does not have sufficient deferred tax liabilities to recover the deferred tax assets in these jurisdictions. For the year ended December 31, 2021, the beginning valuation allowance in Australia of $0.8 million was released as management has concluded, based on the evaluation of the positive and negative evidence, that the deferred tax assets are more likely than not to be realizable. The total increase in the valuation allowance was $53.0 million for the year ended December 31, 2021. The utilization of the NOL carryforwards to reduce future income taxes will depend on the Company's ability to generate sufficient taxable income prior to the expiration of the NOL carryforwards. Under the provisions of Internal Revenue Code Section 382, certain substantial changes in the Company's ownership may result in a limitation on the amount of U.S. net operating loss carryforwards that could be utilized annually to offset future taxable income and taxes payable. The Company does not expect such limitation, if any, to impact the use of the net operating losses prior to their expiration.

The Company recorded an income tax expense of approximately $0.4 million for the year ended December 31, 2021 related to recording of a U.S. deferred tax liability. The deferred tax liability was recorded to account for the book vs. tax basis difference related to the acquired edX indefinite lived intangibles (including goodwill), also known as a "naked credit". The deferred tax liability was excluded from sources of future taxable income available to realize definite lived deferred tax assets, as the timing of its reversal cannot be predicted due to the indefinite life of the intangibles. In accordance with the Tax Act,

11. Income Taxes (Continued)

losses generated beginning with the 2018 tax year may be carried forward indefinitely for U.S. federal tax purposes, however utilization is limited to offsetting 80% of taxable income in future years. Thus, 80% of the U.S. deferred tax liability related to the edX indefinite lived intangibles was able to be used as a source of income to realize the indefinite lived deferred tax assets as of December 31, 2021.

A one-time tax benefit of approximately $17.5 million related to the acquisition of Trilogy was included in the Company's income tax benefit for the year ended December 31, 2019. This one-time benefit relates to the release of the Company's tax valuation allowance that was no longer needed as a result of recognizing an additional net deferred tax liability, due to the acquisition of Trilogy.

As of December 31, 2021 and 2020, the Company has not recognized any amounts for uncertain tax positions.

The Company has analyzed its filing positions in all significant federal, state and foreign jurisdictions where it is required to file income tax returns, as well as open tax years in these jurisdictions. With few exceptions, the Company is no longer subject to U.S. federal, state and local tax examinations by tax authorities for the years prior to 2018, though the NOL carryforwards can be adjusted upon audit and could impact taxes owed in open tax years. No income tax returns are currently under examination by the taxing authorities.

The Tax Act includes Global Intangible Low-Taxed Income ("GILTI") provisions that require a company to include in its U.S. income tax return foreign subsidiary earnings in excess of an allowable return on the foreign subsidiary's tangible assets. Due to foreign subsidiary losses, this provision did not apply to the Company in 2021. Another significant section of the Tax Act, the Base Erosion Anti-Abuse Tax ("BEAT"), did not apply to the Company's 2021 tax year as the Company's base erosion payments are less than 3% of the Company's total deductions. As these taxes may become applicable in the future, the Company will continue to monitor the potential impact.

12. Stockholders' Equity

Common Stock

As of December 31, 2021, the Company was authorized to issue 205,000,000 total shares of capital stock, consisting of 200,000,000 shares of common stock and 5,000,000 shares of preferred stock. As of December 31, 2021, there were 75,754,663 shares of common stock outstanding, and the Company had reserved a total of 24,352,021 of its authorized shares of common stock for future issuance as follows:

	Shares Reserved for Future Issuance
Outstanding restricted stock units	2,613,063
Outstanding performance restricted stock units	1,121,277
Outstanding stock options	3,477,439
Reserved for convertible senior notes	17,140,242
Total shares of common stock reserved for future issuance	24,352,021

On August 6, 2020, the Company sold 6,800,000 shares of the Company's common stock to the public. The Company received net proceeds of $299.8 million, which the Company uses for working capital and other general corporate purposes. On May 22, 2019, the Company issued 4,608,101 shares of common stock in connection with its acquisition of Trilogy. On May 22, 2018, the Company sold 3,833,334 shares of its common stock to the public, including 500,000 shares sold pursuant to the underwriters' over-allotment option, and received net proceeds of $330.9 million.

Stock-Based Compensation

The Company maintains two stock-based compensation plans: the Amended and Restated 2014 Equity Incentive Plan (the "2014 Plan") and the 2008 Stock Incentive Plan (the "2008 Plan" and together with the 2014 Plan, the "Stock Plans"). Upon the effective date of the 2014 Plan in January 2014, the Company ceased using the 2008 Plan to grant new equity awards.

12. Stockholders' Equity (Continued)

2014 Plan

In February 2014, the Company's stockholders approved the 2014 Plan. The 2014 Plan provides for the grant of incentive stock options to the Company's employees and for the grant of nonstatutory stock options, restricted stock awards, restricted stock unit awards, stock appreciation rights, performance stock awards and other forms of stock compensation to the Company's employees, directors and consultants. The 2014 Plan also provides for the grant of performance-based cash awards to the Company's employees, directors and consultants.

A total of 2,800,000 shares of the Company's common stock were initially reserved for issuance pursuant to the 2014 Plan. In addition, the shares reserved for issuance under the 2014 Plan include (a) those shares reserved but unissued under the 2008 Plan, and (b) shares returned to the 2008 Plan as the result of expiration or termination of awards (provided that the maximum number of shares that may be added to the 2014 Plan pursuant to (a) and (b) is 5,943,348 shares). The number of shares of the Company's common stock that may be issued under the 2014 Plan will automatically increase on January 1st of each year, for a period of ten years, from January 1, 2015 continuing through January 1, 2024, by 5% of the total number of shares of the Company's common stock outstanding on December 31st of the preceding calendar year, or a lesser number of shares as may be determined by the Company's board of directors. The shares available for future issuance under the 2014 Plan increased by 3,782,719 and 3,619,344 on January 1, 2022 and 2021, respectively, pursuant to the automatic share reserve increase provision in the 2014 Plan.

In addition, shares subject to outstanding stock awards granted under the 2008 Plan and 2014 Plan that (i) expire or terminate for any reason prior to exercise or settlement; (ii) are forfeited because of the failure to meet a contingency or condition required to vest such shares or otherwise return to the Company; or (iii) are reacquired or withheld (or not issued) to satisfy a tax withholding obligation in connection with an award or to satisfy the purchase price or exercise price of a stock award, return to the 2014 Plan's share reserve and become available for future grant under the 2014 Plan, up to the maximum number of shares of 5,943,348.

