

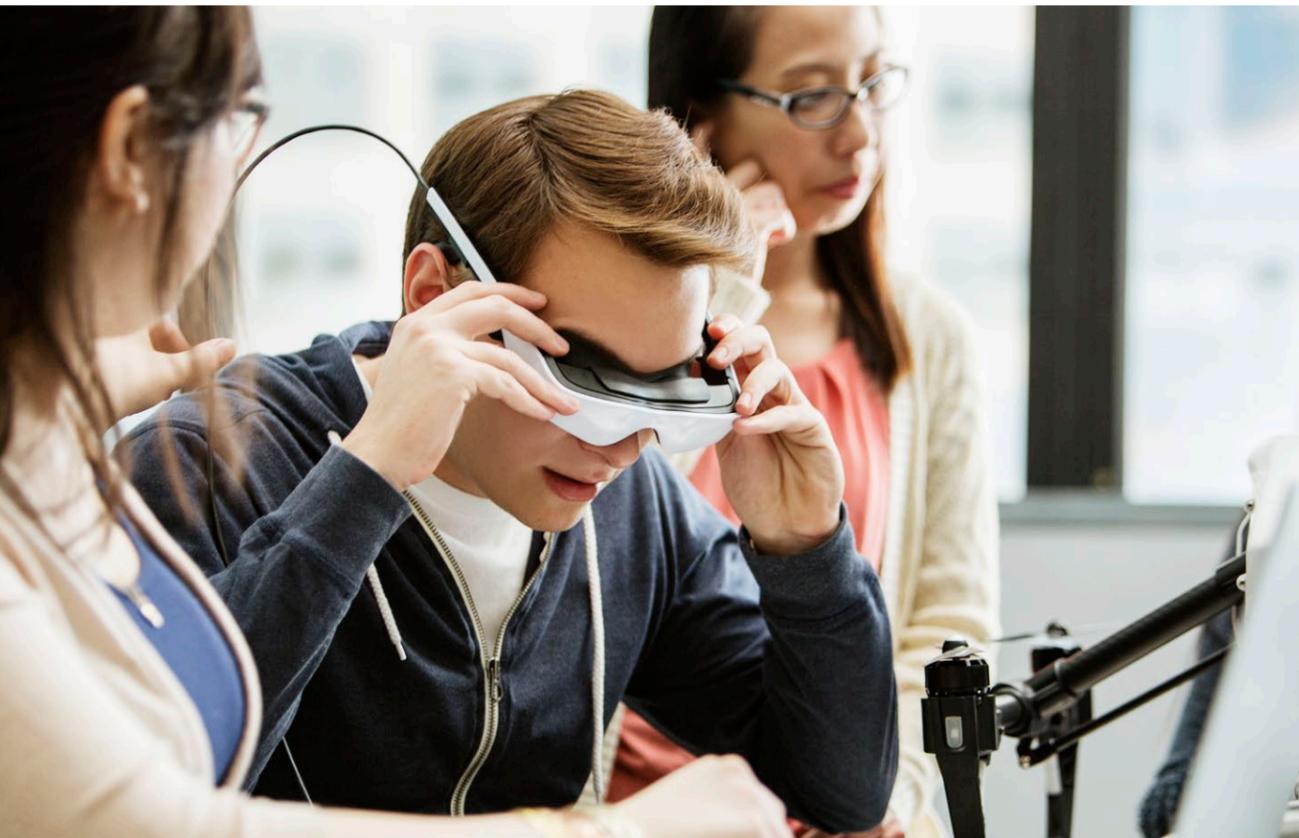
Impact and engagement report

Credit Suisse (Lux)
Edutainment Equity Fund



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Digital transformation of education



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One year on

One year has passed since we launched the Credit Suisse (Lux) Edutainment Equity Fund. We are both humbled by and proud of what we have been able to achieve in such a short time. The fund has become the world's largest mutual fund focused on educational technologies (EdTech).



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Portfolio Manager of
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Introduction

We are very grateful for the support we have received from our clients around the world who have recognized this investment opportunity and have entrusted us with their capital. We have built a portfolio of disruptors and innovators that are improving the efficiency and effectiveness of education and life-long learning.

Our pure-play investment philosophy and focus on innovators means that we invest primarily in smaller companies, in many cases yesterday's start-ups that have only recently debuted on public markets. Because so much of the EdTech market is not yet listed, most investors in the sector are venture capital and private equity funds. The small companies on the listed market are typically poorly covered by analysts, particularly in terms of their environmental, social, and governance (ESG) score, and, in most cases, we have had to rely on our own analyses of financial and nonfinancial metrics.

For our clients, this means that we offer a portfolio of companies that are largely undiscovered, typically with little overlap with their existing holdings. Over 80% of our portfolio is allocated to companies below USD 10 bn market capitalization (mcap) in size, and nearly 50% to companies smaller than USD 2.5 bn mcap.

Since we are not constrained by any benchmark, we can invest where we find the best opportunities. As such, almost half of the portfolio is invested in Asia, and almost one-third in emerging markets.