As of December 31, 2021, the Company had 7,465,698 shares available for issuance under the 2014 Plan. Further, as of December 31, 2021, under the 2014 Plan, options to purchase 2,593,719 shares of the Company's common stock were outstanding at a weighted-average exercise price of $46.38 per share, and 2,613,063 RSUs and 1,121,277 PRSUs were also outstanding.

2008 Plan

In October 2008, the Company's stockholders approved the Company's 2008 Plan. The 2008 Plan was most recently amended on May 8, 2013. The 2008 Plan provided for the grant of incentive stock options to the Company's employees and the employees of the Company's subsidiaries, and for the grant of nonstatutory stock options, restricted stock awards and deferred stock awards to the Company's employees, directors and consultants. The Company ceased granting equity awards under the 2008 Plan, and accordingly, as of January 30, 2014, no shares were available for future grant under the 2008 Plan. However, the 2008 Plan will continue to govern the terms and conditions of outstanding awards granted thereunder.

As of December 31, 2021, options to purchase 883,720 shares of the Company's common stock were outstanding under the 2008 Plan at a weighted-average exercise price of $6.04 per share.

Employee Stock Purchase Plan

The Company also has an ESPP. The Company's ESPP provides (i) for two offering periods each year and (ii) that the purchase price for shares of the Company's common stock purchased under the ESPP will be 90% of the lesser of the fair market value of the Company's common stock on the purchase date or the fair market value of the Company's common stock on the first day of the offering period. Notwithstanding the foregoing, the compensation committee of the Company's board of directors may exercise its discretion, subject to certain conditions, to make changes to certain aspects of the ESPP including, but not limited to, the length of the offering periods and that the purchase price will be 85% of the lesser of the fair market value of the Company's common stock on the purchase date or the fair market value of 2U's common stock on the first day of the offering period. Participating eligible employees select a rate of payroll deduction between 1% and 15% of their salary or wage compensation received from the Company as in effect at the start of the offering period, with the aggregate purchase limited to a maximum fair market value of $25,000 per employee per year. Participation in the ESPP began on January 1, 2018. The ESPP is intended to qualify as an employee stock purchase plan under Section 423 of the Internal Revenue Code. A maximum of 1,000,000 shares of 2U's common stock may be issued under the ESPP, subject to adjustments for certain capital transactions.

12. Stockholders' Equity (Continued)

During the years ended December 31, 2021 and 2020, an aggregate of 150,685 and 146,570 shares, respectively, of the Company's common stock were purchased in accordance with the ESPP. Net proceeds from the issuance of these shares were $3.6 million and $4.0 million for the years ended December 31, 2021 and 2020, respectively. As of December 31, 2021, 515,709 shares remained available for purchase under the ESPP.

Stock-Based Compensation Expense

The following table presents stock-based compensation expense related to the Stock Plans and the ESPP, contained on the following line items on the Company's consolidated statements of operations and comprehensive loss for each of the periods indicated. The Company accounts for forfeitures as they occur.

	Year Ended December 31,		
	2021	2020	2019
		(in thousands)	
Curriculum and teaching	$ 69	$ 230	$ 45
Servicing and support	15,352	14,033	8,915
Technology and content development	11,832	12,014	8,241
Marketing and sales	6,711	8,217	7,021
General and administrative	63,802	47,548	27,282
Total stock-based compensation expense	$ 97,766	$ 82,042	$ 51,504

Restricted Stock Units

The 2014 Plan provides for the issuance of RSUs to employees and consultants. RSUs generally vest over a three- or four-year period. The terms of these grants under the 2014 Plan, including the vesting periods, are determined by the Company's board of directors or the compensation committee, or a subcommittee thereof.

Throughout 2021 and 2020, the Company granted RSUs under the 2014 Plan to the Company's directors and certain of the Company's employees and certain consultants. The terms of the restricted stock unit grants under the 2014 Plan, including the vesting periods, are determined by the Company's board of directors or the compensation committee thereof. Restricted stock units are generally subject to service-based vesting conditions and vest at various times from the date of the grant, with most restricted stock units vesting in equal annual tranches, generally over a period of three to four years.

The following table presents a summary of the Company's RSU activity for the period indicated.

	Number of Units	Weighted-Average Grant Date Fair Value per Share
Outstanding balance as of December 31, 2020	3,010,019	$ 29.41
Granted	1,470,090	37.07
Vested	(1,480,281)	31.31
Forfeited	(386,765)	31.76
Outstanding balance as of December 31, 2021	2,613,063	$ 32.29

The total compensation cost related to the unvested RSUs not yet recognized as of December 31, 2021 was $56.6 million and will be recognized over a weighted-average period of approximately 1.4 years.

Performance Restricted Stock Units

The 2014 Plan provides for the issuance of PRSUs to employees and consultants. PRSUs generally include both service conditions and market conditions related to total shareholder return targets relative to that of companies comprising the Russell 3000 Index.

12. Stockholders' Equity (Continued)

During the fourth quarter of 2019, the Company granted 1.3 million PRSUs with a weighted-average grant date fair value per share of $22.94 to certain of its employees. These PRSU awards are subject to vesting over a period of three years, based on the Company's stock price achieving predetermined total shareholder return targets relative to that of companies comprising the Russell 3000 Index during each of the one, two and three-year vesting periods. The PRSU award agreements provide that the quantity of units subject to vesting may range from 200% to 0% of the granted quantities, depending on the achievement of market-based targets. The expense recognized each period is determined at the time of grant and not subject to fluctuation due to the achievement of market-based targets. In each of the fourth quarters ending 2020 and 2021, as a result of the achievement of market-based targets for the first and second performance periods of these PRSUs, 200% of the eligible units vested.

During the first quarter of 2020, as part of its annual equity awards cycle, the Company awarded 1.9 million PRSUs with an aggregate intrinsic value of $37.8 million. Of these PRSUs, 0.6 million were granted in January 2020 with a weighted-average grant date fair value per share of $22.45, and 0.6 million were granted in January 2021 with a weighted-average grant date fair value per share of $61.14. These PRSU awards are subject to vesting over respective one year periods, based on the Company's stock price achieving predetermined total shareholder return targets relative to that of companies comprising the Russell 3000 Index. The PRSU award agreements provide that the quantity of units subject to vesting may range from 200% to 0% of the granted quantities for each of the first and second performance periods, depending on the achievement of market-based targets. The expense recognized each period is determined at the time of grant and not subject to fluctuation due to the achievement of market-based targets. In January 2021, as a result of the achievement of market-based targets for the first performance period of these PRSUs, 200% of the granted quantities vested. In January 2022, as a result of not achieving the market-based targets for the second performance period of these PRSUs, 0% of the granted quantities vested. Achievement percentages applicable to each performance period will be determined prior to the grant date.