This also means that we are one of the largest institutional investors in many of our portfolio companies, which gives us a powerful voice and direct access to senior management when discussing critical issues. We have taken full advantage of this opportunity, engaging with the majority of our companies on a range of topics. Our goal is to maintain a continuous dialogue.

We have tried to help our companies address any ESG concerns highlighted by our third-party ESG data providers, asking them to consider the impact of their products and services on achieving relevant United Nations Sustainable Development Goals (UN SDGs) and suggesting additional initiatives where appropriate.

In this report, we summarize the key outcomes of these initiatives and report on our engagement activities.



More information on ESG and ESG investment criteria is available at credit-suisse.com/am/esg and credit-suisse.com/esg. For more information about the Citywire award and the LuxFLAG label, please visit <https://citywire.ch/news/revealed-the-winners-of-the-2020-switzerland-awards/a1337973#i=18>. <https://www.luxflag.org/pages/news-detail.html?newsidcatsideback=1&newsstartmonth=4&newsmonthback=-1&newsidarticle=277&newscategory=0&newspage=1>.

Impact

“

2U was founded to help eliminate the back row in higher education, and creating greater access to relevant, high-quality education has always been core to our mission. As our largest impact-focused investor, Credit Suisse has been a leader and excellent partner in fostering our socially responsible mission. Together we believe that meeting society’s growing demand for more accessible and affordable education is not only the right thing to do, it is also the best path to generating long-term value creation for shareholders.

Chip Paucek
CEO and founder of 2U Inc.
(our largest portfolio position as of July 2020)

2U Credit Suisse video



UN Sustainable Development Goals

When we started looking at the education sector just over one year ago, we were perplexed by the very low penetration of digital technologies, and recognized this as an excellent investment opportunity.

Services in the education sector have been delivered in almost the same way for centuries. There has been very little innovation, and the penetration of digital technologies remained low, at just 2% to 3%, for a long time. This penetration was materially lower than in practically any other sector today and stands in stark contrast to a number of other sectors, which are currently being disrupted to their core by technology-based innovations. Examples of this type of disruption include the hospitality sector, where Airbnb and Vrbo successfully compete with hotel operators; the media sector, where Netflix and Hulu are disrupting traditional cable and satellite pay-TV services; and the retail sector, where Amazon, eBay, and Alibaba have made a significant impact on traditional retailers worldwide.

This low level of adoption of technological innovation in the education sector is one of the

reasons why the costs of teaching have spiraled out of control. According to the US Commerce Department, the cost of higher education in the US has risen 4.5 times over the 25 years to 2015. This cost inflation is approximately 2.5 times higher than that for groceries, and approximately twice as high as the inflation experienced in the healthcare sector in the US (another notoriously inefficient sector).¹

This escalation in the cost of education is extremely unfortunate, since education is the very foundation of socioeconomic development and contributes to the elimination of poverty and inequality. Education can be directly linked to prosperity and health, as well as higher quality of life and general life satisfaction. Conversely, low levels of education are linked with lower earnings, unemployment, poor health, and homelessness. This is why access to quality education is the UN’s fourth SDG, and achieving this goal also contributes to other UN SDGs – reducing poverty and inequality, fighting hunger, achieving good health and well-being, gender equality, decent economic growth, and innovation.

UN SDG 4:
Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all



SUSTAINABLE DEVELOPMENT GOALS



¹ Bureau of Economic Analysis, Lumen Learning, 2015, <https://courses.lumenlearning.com/wm-macroeconomics/chapter/tracking-inflation/>.

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Developing countries

Access to education is particularly important in developing economies, where every dollar invested in education delivers USD 10 of economic return. Typically, education is more highly valued in developing countries because they have fewer people with advanced degrees than the countries belonging to the Organization for Economic Co-operation and Development (OECD). Graduates earn more in general, but in societies with greater inequality the difference in earning power is magnified.

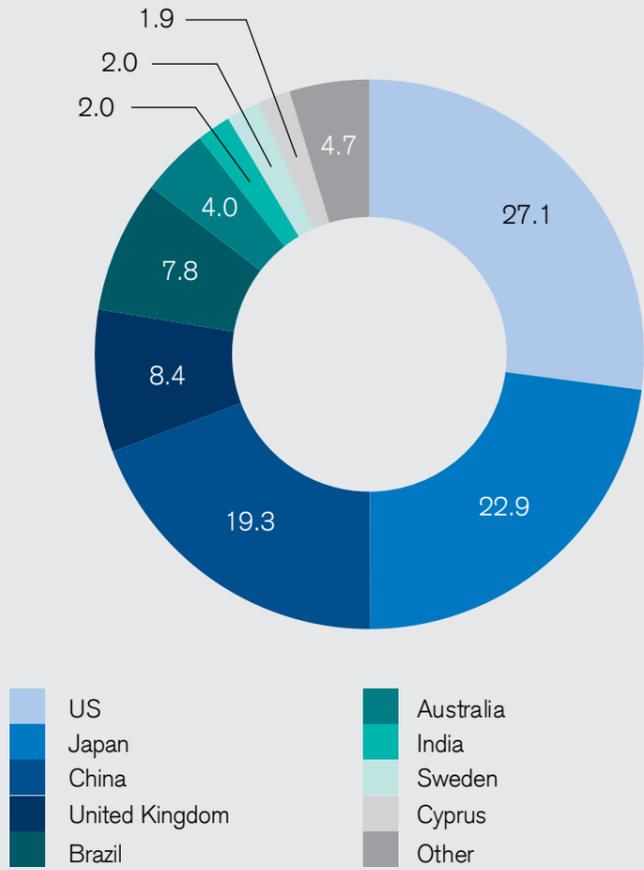
Access to education is particularly relevant for people in developing countries, since education systems in lower-income countries are often of