During the first quarter of 2021, as part of its annual equity awards cycle, the Company awarded 0.4 million PRSUs with an aggregate intrinsic value of $20.0 million. Of these PRSUs, 0.1 million were granted with a weighted-average grant date fair value per share of $40.69. Certain of these PRSU awards are subject to vesting over a period of one year, while certain other of these awards are subject to vesting over a period of three years, all of which are based on the Company's internal financial performance achieving predetermined targets. The PRSU award agreements provide that the quantity of units subject to vesting may range from 200% to 0% of the granted quantities for the first performance period, depending on the achievement of internal financial performance-based targets. The expense recognized each period is estimated at the time of grant and is subject to fluctuation due to the achievement of internal financial performance-based targets. In January 2022, as a result of the achievement of internal financial performance-based targets for the first performance period of these PRSUs, 112.7% of the goals were achieved, and the PRSUs subject to a one-year service period vested. Achievement percentages applicable to each performance period will be determined prior to the grant date.

During the first quarter of 2021, as part of its annual equity awards cycle, the Company granted 0.2 million PRSUs with an aggregate intrinsic value of $9.1 million and a weighted-average grant date fair value of $61.94. These PRSU awards are subject to vesting over a single three-year period, based on the Company's stock price achieving predetermined total shareholder return targets relative to that of companies comprising the Russell 3000 Index. The PRSU award agreements provide that the quantity of units subject to vesting may range from 200% to 0% of the granted quantities for the performance period, depending on the achievement of market-based targets. The expense recognized each period is determined at the time of grant and not subject to fluctuation due to the achievement of market-based targets.

The Company values PRSUs subject to market-based vesting conditions using a Monte Carlo valuation model, which requires the input of subjective assumptions, including the risk-free interest rate, expected life, expected stock price volatility and dividend yield. The risk-free interest rate assumption is based upon observed interest rates for constant maturity U.S. Treasury securities consistent with the performance period. The expected life is consistent with the performance period of the awards. Expected volatility is based on the historical volatility of the Company's common stock over the estimated expected life. The Company assumes no dividend yield because dividends are not expected to be paid in the near future, which is consistent with the Company's history of not declaring or paying dividends to date.

The following table summarizes the assumptions used for estimating the fair values of the PRSUs subject to market-based vesting conditions that were granted for the periods presented.

12. Stockholders' Equity (Continued)

	Year Ended December 31,	
	2021	2020
Risk-free interest rate	0.10% – 0.26%	1.51%
Expected term (years)	1.00 – 3.00	1.00
Expected volatility	85% – 89%	75%
Dividend yield	0%	0%

The following table presents a summary of the Company's PRSU activity for the period indicated.

	Number of Units	Weighted-Average Grant Date Fair Value per Share
Outstanding balance as of December 31, 2020	1,355,296	$ 23.51
Granted	1,916,354	41.10
Vested	(1,928,729)	24.25
Forfeited	(221,644)	42.17
Outstanding balance as of December 31, 2021	1,121,277	$ 48.62

The total compensation cost related to the unvested PRSUs not yet recognized as of December 31, 2021 was $11.5 million and will be recognized over a weighted-average period of approximately 1.3 years.

Stock Options

The Stock Plans provide for the issuance of stock options to employees and consultants. Stock options issued under the Stock Plans generally are exercisable for periods not to exceed 10 years and generally vest over four years.

The terms of stock option grants, including the exercise price per share and vesting periods, are determined by the Company's board of directors or the compensation committee thereof. Stock options are granted at exercise prices of not less than the estimated fair market value of the Company's common stock at the date of grant. Stock options are generally subject to service-based vesting conditions and vest at various times from the date of the grant, with most options vesting in tranches, generally over a period of four years. Stock options granted under the 2014 Plan and the 2008 Plan are subject to service-based vesting conditions, and generally expire ten years from the grant date.

The Company values stock options using the Black-Scholes option pricing model, which requires the input of subjective assumptions, including the risk-free interest rate, expected life of the option, expected stock price volatility and dividend yield. The risk-free interest rate assumption is based upon observed interest rates for constant maturity U.S. Treasury securities consistent with the expected term of the Company's employee stock options. The expected life represents the period of time the stock options are expected to be outstanding and is based on the "simplified method." Under the "simplified method," the expected life of an option is presumed to be the mid-point between the vesting date and the end of the contractual term. The Company uses the "simplified method" due to the lack of sufficient historical exercise data to provide a reasonable basis upon which to otherwise estimate the expected life of the stock options. Expected volatility is based on the historical volatility of the Company's common stock over the estimated expected life of the stock options. The Company assumes no dividend yield because dividends are not expected to be paid in the near future, which is consistent with the Company's history of not declaring or paying dividends to date.

The following table summarizes the assumptions used for estimating the fair value of the stock options granted for the periods presented. No stock options were granted during the year ended December 31, 2021.

12. Stockholders' Equity (Continued)

	Year Ended December 31,	
	2020	2019
Risk-free interest rate	1.5%	1.6% - 2.6%
Expected term (years)	6.04	5.96 - 6.08
Expected volatility	64%	45% - 64%
Dividend yield	0%	0%

The following table presents a summary of the Company's stock option activity for the period indicated.

	Number of Options	Weighted-Average Exercise Price per Share	Weighted-Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in thousands)
Outstanding balance as of December 31, 2020	3,916,867	$ 35.63	5.08	$ 59,906
Granted	—	—	—	
Exercised	(326,430)	21.29	1.68	
Forfeited	(60,388)	55.64		
Expired	(52,610)	68.81		
Outstanding balance as of December 31, 2021	3,477,439	36.13	3.87	16,246
Exercisable as of December 31, 2021	3,154,910	$ 32.62	3.58	$ 16,191

The weighted-average grant date fair value of stock options granted during the years ended December 31, 2020 and 2019 was $11.48 and $28.49 per share, respectively.

The aggregate intrinsic value of options exercised during the years ended December 31, 2021, 2020 and 2019 was $6.8 million, $8.7 million and $15.4 million, respectively.

The total unrecognized compensation cost related to the unvested options as of December 31, 2021 was $8.9 million and will be recognized over a weighted-average period of approximately 1.7 years.

13. Net Loss per Share

Diluted net loss per share is the same as basic net loss per share for all periods presented because the effects of potentially dilutive items were anti-dilutive, given the Company's net loss. The following securities have been excluded from the calculation of weighted-average shares of common stock outstanding because the effect is anti-dilutive for each of the periods indicated.

	Year Ended December 31,		
	2021	2020	2019
Stock options	3,477,439	3,916,867	4,373,895
Restricted stock units	2,613,063	3,010,019	2,281,142
Performance restricted stock units	1,121,277	1,355,296	1,413,773
Shares related to convertible senior notes	13,443,374	3,432,837	—
Total antidilutive securities	20,655,153	11,715,019	8,068,810

The following table presents the calculation of the Company's basic and diluted net loss per share for each of the periods indicated. The calculation of diluted net loss per share reflects the Company's intent to settle conversions of the Notes through a combination settlement, which contemplates repayment in cash of the principal amount and repayment in shares of the Company's common stock of any excess of the conversion value over the principal amount.

13. Net Loss per Share (Continued)

	Year Ended December 31,		
	2021	2020	2019
Numerator (in thousands):			
Net loss	$ (194,766)	$ (216,484)	$ (235,222)
Denominator:			
Weighted-average shares of common stock outstanding, basic and diluted	74,580,115	67,142,976	61,393,666
Net loss per share, basic and diluted	$ (2.61)	$ (3.22)	$ (3.83)

14. Segment and Geographic Information

The Company has two reportable segments: the Degree Program Segment and the Alternative Credential Segment. The Company's reportable segments are determined based on (i) financial information reviewed by the chief operating decision maker, the Chief Executive Officer ("CEO"), (ii) internal management and related reporting structure, and (iii) the basis upon which the CEO makes resource allocation decisions. The Company's Degree Program Segment includes the technology and services provided to nonprofit colleges and universities to enable the online delivery of degree programs. The Company's Alternative Credential Segment includes the premium online executive education programs and technical skills-based boot camps provided through relationships with nonprofit colleges and universities.

Significant Customers

For the year ended December 31, 2021, no university clients accounted for 10% or more of the Company's consolidated revenue. For the year ended December 31, 2020, one university client in the Degree Program Segment accounted for 10% or more of the Company's consolidated revenue, contributing $74.6 million, or approximately 10% of the Company's consolidated revenue. For the year ended December 31, 2019, one university client in the Degree Program Segment accounted for 10% or more of the Company's consolidated revenue, contributing $83.5 million, or approximately 15% of the Company's consolidated revenue.

As of December 31, 2021, two university clients in the Degree Program Segment each accounted for 10% or more of the Company's consolidated accounts receivable, net balance, as follows: $9.8 million and $8.8 million, which equaled 14% and 13% of the Company's consolidated accounts receivable, net balance, respectively. As of December 31, 2020, two university clients in the Degree Program Segment each accounted for 10% or more of the Company's consolidated accounts receivable, net balance, contributing $5.8 million and $5.2 million, or approximately 12% and 11% of the Company's consolidated accounts receivable, net balance, respectively.

14. Segment and Geographic Information (Continued)

Segment Performance

The following table presents financial information regarding each of the Company's reportable segment's results of operations for each of the periods indicated.

	Year Ended December 31,		
	2021	2020	2019
		(in thousands)	
Revenue by segment*			
Degree Program Segment	$ 592,288	$ 486,676	$ 417,206
Alternative Credential Segment	353,394	287,857	157,465
Total revenue	$ 945,682	$ 774,533	$ 574,671
Segment profitability**			
Degree Program Segment	$ 126,141	$ 49,607	$ 5,770
Alternative Credential Segment	(59,564)	(33,534)	(29,716)
Total segment profitability	$ 66,577	$ 16,073	$ (23,946)
Segment profitability margin***			
Degree Program Segment	21 %	10 %	1 %
Alternative Credential Segment	(17)%	(12)%	(19)%
Total segment profitability margin	7 %	2 %	(4)%

* The Company has excluded immaterial amounts of intersegment revenues from the years ended December 31, 2021, 2020 and 2019.

** The Company defines segment profitability as net income or net loss, as applicable, before net interest income (expense), other income (expense), net, taxes, depreciation and amortization expense, deferred revenue fair value adjustments, transaction costs, integration costs, restructuring-related costs, stockholder activism costs, certain litigation-related costs, consisting of fees for certain non-ordinary course litigation and other proceedings, impairment charges, losses on debt extinguishment, and stock-based compensation expense. Some or all of these items may not be applicable in any given reporting period.

*** The Company defines segment profitability margin as segment profitability as a percentage of the respective segment's revenue.

14. Segment and Geographic Information (Continued)

The following table presents a reconciliation of the Company's total segment profitability to net loss for each of the periods indicated.

	Year Ended December 31,		
	2021	2020	2019
		(in thousands)	
Net loss	$ (194,766)	$ (216,484)	$ (235,222)
Adjustments:			
Stock-based compensation expense	97,766	82,042	51,504
Other (income) expense, net	(22,324)	1,429	707
Net interest expense	49,747	25,963	7,619
Income tax benefit	(1,196)	(1,514)	(19,860)
Depreciation and amortization expense	108,448	96,469	69,843
Loss on debt extinguishment	1,101	11,671	—
Impairment charge	—	—	70,379
Other*	27,801	16,497	31,084
Total adjustments	261,343	232,557	211,276
Total segment profitability	$ 66,577	$ 16,073	$ (23,946)

* Includes (i) transaction and integration costs of $16.9 million, $2.3 million and $8.0 million for the years ended December 31, 2021, 2020 and 2019, respectively, (ii) restructuring-related costs of $8.5 million, $6.8 million and $10.8 million for the years ended December 31, 2021, 2020 and 2019, respectively, (iii) stockholder activism and litigation-related costs of $2.4 million, $7.4 million and $1.0 million for the years ended December 31, 2021, 2020 and 2019, respectively, and (iv) deferred revenue fair value adjustments of $11.2 million for the year ended December 31, 2019.

The following table presents the Company's total assets by segment as of each of the dates indicated.

	December 31, 2021	December 31, 2020
	(in thousands)	
Total assets		
Degree Program Segment	$ 546,572	$ 830,706
Alternative Credential Segment	1,562,434	713,558
Total assets	$ 2,109,006	$ 1,544,264

Geographical Information

The Company's non-U.S. revenue is based on the currency of the country in which the university client primarily operates. The Company's non-U.S. revenue was $98.5 million, $73.0 million and $40.8 million for the years ended December 31, 2021, 2020 and 2019, respectively. Substantially all of the Company's non-U.S. revenue for each of the aforementioned periods was sourced from the Alternative Credential Segment's operations outside of the U.S. The Company's long-lived tangible assets in non-U.S. countries as of December 31, 2021 and 2020 totaled approximately $3.3 million and $1.6 million, respectively.