poor quality and vastly understaffed. Given capacity constraints, online learning is perhaps the only way in which children from the lowest-income brackets can access quality education. We have recognized this in our fund from the beginning, which – as a result – has disproportionately large exposure to developing markets, with China and Brazil alone accounting for more than 25% of the fund, and Chinese companies **Youdao** and **GSX Techedu** being among the top ten holdings.



Credit Suisse (Lux) Edutainment Equity Fund: portfolio breakdown

Portfolio allocation by country (in %)



Top ten holdings (in %)

2U, Inc.	3.6
Medley, Inc.	3.4
Chegg, Inc.	3.3
Offcn Education Technology Co Ltd.	3.1
K12, Inc.	3.1
Cornerstone OnDemand, Inc.	2.9
Bright Horizons Family Solutions, Inc.	2.8
Pluralsight, Inc.	2.8
MedPeer, Inc.	2.8
New Oriental Education & Technology Group, Inc.	2.7
Total	30.5

Source Credit Suisse, data as of October 2020
This is an indicative allocation, which may change over time.



Developing countries

How online learning expands access and reduces the cost of education in China

The World Bank's Gini coefficient is a well-established measure of economic inequality. China's score is higher than that of most OECD countries, with the notable exception of the US.² China has one of the world's lowest percentages of university degree holders in their adult population. According to the OECD, that percentage was less than 10% in 2015, compared to more than 30% for the EU, more than 40% for the US and the UK, and more than 50% for Russia and Canada.³ China has a target to reach 20% by the end of 2020, but even if that were achieved, China would still rank below 80% of the countries in the world. Nevertheless, according to the McKinsey Global Institute, growing spending on education contributes 13% to China's consumption growth.⁴

Despite the low percentage of university graduates in Chinese society, the absolute numbers are staggering. According to the World Economic Forum and UNESCO, in 2016 there were 78 million degree holders in China, compared to 67 million in the US and 29 million in Russia.⁵ China's degree holders account for approximately 12% of the world's total and, if current trends persist, by 2030 they will account for over a quarter. The pace of growth is also impressive, as there are a further 43 million students currently at university.⁶

While the number of students in China is huge and education offers real benefits, there are simply not enough university places available for everyone who wants in. Every year, around ten million Chinese students take the National College Entrance Examination, known as gaokao, at the age of 18, but according to Frost & Sullivan, there are only places at university for 40% of them, fewer than 10% are accepted into the top 150 universities, and fewer than 1% get into the highest-ranking universities like Peking and Tsinghua.⁷ The competition is therefore extreme because in a country with great inequality, the gaokao may be one of few truly egalitarian opportunities to climb up the ladder to a better future.

Preparing for these tests is therefore extremely important, and parents often spend a disproportionate amount of money on after-school tutoring. According to the Chinese National Bureau of Statistics, approximately 10% of all Chinese household income is spent on education, compared to just 2% in the US.⁸ In a country with relatively few private schools (only 6% of primary and 10% of secondary schools are private according to the OECD), most of this spending is likely on supplementary tuition.

² World Bank, <https://data.worldbank.org/indicator/SI.POV.GINI?locations=CN>.

³ Thematic Investing – Let's Get Smart – Global Education Primer, BoAML 2016, p. 24.

⁴ Ibid., p. 73.

⁵ Ibid., p. 25.

⁶ Chinese Government Statistics, www.stats.gov.cn/tjsj/ndsj/2018/indexeh.htm.

⁷ Fu, Y. China's Unfair College Admissions System. The Atlantic.

Retrieved from: <https://www.theatlantic.com/china/archive/2013/06/chinas-unfair-collegeadmissions-system/276995/> (last accessed on June 19, 2013).

⁸ Education; Back to Basics – Citi GPS, 2017, p. 133.

有道 youdao

跟谁学
GSX Techedu Inc.

Youdao and GSX Techedu – our top ten holdings as of July 2020

After-school tutoring in particular has seen explosive growth. Revenues at the two market leaders – New Oriental Education and TAL Education – have grown threefold and eightfold, respectively, over the last five years. Today, they are of a similar size, each with around USD 3.5 bn (RMB 25 bn) in annual revenue.⁹ There were also two purely online publicly listed companies with revenues above USD 100 mn in 2019: **GSX Techedu** and **Youdao**. These companies' revenues more than double each year.