15. Receivables and Contract Liabilities

Trade Accounts Receivable

The Company's trade accounts receivable balances relate to amounts due from students or customers occurring in the normal course of business. Trade accounts receivable balances have a term of less than one year and are included in accounts receivable, net on the Company's consolidated balance sheets. The following table presents the Company's trade accounts receivable in each segment as of each of the dates indicated.

	December 31, 2021	December 31, 2020
	(in thousands)	
Degree Program Segment accounts receivable	$ 31,762	$ 16,424
Degree Program Segment unbilled revenue	4,440	6,072
Alternative Credential Segment accounts receivable	42,771	29,717
Total	78,973	52,213
Less: Provision for credit losses	(11,686)	(5,936)
Trade accounts receivable, net	$ 67,287	$ 46,277

The following table presents the change in provision for credit losses for trade accounts receivable on the Company's consolidated balance sheets for the period indicated.

	Provision for Credit Losses
	(in thousands)
Balance as of December 31, 2020	$ 5,936
Current period provision	6,794
Amounts written off	(157)
Amounts recovered	(874)
Foreign currency translation adjustments	(13)
Balance as of December 31, 2021	$ 11,686

Other Receivables

The Company's other receivables are comprised of amounts due under tuition payment plans with extended payment terms from students enrolled in certain of the Company's alternative credential offerings. These payment plans, which are managed and serviced by third-party providers, are designed to assist students with paying tuition costs after all other student financial assistance and scholarships have been applied. The associated receivables generally have payment terms that range from 12 to 42 months and are recorded net of any implied pricing concessions, which are determined based on collections history, market data and any time value of money component. There are no fees or origination costs included in these receivables. The carrying value of these receivable balances approximate their fair value. The following table presents the components of the Company's other receivables, net, as of each of the dates indicated.

	December 31, 2021	December 31, 2020
	(in thousands)	
Other receivables, amortized cost	$ 52,428	$ 25,587
Less: Provision for credit losses	(1,421)	(179)
Other receivables, net	$ 51,007	$ 25,408
Other receivables, net, current	$ 29,439	$ 1,076
Other receivables, net, non-current	$ 21,568	$ 24,332

15. Receivables and Contract Liabilities (Continued)

The following table presents the change in provision for credit losses for other receivables on the Company's consolidated balance sheets for the period indicated.

	Provision for Credit Losses
	(in thousands)
Balance as of December 31, 2020	$ 179
Current period provision	1,242
Balance as of December 31, 2021	$ 1,421

The Company considers receivables to be past due when amounts contractually due under the extended payment plans have not been paid. As of December 31, 2021, 93% of other receivables, net due under extended payment plans were current.

At the time of origination, the Company categorizes its other receivables using a credit quality indicator based on the credit tier rankings obtained from the third-party providers that manage and service the payment plans. The third-party providers utilize credit rating agency data to determine the credit tier rankings. The Company monitors the collectability of its other receivables on an ongoing basis. The adequacy of the allowance for credit losses is determined through analysis of multiple factors, including industry trends, portfolio performance, and delinquency rates. The following tables present other receivables, at amortized cost including interest accretion, by credit quality indicator and year of origination, as of the dates indicated.

	December 31, 2021				
	Year of Origination				
	2021	2020	2019	2018	Total
	(in thousands)				
Credit Quality Tier					
High	$ 18,466	$ 1,635	$ 24	$ 115	$ 20,240
Mid	14,352	2,992	1,312	392	19,048
Low	8,135	2,802	1,873	330	13,140
Total	$ 40,953	$ 7,429	$ 3,209	$ 837	$ 52,428

	December 31, 2020			
	Year of Origination			
	2020	2019	2018	Total
	(in thousands)			
Credit Quality Tier				
High	$ 9,506	$ 28	$ 104	$ 9,638
Mid	7,821	1,126	356	9,303
Low	4,892	1,453	301	6,646
Total	$ 22,219	$ 2,607	$ 761	$ 25,587

15. Receivables and Contract Liabilities (Continued)

Contract Liabilities

The Company's deferred revenue represents contract liabilities. The Company generally receives payments from Degree Program Segment university clients early in each academic term and from Alternative Credential Segment students, either in full upon registration for the course or in full before the end of the course based on a payment plan, prior to completion of the service period. These payments are recorded as deferred revenue until the services are delivered or until the Company's obligations are otherwise met, at which time revenue is recognized. The following table presents the Company's contract liabilities in each segment as of each of the dates indicated.

	December 31, 2021	December 31, 2020
	(in thousands)	
Degree Program Segment deferred revenue	$ 3,462	$ 1,714
Alternative Credential Segment deferred revenue	88,464	73,779
Total contract liabilities	$ 91,926	$ 75,493

For the Degree Program Segment, revenue recognized during the years ended December 31, 2021 and 2020 that was included in the deferred revenue balance that existed at the end of each preceding year was $1.7 million and $2.2 million, respectively.

For the Alternative Credential Segment, revenue recognized during the years ended December 31, 2021 and 2020 that was included in the deferred revenue balance that existed at the end of each preceding year was $71.9 million and $46.6 million, respectively.

Contract Acquisition Costs

The Degree Program Segment had $0.5 million and $0.5 million of net capitalized contract acquisition costs recorded primarily within other assets, non-current on the Company's consolidated balance sheets as of December 31, 2021 and 2020, respectively. For the years ended December 31, 2021 and 2020, the Company capitalized an immaterial amount of contract acquisition costs and recorded an immaterial amount of associated amortization expense in the Degree Program Segment.

16. Retirement Plan

The Company has established a 401(k) plan for eligible employees to contribute up to 100% of their compensation, limited by the IRS-imposed maximum contribution amount. The Company matches 100% of the first 2% of each employee's contribution, and 50% of the next 4% of each employee's contribution, each plan year. For the years ended December 31, 2021, 2020 and 2019, the Company made employer contributions of $7.8 million, $3.6 million and $3.0 million, respectively.

17. Subsequent Event

Subsequent to year-end and through the date of this filing, the Company has experienced a significant decline in its market capitalization, from $1.5 billion to $0.8 billion. Management is evaluating whether this decline represents a triggering event for assessing the goodwill and indefinite-lived intangible asset balances for impairment in the first quarter of 2022. As of December 31, 2021, the balances of the Company's goodwill and indefinite-lived intangible asset were $834.5 million and $255.0 million, respectively.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we have evaluated the effectiveness of our disclosure controls and procedures pursuant to the Securities Exchange Act of 1934 Rules 13a-15 and 15d-15 as of the end of the period covered by this report. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that these disclosure controls and procedures are effective.

Management's Annual Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting for our company. With the participation of our Chief Executive Officer and Chief Financial Officer, management conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2021 based on the Internal Control—Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation, management concluded that our internal control over financial reporting was effective as of December 31, 2021.

We completed the edX Acquisition on November 16, 2021, which represented 1% of our total assets as of December 31, 2021 and 1% of our total revenue for the year ended December 31, 2021. As the edX Acquisition was completed during the fourth quarter of 2021, the scope of our evaluation of the effectiveness of our internal control over financial reporting does not include edX.

Our independent registered public accounting firm, KPMG LLP, has issued an audit report on the effectiveness of our internal control over financial reporting, which appears in Part II, Item 8 of this Annual Report on Form 10-K.

Changes in Internal Control Over Financial Reporting

We made no changes in our internal control over financial reporting during the three months ended December 31, 2021 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting, other than changes in controls to integrate the business we acquired in the edX acquisition.

Item 9B. Other Information

(a) On November 4, 2021, we entered into (i) a First Amendment to Term Loan Credit and Guaranty Agreement (the "First Amendment") with certain of our subsidiaries, Alter Domus (US) LLC, as administrative agent, and the lenders party thereto and (ii) a Joinder Agreement (collectively, with the First Amendment, the "Facility Amendments") with Alter Domus (US) LLC, as administrative agent, and the lenders party thereto. The Facility Amendments amend the Term Loan Agreement primarily to provide for an incremental facility to us in an original principal amount of $100 million, the proceeds of which may be used for general corporate purposes.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

Not applicable.

PART III

We will file a definitive Proxy Statement for our 2022 Annual Meeting of Stockholders or our 2022 Proxy Statement with the SEC, pursuant to Regulation 14A, not later than 120 days after the end of our fiscal year. Accordingly, certain information required by Part III has been omitted under General Instruction G(3) to Form 10-K. Only those sections of the 2022 Proxy Statement that specifically address the items set forth herein are incorporated by reference.

Item 10. Directors, Executive Officers and Corporate Governance

The information required by Item 10 will be contained in our 2022 Proxy Statement under the captions “Board of Directors and Committees,” “Election of Directors,” “Management,” “Code of Business Conduct and Ethics for Employees, Executive Officers and Directors” and, if applicable, “Delinquent Section 16(a) Reports” or in an amendment on Form 10-K/A and is incorporated herein by reference.

Item 11. Executive Compensation

The information required by Item 11 will be contained in our 2022 Proxy Statement under the captions “Executive Compensation,” “Director Compensation” and “Compensation Committee Interlocks and Insider Participation” or in an amendment on Form 10-K/A and is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required by Item 12 will be contained in our 2022 Proxy Statement under the captions “Security Ownership of Certain Beneficial Owners and Management” and “Securities Authorized for Issuance under Equity Compensation Plans” or in an amendment on Form 10-K/A and is incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required by Item 13 will be contained in our 2022 Proxy Statement under the captions “Transactions with Related Parties” and “Director Independence” or in an amendment on Form 10-K/A and is incorporated herein by reference.

Item 14. Principal Accounting Fees and Services

The information required by Item 14 will be contained in our 2022 Proxy Statement under the caption “Independent Registered Public Accounting Firm Fees” and is incorporated herein by reference.

PART IV

Item 15. Exhibits, Financial Statement Schedules

(a) Exhibits

See the Exhibit Index immediately following the signature page of this Annual Report on Form 10-K.

(b) Financial Statement Schedules

Schedule II—Valuation and Qualifying Accounts (in thousands)

	Balance at Beginning of Period	Additions Charged to Expense/Against Revenue	Deductions	Balance at End of Period
Provision for credit losses for trade accounts receivable:				
Year ended December 31, 2021	$ 5,936	$ 6,794	$ (1,044)	$ 11,686
Year ended December 31, 2020	1,331	4,642	(37)	5,936
Year ended December 31, 2019	$ 257	$ 1,425	$ (351)	$ 1,331

	Balance at Beginning of Period	Additions	Deductions	Balance at End of Period
Income tax valuation allowance:				
Year ended December 31, 2021	$ 137,767	$ 53,012	$ —	$ 190,779
Year ended December 31, 2020	116,244	21,523	—	137,767
Year ended December 31, 2019	$ 88,061	$ 45,642	$ (17,459)	$ 116,244

Other financial statement schedules have been omitted because they are not applicable, not material, or the required information is presented in the Consolidated Financial Statements or notes thereto.

Item 16. Form 10-K Summary

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized:

2U, Inc.
March 01, 2022

By:	/s/ CHRISTOPHER J. PAUCEK	
	Name:	Christopher J. Paucek
	Title:	*Chief Executive Officer and Director*

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Christopher J. Paucek, Paul S. Lalljie and Matthew J. Norden, or each of them, as his or her true and lawful attorneys-in-fact and agents, each with the full power of substitution, for him or her and in his or her name, place or stead, in any and all capacities, to sign any amendments to this report and to file the same, with exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that either of said attorneys-in-fact, or substitute or substitutes, may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this Annual Report on Form 10-K has been signed by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ CHRISTOPHER J. PAUCEK Christopher J. Paucek	Chief Executive Officer and Director (Principal Executive Officer)	March 1, 2022
/s/ PAUL S. LALLJIE Paul S. Lalljie	Chief Financial Officer (Principal Financial Officer)	March 1, 2022
/s/ JOHN B. ELLIS John B. Ellis	Chief Accounting Officer (Principal Accounting Officer)	March 1, 2022
/s/ PAUL A. MAEDER Paul A. Maeder	Director and Chairman of the Board	March 1, 2022
/s/ TIMOTHY M. HALEY Timothy M. Haley	Director	March 1, 2022
/s/ JOHN M. LARSON John M. Larson	Director	March 1, 2022
/s/ CORETHA M. RUSHING Coretha M. Rushing	Director	March 1, 2022
/s/ ROBERT M. STAVIS Robert M. Stavis	Director	March 1, 2022
/s/ SALLIE L. KRAWCHECK Sallie L. Krawcheck	Director	March 1, 2022
/s/ EARL LEWIS Earl Lewis	Director	March 1, 2022
/s/ EDWARD S. MACIAS Edward S. Macias	Director	March 1, 2022
/s/ GREGORY PETERS Gregory Peters	Director	March 1, 2022
/s/ ALEXIS MAYBANK Alexis Maybank	Director	March 1, 2022

SPECIAL NOTE REGARDING EXHIBITS

In reviewing the agreements included as exhibits to this Annual Report on Form 10-K, please remember they are included to provide you with information regarding their terms and are not intended to provide any other factual or disclosure information about the Company or the other parties to the agreements. The agreements contain representations and warranties by each of the parties to the applicable agreement. These representations and warranties have been made solely for the benefit of the other parties to the applicable agreement and:

- should not in all instances be treated as categorical statements of fact, but rather as a way of allocating the risk to one of the parties if those statements prove to be inaccurate;
- have been qualified by disclosures that were made to the other party in connection with the negotiation of the applicable agreement, which disclosures are not necessarily reflected in the agreement;
- may apply standards of materiality in a way that is different from what may be viewed as material to you or other investors; and
- were made only as of the date of the applicable agreement or such other date or dates as may be specified in the agreement and are subject to more recent developments.