This type of after-school tutoring, paid for by parents and filling the gap left by state education, is clearly proliferating. According to the Chinese National Bureau of Statistics, China spends just over 5% on education as a percentage of GDP, only slightly below the US, UK, and other high-income countries (this figure is typically between 3% and 4% for low-income countries).¹⁰ However, on a per capita basis, China spends less than USD 500, compared to more than USD 3,000 in the US and UK.¹¹

As a result, class size in China is typically twice as large. The national standard in China is 45 students, which compares to just over 20 in the average OECD class. A 2017 study found a primary school in Henan with 113 students per class.¹² In 27 provinces, the average high school class was larger than the national standard, and in twelve provinces the average was higher than 55 students.¹³ The Chinese government has set a goal of classes no larger than 56 students by 2020.

Thus, it comes as no surprise that there is still room for improvement in terms of the quality of education, especially in rural areas. In the meantime, Chinese students today receive around 20 hours of extra tuition per week, far more than children in most other countries.

Both New Oriental and TAL started out offering after-school tutoring in a traditional classroom environment. They started in tier-one cities such as Beijing and Shanghai, and now that the larger cities are well penetrated, the growth opportunity is in smaller towns and cities. However, this is not without challenges. Lower-tier cities are often in rural and remote locations, and it is more difficult to recruit high-quality tutors. This is a tough and unfortunate reality, because children from remote areas need to pass the same gaokao as everyone else to win their ticket to a better life.

Technology is helping to solve this problem. Thanks to digital technologies, online after-school tutoring services can be delivered affordably to the most remote areas and offered to a much larger number of students. Purely online players such as GSX Techedu and Youdao have been specifically targeting lower-tier cities as they recognize the opportunity presented by lower penetration rates. As a result, they have enjoyed sales growth rates in excess of 100%. However, they also deliver an important socioeconomic benefit to remote areas, where children may not have any other opportunity to access quality tutoring and thus prepare for exams. Technology is therefore directly improving access to education and contributing to the UN's fourth SDG.

Although the penetration rate of online tutoring is low, varying between 15% and 25%, this way of obtaining education is proving increasingly popular. According to Frost & Sullivan, Chinese families spent an estimated RMB 64 bn on online tutoring in 2019, and this is projected to grow at an annual rate of 65% by 2023.¹⁴

Online education also appears to have solved the scale issue with a dual-teacher model. In this model, the primary tutor delivers a lesson online to a class of several thousand students. The class is then split into smaller groups with a teaching assistant assigned to each group. In this way, the delivery of course content is separated from the checking of assignments and dealing with individual questions in order to "industrialize the process" and allow for greater economies of scale. As a result, after-school tutoring can be delivered at an affordable price of less than USD 10 per hour, while the main tutors can earn a very attractive salary (e.g. average in excess of USD 150,000 per year working for **GSX Techedu**). This ensures recruitment and retention of the best talent in the industry. The online model also enables primary tutors to be based in a location of their choosing.

Another benefit of the use of technology is adaptive learning. This means tailoring the complexity of the material and the speed of delivery to the level of each individual student in a manner similar to individual tuition, which is extremely expensive. Youdao's online courses, for example, come with a smart pen used for exercises. This pen transmits the results back to the company, enabling quick feedback and grading, and the system can even suggest additional exercises for each student based on their progress. Students, in turn, like the pen because Chinese tests are paper-based, so the use of pens helps create an experience that is very similar to the actual exam. According to the company, there are now 30,000 smart pens in daily use, and Youdao is working on further improving connectivity between the smart pen and the course content.

⁹ Credit Suisse based on Bloomberg data.

¹⁰ Education; Back to Basics – Citi GPS, 2017, p. 136.

¹¹ Ibid., p. 11.

¹² Sixth Tone, <http://www.sixthtone.com/news/1000089/chinas-most-understaffed-school-has-113-children-class>.

¹³ Brookings Institute, <https://www.brookings.edu/blog/brown-center-chalkboard/2019/12/19/the-children-pisa-ignores-in-china/>.

¹⁴ Frost & Sullivan data from the GSX Techedu IPO Prospectus, p. 95.

Technology can also be used to improve students' engagement. Facial recognition algorithms, for example, can ensure that students are paying attention, and warn tutors if they are losing their audience.

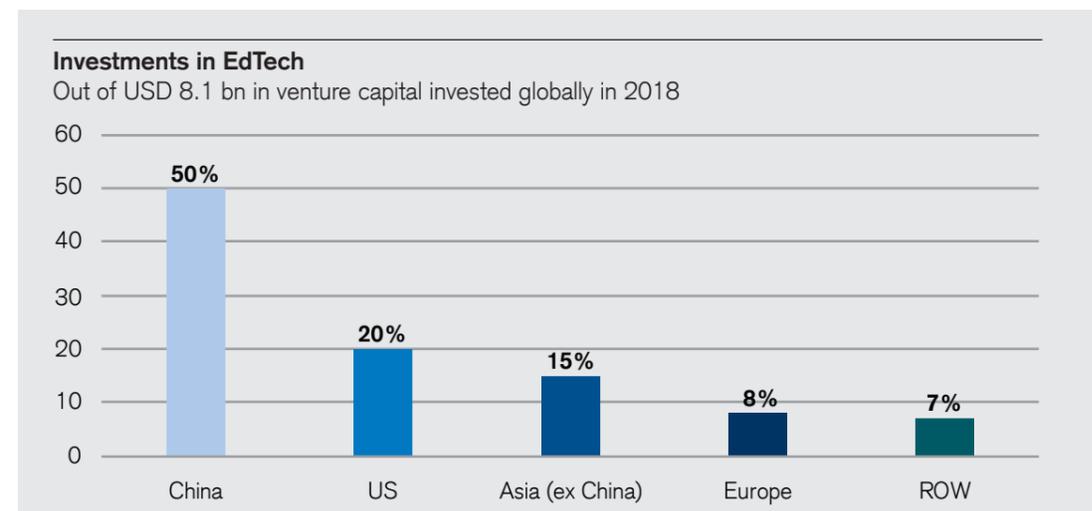
In these ways, the use of technology can improve both the efficiency and effectiveness of education while making it more affordable and accessible. Education technology has been recognized as the solution to China's specific problems, which is why the country has seen the largest inflow of venture capital investments into the EdTech field. According to the 2020 EdTechX Global Report, China received half of the USD 8.1 bn global venture capital investments in EdTech in 2018, and around 200 Chinese online education companies raised capital in 2018. This amount is 2.5 times higher than the amount invested in the US, which traditionally dominates the tech scene.¹⁵

An even more encouraging sign for the future is that, despite relatively low per capita government spending on education, Chinese students are among the best performers in the world. In the most recent Program for International Student Assessment (PISA), Chinese students topped the rankings in all three categories of reading, math, and science. The regions of Beijing, Shanghai, Jiangsu, and Zhejiang, with a combined population of 180 million participating as a single region, came in 1st among 37 OECD and 42 partner countries. For comparison, in the reading category, which OECD considers the primary indicator, Singapore came in 2nd, Macao (China) 3rd, Hong Kong (China) 4th, the US 13th, the UK 14th, Japan 15th, Germany 20th, France 23rd, and Switzerland 28th. Moreover, the 10% most socioeconomically disadvantaged students in those four Chinese regions showed better reading skills than those

of the average student in OECD countries and, in fact, skills similar to the 10% most advantaged students in some of those countries.¹⁶ **"You don't have to spend more to do better, that is one conclusion,"** said the OECD Secretary-General, Angel Gurría, at a news conference in Paris after the results were announced.

As we have demonstrated, education technology has helped solve some of the bottlenecks in the

Chinese education system. However, its potential stretches far beyond the borders of any individual country, even one as important as China. Education technology and artificial intelligence maximize human potential and help to develop a knowledge economy. According to McKinsey, learning and artificial intelligence will unlock USD 13 tn of global economic growth by 2030. China is at the forefront of these investments, and we should take notice.¹⁷



Source Learning is the new tech: EdTechX, Credit Suisse, 2020, p. 12.

Rank	Reading	Mathematics	Science
1 B-S-J-Z* (China)	555	591	590
2 Singapore	549	569	551
3 Macao (China)	525	558	544
4 Hong Kong (China)	524	551	517
...
13 United States	505	478	502
14 United Kingdom	504	502	505
15 Japan	504	527	529
...
20 Germany	498	500	503
...
23 France	493	495	493
...
28 Switzerland	484	515	495
...
OECD Average	487	489	489

Source OECD, PISA 2018 Database
* B-S-J-Z refers to Beijing, Shanghai, Jiangsu, and Zhejiang.

¹⁵ Learning is the new tech, EdTechX, Credit Suisse, 2020.

¹⁶ OECD, www.oecd.org/pisa/PISA-results_ENGLISH.png.
¹⁷ Learning is the new tech, EdTechX, Credit Suisse, 2020.

Developed countries

In developed countries, the cost of higher education has increased much faster than inflation, and online education is one solution to the cost issue for lower-income communities. In addition, the quality of education varies dramatically. For example, since 1990, education costs in the US have grown 450% compared to grocery inflation of 70% and healthcare inflation of 213%.

Yet the system remains inefficient: 37% of US students do not graduate, 40% attend remedial courses, while the average level of student debt at graduation was USD 37,000 in 2016. Online learning can help improve the quality at the lower end, providing tools to teachers, students, and parents to enhance the quality of their educational experience.



Chegg – our top ten holding as of July 2020

Our portfolio companies directly contribute to improving the efficacy of education. For example, the US tech company **Chegg**, which has been one of our top holdings since inception, helps students prepare for exams, aided by 43 million pieces of learning library content and 24/7 access to tutors. As many as 92% of students say that Chegg Study helps them get better grades, and the company has become one of the best-known brands among US students. Chegg has announced its ambition to become a trusted partner for students and a connected learning platform that follows students through university and also helps them find a job.

These schools serve students of all abilities, backgrounds, and circumstances. Approximately 13% of students at K12-powered schools have special needs. These are students with all types of needs, including learning disabilities, autism, speech challenges, cognitive disabilities, physical, social, or emotional needs, vision or hearing impairments, and more. Every need – mild to severe – is met through online schooling.