Accordingly, these representations and warranties may not describe the actual state of affairs as of the date they were made or at any other time. Additional information about the Company may be found elsewhere in this Annual Report on Form 10-K and the Company's other public filings, which are available without charge through the SEC's website at http://www.sec.gov.

The Company acknowledges that, notwithstanding the inclusion of the foregoing cautionary statements, it is responsible for considering whether additional specific disclosures of material information regarding material contractual provisions are required to make the statements in this report not misleading.

Exhibit Index

Exhibit Number	Description	Form	File No.	Exhibit Number	Filing Date	Filed/ Furnished Herewith
2.1	Agreement and Plan of Merger and Reorganization, dated as of April 7, 2019, by and among 2U, Inc., Skywalker Purchaser, LLC, Skywalker Sub, Inc., Fortis Advisors LLC, as stockholder representative and Trilogy Education Services, Inc.	8-K	001-36376	2.1	April 8, 2019	
2.2**	Membership Interest Purchase Agreement, dated as of June 28, 2021, by and among 2U, Inc., edX Inc. and Circuit Sub LLC. Interest Purchase Agreement, dated as of June 28, 2021, by and among 2U, Inc., edX Inc. and Circuit Sub LLC.	8-K	001-36376	2.1	June 29, 2021	
2.3	Amendment No. 1 to Membership Interest Purchase Agreement, dated as of November 16, 2021, by and between 2U, Inc. and edX Inc.					X
3.1	Amended and Restated Certificate of Incorporation of the Registrant.	8-K	001-36376	3.1	April 4, 2014	
3.2	Amended and Restated Bylaws of the Registrant.	8-K	001-36376	3.2	April 4, 2014	
4.1	Specimen stock certificate evidencing shares of Common Stock.	S-1/A	333-194079	4.2	March 17, 2014	
4.2	Description of Registrant's Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934.	10-K	001-36376	4.2	February 28, 2020	
4.3	Indenture, dated as of April 23, 2020, between 2U, Inc. and Wilmington Trust, National Association.	8-K	001-36376	4.1	April 27, 2020	
4.4	Form of 2.25% Convertible Senior Note due May 1, 2025 (included as Exhibit A to Exhibit 4.1).	8-K	001-36376	4.2	April 27, 2020	
10.1*	Services Agreement, by and between the Registrant and University of Southern California, on behalf of the USC Rossier School of Education, dated as of October 29, 2008, as amended to date.	S-1	333-194079	10.1	February 21, 2014	
10.2*	Master Services Agreement, by and between the Registrant and University of Southern California, on behalf of School of Social Work, dated as of April 12, 2010, as amended.	S-1	333-194079	10.2	February 21, 2014	
10.2.1*	Second Addendum to the Master Services Agreement, by and between the Registrant and University of Southern California, on behalf of the School of Social Work, dated as of March 14, 2014.	S-1/A	333-194079	10.2.1	March 17, 2014	
10.2.2*	Amendment to Master Services Agreement, by and between the Registrant and University of Southern California, on behalf of School of Social Work, dated as of November 5, 2015.	10-K	001-36376	10.2.2	March 10, 2016	
10.3†	Fourth Amended and Restated 2008 Stock Incentive Plan, as amended to date.	S-1	333-194079	10.7	February 21, 2014	
10.4†	Form of Incentive Stock Option Agreement under 2008 Stock Incentive Plan.	S-1	333-194079	10.8	February 21, 2014	

Exhibit Number	Description	Form	File No.	Exhibit Number	Filing Date	Filed/ Furnished Herewith
10.5†	Form of Non-Qualified Stock Option Agreement under 2008 Stock Incentive Plan.	S-1	333-194079	10.9	February 21, 2014	
10.6†	Amended and Restated 2014 Equity Incentive Plan.	10-Q	001-36376	10.3	November 9, 2021	
10.7†	Form of Stock Option Agreement under Amended and Restated 2014 Equity Incentive Plan.	10-Q	001-36376	10.2	August 2, 2018	
10.8†	Form of Restricted Stock Unit Award Agreement under Amended and Restated 2014 Equity Incentive Plan.	10-K	001-36376	10.8	February 28, 2020	
10.9†	Form of Performance Stock Unit Award Agreement under Amended and Restated 2014 Equity Incentive Plan.	10-Q	001-36376	10.3	November 12, 2019	
10.10†	Form of Performance Stock Unit Award Agreement under Amended and Restated 2014 Equity Incentive Plan.	10-K	001-36376	10.10	February 28, 2020	
10.11†	Form of Restricted Stock Unit Award Agreement under Amended and Restated 2014 Equity Incentive Plan.	10-Q	001-36376	10.1	April 28, 2021	
10.12†*	Form of Performance Stock Unit Award Agreement under Amended and Restated 2014 Equity Incentive Plan.	10-Q	001-36376	10.2	April 28, 2021	
10.13†	Form of Severance Pay and Change in Control Plan.	8-K	001-36376	10.1	February 21, 2020	
10.13.1†	First Amendment to the 2U, Inc. Severance Pay and Change in Control Plan.	10-Q	001-36376	10.4	April 30, 2020	
10.14†	Summary of Non-Employee Director Compensation.	10-Q	001-36376	10.2	July 29, 2021	
10.15†	Confidential Information, Invention Assignment, Work for Hire, Noncompete and No Solicit/No Hire Agreement, dated as of February 28, 2009, by and between the Registrant and Christopher J. Paucek.	S-1/A	333-194079	10.14	March 17, 2014	
10.16†	Form of Indemnification Agreement with directors and executive officers.	S-1	333-194079	10.15	February 21, 2014	
10.17†	Offer letter agreement, dated as of May 20, 2018, between Mark Chernis and 2U, Inc.	10-Q	001-36376	10.4	August 2, 2018	
10.18†	Offer letter agreement, dated as of October 10, 2019, between Paul S. Lalljie and 2U, Inc.	8-K	001-36376	10.1	October 16, 2019	
10.19†	Employee Intellectual Property, Non-Competition, and Non-Solicitation Agreement, dated October 10, 2019, between Paul S. Lalljie and 2U, Inc.	8-K	001-36376	10.2	October 16, 2019	
10.20†	Separation and Transition Agreement, dated October 17, 2019, between Catherine A. Graham and 2U, Inc.	8-K	001-36376	10.1	October 23, 2019	
10.21†	Separation, Consulting and Release Agreement, dated November 10, 2021 by and between 2U, Inc. and James Kenigsberg.	8-K	001-36376	10.1	November 12, 2021	

Exhibit Number	Description	Form	File No.	Exhibit Number	Filing Date	Filed/ Furnished Herewith
10.22**	Term Loan Credit and Guaranty Agreement, dated June 28, 2021, by and among 2U, Inc., as borrower, the Guarantors party thereto, Alter Domus (US) LLC, as administrative agent and collateral agent, and the Lenders party thereto.	8-K	001-36376	10.1	June 29, 2021	
10.23	First Amendment to Term Loan Credit and Guaranty Agreement.	10-Q	001-36376	10.1	November 9, 2021	
10.24*	Joinder Agreement.	10-Q	001-36376	10.2	November 9, 2021	
10.25	Base Call Option Confirmation, dated as of April 20, 2020, between 2U, Inc. and Citibank, N.A.	8-K	001-36376	10.1	April 27, 2020	
10.26	Base Call Option Confirmation, dated as of April 20, 2020, between 2U, Inc. and Morgan Stanley & Co. LLC.	8-K	001-36376	10.2	April 27, 2020	
10.27	Base Call Option Confirmation, dated as of April 20, 2020, between 2U, Inc. and Credit Suisse Capital LLC.	8-K	001-36376	10.3	April 27, 2020	
10.28	Additional Call Option Confirmation, dated as of April 29, 2020, between 2U, Inc. and Citibank, N.A.	8-K	001-36376	10.1	May 1, 2020	
10.29	Additional Call Option Confirmation, dated as of April 29, 2020, between 2U, Inc. and Morgan Stanley & Co. LLC.	8-K	001-36376	10.2	May 1, 2020	
10.30	Additional Call Option Confirmation, dated as of April 29, 2020, between 2U, Inc. and Credit Suisse Capital LLC.	8-K	001-36376	10.3	May 1, 2020	
10.31	Office Lease, by and between Lanham Office 2015 LLC and 2U Harkins Road LLC, dated as of December 23, 2015.	10-K	001-36376	10.16	February 24, 2017	
10.32	Agreement of Lease, by and between 55 Prospect Owner LLC and 2U NYC, LLC, dated as of February 13, 2017.	10-K	001-36376	10.17	February 24, 2017	
10.33	Office Lease, by and between SRI Ten DCC LCC and 2U, Inc., dated May 11, 2016.	10-K	001-36376	10.18	February 24, 2017	
21.1	Subsidiaries of the Registrant.					X
23.1	Consent of KPMG LLP, independent registered public accounting firm.					X
31.1	Certification of Chief Executive Officer of 2U, Inc. pursuant to Exchange Act Rule 13a-14(a)/15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.					X
31.2	Certification of Chief Financial Officer of 2U, Inc. pursuant to Exchange Act Rule 13a-14(a)/15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.					X
32.1	Certification of Chief Executive Officer of 2U, Inc. in accordance with 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.					X

Exhibit Number	Description	Form	File No.	Exhibit Number	Filing Date	Filed/ Furnished Herewith
32.2	Certification of Chief Financial Officer of 2U, Inc. in accordance with 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.					X
101.INS	XBRL Instance Document - The instance document does not appear in the interactive data file because its XBRL tags are embedded within the Inline XBRL document.					X
101.SCH	XBRL Taxonomy Extension Schema Document.					X
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.					X
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.					X
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.					X
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.					X
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).					X

* Portions of this exhibit, indicated by asterisks, have been omitted pursuant to a request for confidential treatment and have been separately filed with the Securities and Exchange Commission.

** Schedules and exhibits have been omitted pursuant to Item 601(b)(2) of Regulation S-K. The registrant hereby undertakes to supplementally furnish to the Securities and Exchange Commission copies of any of the omitted schedules and exhibits upon request by the Securities and Exchange Commission.

† Indicates management contract or compensatory plan.

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Board of Directors.

Christopher J. Paucek
Co-Founder and CEO

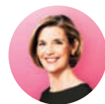
Paul A. Maeder
Board Chair
Audit Committee Member
General Partner of Highland Capital Partners

Timothy M. Haley
Nominating and Governance Committee Chair
Managing Director of Redpoint Ventures

John M. Larson
Compensation Committee Chair
Executive Chairman of Triumph Higher Education Group, Inc., and President of Triumph Group, Inc.

Robert M. Stavis
Audit Committee Chair
Partner at Bessemer Venture Partners

Earl Lewis
Audit Committee Member
Thomas C. Holt Distinguished University Professor of History, Afroamerican and African Studies, and Public Policy at the University of Michigan



Sallie L. Krawcheck
Nominating and Governance Committee Member
CEO and Co-Founder of Ellevest

Coretha M. Rushing
Compensation Committee Member
President at CR Consulting Alliance, LLC
Managing Director and Executive Mentor at The ExCo Group

Gregory K. Peters
Audit Committee Member
Chief Operating Officer and Chief Product Officer at Netflix

Alexis Maybank
Compensation Committee Member
Founder and Chief Executive Officer of Creative Beauty, Inc.

Edward S. Macias
Nominating and Governance Committee Member
Provost Emeritus and Barbara and David Thomas Distinguished Professor Emeritus in Arts & Sciences at Washington University in St. Louis

Shareholder Information
Copies of the Company's Form 10-K filed with the Securities and Exchange Commission for the year ended December 31, 2021; committee charters; Code of Business Conduct and Ethics and other documents may be obtained free of charge at investor.2u.com or by contacting:

2U, Inc.
Investor Relations
7900 Harkins Road
Lanham, MD 20706
301-892-4350

Annual Meeting
The annual meeting of stockholders will be held virtually on June 8, 2022, at 3:00 p.m. ET at www.virtualshareholdermeeting.com/TWOU2022

2U.com

2U, Inc.
7900 Harkins Road
Lanham, MD 20706
301-892-4350