In the 2017–2018 school year, a majority of K12 partner schools served higher percentages of students eligible for special education services than their states did. Thirty K12 partner schools served higher percentages of students eligible for free and reduced-price lunches than their states served.



K12 – our top ten holding as of July 2020

Another of our largest holdings, **K12 Inc.**, has been educating youngsters in the US who may not otherwise be able to attend school due to their particular life circumstances.

K12 has educated more than two million students during the past two decades at over 70 full-time online public and private schools, approximately 1,000 school districts encompassing all 50 US states, and more than 100 countries. K12-powered schools educate one in three online students in the US – more full-time online students than anyone else in the country.

The longer students stay enrolled in online school, the better their academic outcomes. Compared to students enrolled in K12 partner schools for less than one year, students enrolled for four years or more achieved higher percentages at or above proficiency on assessments: 20 percentage points higher in English language arts; 11 percentage points higher in reading; and 15 percentage points higher in mathematics.¹⁸

To date, more than 50,000 students have graduated from K12's full-time partner schools, and the parent satisfaction rate is over 80%. Alumni have gone on to enroll in two- and four-year colleges, enter the workforce, run their own businesses, serve in the military, win Olympic medals, and more.

K12-powered schools are staffed by more than 6,000 teachers specially trained to facilitate online learning. In addition to robust onboarding and ongoing professional development, K12 has worked with Southern New Hampshire University to launch a Master's of Education in Online Instruction program. Since the program began in July 2019, nearly 500 K12-powered teachers have enrolled, solidifying their role as leaders in online learning.

¹⁸ K12 Inc. 2018 Academic Report: <http://investors.k12.com/static-files/92326939-ec5a-45f0-9618-3398d6b18773>, p. 7.

As the COVID-19 pandemic closed schools across the US in the spring of 2020, K12 responded by making a host of resources available to help teachers and families navigate this new space. This included free training for teachers transitioning to online education and complimentary trial access for school districts to K12's digital content and hosting platform, professional development, and educational services. For families encountering online

learning for the first time, K12 provided free and discounted access to tools and resources including the Big Universe library of e-books, with over 2,000 titles in Spanish; discounted tuition at The Keystone School; and a library of free webinars and materials to help families navigate the academic and personal challenges brought on by the pandemic. To date, more than 200,000 families, teachers, students, and schools have signed up for these programs and webinars.

In recent years, EdTech has gained some traction. Online learning apps, for example, now have hundreds of millions of users. Other forms of EdTech, such as curriculum management software, e-textbooks, and communications and administration platforms have become more effective, while the costs of devices and the data required to use them have plummeted. Gamification and the use of adaptive learning are creating engaging and personalized learning journeys for students. Classrooms are starting to adopt these technologies, and teachers and students are increasingly able and willing to make use of them.

Addressing the digital divide

As reliance on EdTech increases, a primary concern is limited broadband access and device ownership in both developed and developing countries. This has highlighted the digital divide between those with access to information and communications technology and those without, as well as inequalities in access to opportunities, knowledge, services, and goods.

More than four billion people worldwide now have access to the internet, but broadband access is unevenly distributed and costs can be prohibitive. While the digital divide is closing as prices of devices and data fall and reliable 4G and 5G data coverage extends globally, people in developed countries are still four times more likely to have mobile broadband

subscriptions than those in the least-developed countries. Most schoolchildren in Africa do not have devices or connectivity. In Ghana, less than half of the population has mobile phone internet access.

Even in developed countries, digital access is not ubiquitous. Only two-thirds of rural Americans report a home broadband connection. Roughly three out of ten adults with yearly household incomes below USD 30,000 (29%) do not own a smartphone. More than four out of ten do not have home broadband service (44%) or a traditional computer (46%). In the UK, an estimated 15% of students in low-income areas do not have access to an electronic device for learning from home.

Practical benefits of EdTech

Virtual education is:



Cost-efficient

It reduces costs, providing access to quality education on a global scale to people with limited resources, geographical restrictions, and physical disabilities.



Flexible

Students can get assistance on demand based on their individual pace and needs.



Effective

Different digital formats can improve learning outcomes and increase students' engagement by applying a multisensory approach.



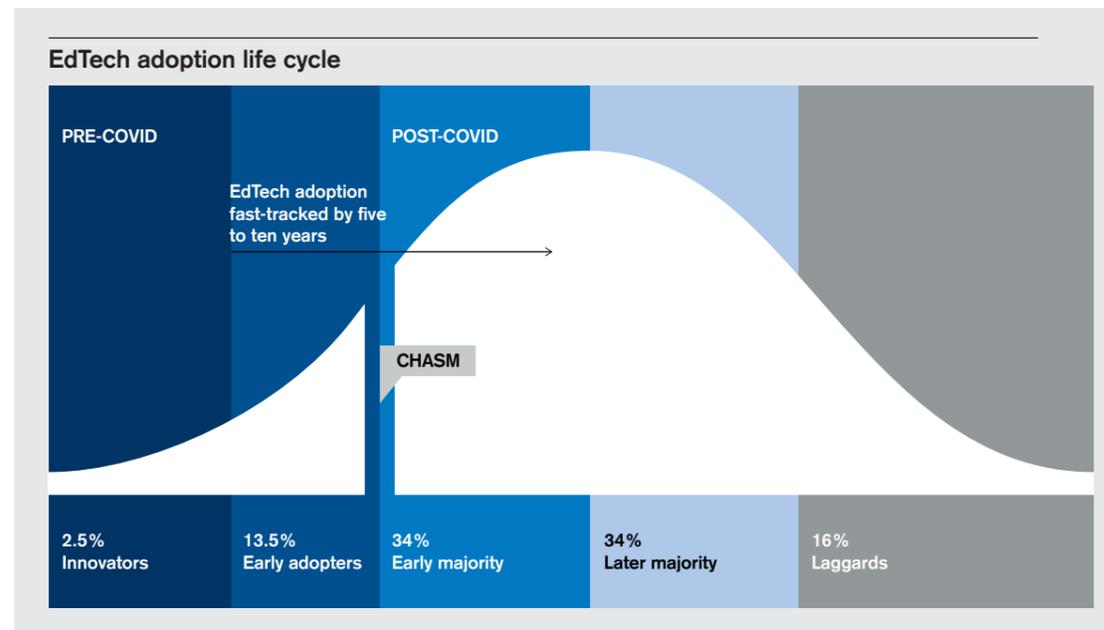
The impact of COVID-19 on EdTech

Before the coronavirus outbreak, EdTech expenditure was forecast to grow at 15% CAGR in 2019–2025 and reach more than USD 400 bn by 2025. And then the coronavirus hit. Adoption and usage have swelled, and the demand for EdTech solutions has grown exponentially, fast-tracking the digitalization of education by five to ten years.

COVID-19 compelled the world's students and educators to switch to remote learning overnight. According to data from UNESCO, 191 countries implemented nationwide closures, affecting around 98% of the world's student population.¹⁹ As a result, an unprecedented and rapid adoption of online learning has taken place in recent months. At the peak of the crisis, more than 90% of the world's schools and a majority of universities closed their doors and migrated

their teaching online. By late April 2020, approximately 1.7 billion students were studying remotely using a mix of workplace and education technologies including Zoom, Google Classrooms, and Microsoft Teams.

According to the language learning app Duolingo, traffic typically spiked three to five days after the introduction of lockdowns. Traffic doubled first in China, then Korea, and then grew by 135% in Spain, 100% in Italy, and 90% in the US. There were two main types of users: students assigned online learning material by teachers, and adult learners stuck at home taking courses. Coursera saw a fivefold increase in new learner enrollments, with personal-development courses seeing the highest interest, and a tenfold increase in overall enrollments.²⁰



Source Credit Suisse, "COVID-19, The (Great) Disruptor of Education and Work," used with kind permission of EdTechX

¹⁹ <https://en.unesco.org/covid19/educationresponse>, last accessed on May 12, 2020.

²⁰ GSV Virtual Summit Series (Program 1 – Wednesday, April 1, 2020).

When the first COVID-19 cases emerged in China and schools were shut down, online learning companies opened their courses for free and new user numbers often increased by a factor of ten. Koolearn, GSX, and Youdao – three purely online after-school tutoring services – each registered over ten million enrollments in free courses during this period, which compares to a pre-pandemic paid user base of hundreds of thousands. Education app downloads in China have soared to 127 million – almost double the pre-crisis figure.²¹ There has also been a surge in sales of iPads in China as schools moved online, resulting in shortages.²²

As the virus spread, EdTech companies around the globe saw similar increases in user numbers. Seesaw, which allows students to build a digital portfolio of work to share with parents or teachers, increased its reach tenfold within a month when schools began to shut down in March 2020.²³ Google Classroom, which allows teachers to send lessons and materials to students, doubled its users to 100 million in March 2020.²⁴ BYJU'S, the Indian online learning app, added six million new users in the same month.²⁵ In Brazil, Estacio registered 55% growth in purely online distance-learning student enrollments during Q1 2020. In the US, Chegg saw a 35% increase in subscriptions to its online learning services over the same quarter. Newsela, an app providing engaging digital content and learning resources, signed up thousands of US schools within just a few weeks.



²¹ <https://global.chinadaily.com.cn/a/202004/06/WS5e8a6f3aa310128217284886.html>, last accessed on May 11, 2020.

²² <https://asia.nikkei.com/Spotlight/Coronavirus/China-demand-for-e-learning-bites-into-Apple-s-iPad-supply>, last accessed on May 11, 2020.

²³ <https://www.theguardian.com/technology/2020/apr/24/remote-learning-classroom-technology-coronavirus>, last accessed on May 12, 2020.

²⁴ <https://www.bloomberg.com/news/articles/2020-04-09/google-widens-lead-in-education-market-as-students-rush-online>, last accessed on May 14, 2020.

²⁵ <https://www.businessinsider.in/business/startups/news/byjus-adds-6-million-new-students-in-a-month-after-the-nation-goes-into-a-complete-lockdown/articleshow/75009408.cms>, last accessed on May 12, 2020.

Support for students and teachers amid the crisis from our portfolio companies

Supporting students, teachers, and families with free access to courses, training, and products is a moral imperative in a crisis. During the pandemic, many of our portfolio companies took on important roles in their communities. Below are examples of three diligent corporate citizens from three countries – Brazil, China, and the US – all of which offered their platforms and services free of charge to students or universities.



Afya Educational – our top ten holding as of July 2020

Afya is a leading medical education group in Brazil. Even before the coronavirus outbreak, Afya worked with the government under the “Mais Médicos” program that specifically targets the shortage of doctors in rural Brazil. When the virus hit, Afya moved non-practical on-site classes to its online platform and then opened the platform to other medical institutions without cost for the duration of the lockdown.²⁶ Over 9,000 medical students from 30 public and private schools accessed Afya’s platform during this period. Afya then created a free specialist course on medical procedures related to the coronavirus for hospitals, medical associations, medical schools, and students. The course, “Conducts for emergencies in COVID-19,” focuses on mechanical ventilation, respiratory emergencies, and diagnostic imaging.

Youdao, Inc. – our top ten holding as of July 2020

In China, digital learning and online tutoring company Youdao, Inc. also stepped up to support the community. Youdao was fresh off its 2019 IPO, growing quickly, and investing in its clients and capabilities when the coronavirus appeared. Youdao offered free digital courses

for the lockdown period. “[We] have a social responsibility to assist in any way we can. ... There have been over ten million free students, free course enrollments, since we launched the campaign on January 24 [, 2020],” stated CEO Dr. Feng Zhou on the earnings conference call on February 27, 2020.²⁷

Youdao noted that the coronavirus presented opportunities to get their product into the hands of new users quickly:

“The outbreak significantly raises the awareness of online education. So, business-wise, it’s very positive for our courses. So, we are doing several things ... We are offering free courses to our users and ... most of the results ... is actually branding awareness. As a lot of users ... [try] these free courses, they get to know Youdao and get to know online education for the first time ... The second thing we’re doing is ... offering... low-cost trial courses ... What we are seeing is ... much lower user acquisition costs over the period of time and also better conversion rates ... We are spending more on marketing ... Most of that is actually on the low-cost trial courses ... and this enables us to ramp up the business faster.”²⁸



It is too early to tell how many of the free trial or forced online users will stay on as paying subscribers. However, even if the conversion rate of free trial clients into paying clients is much lower than previously, that would still mean a significant expansion of the paying user base, boosting future revenue. A look at the top three players in China also suggests that the free classes offered to students during the lockdown period may have resulted in a client acquisition cost reduction of 95%.²⁹ In other words, these companies have obtained a huge boost in revenue with a simultaneous uplift in margins, which may justify the outstanding share performance from pure-play EdTech companies during the COVID-19 outbreak.

2U Inc. – our top holding as of July 2020

2U offers turnkey platforms for online learning at top universities in the US and overseas. With a mission to narrow the skill gap by widening access to quality education, 2U builds and powers online graduate degree platforms in high-demand fields for partners that include UCL, Oxford, Yale, and 70 other institutions. In addition to constructing a digital backbone for student learning, 2U equips individual instructors with training and services to optimize success in the virtual classroom. When the coronavirus hit the US in early March 2020, 2U immediately offered free training and digital instruction best practices to all professors at its partner universities, many of whom were brand new to online teaching. In addition, 2U rolled out Studio in a Box, an easy-to-use toolkit enabling professors to produce courses and film content from home.

At 2U’s April 30, 2020, earnings conference call, CEO and co-founder Chip Paucek stated: “[W]e all witnessed how COVID-19 created an urgent need for every university to move their programs online. This rush to remote learning happened almost overnight ... We now believe that this forced transition online will substantially increase the demand from universities for our core product offerings and new solutions. The need to deliver truly high-quality online programs, not just remote live lectures, at a time when universities are facing unprecedented financial constraints and challenges makes our ... model even more compelling and valuable.”³⁰

²⁶ <https://ir.afya.com.br/news-releases/news-release-details/afya-launches-online-solutions-help-healthcare-professionals>, last accessed on May 11, 2020.

²⁷ Youdao Inc. (2020): Q4 2019 Earnings Call. Bloomberg Transcript from February 27, 2020, p. 5 and p. 7f.

²⁸ Youdao Inc. (2020): Q4 2019 Earnings Call. Bloomberg Transcript from February 27, 2020, p. 7f.

²⁹ <https://www.brinknews.com/online-education-companies-in-china-see-a-huge-spike-in-demand-caused-by-covid-19/>, last accessed on May 15, 2020.

³⁰ 2U Inc. (2020): Q1 2020 Earnings Call. Bloomberg Transcript from April 30, 2020, p. 3.

The future of learning is EdTech

Just as EdTech companies may have benefited from the crisis with unexpected universal brand awareness, the entire industry received a boost in attention and acceptance as a result of the pandemic. Though difficult to quantify in these early days, the pandemic will likely accelerate the industry's development, with many EdTech companies bringing forward investments into new functionalities. With the extra resources and a vast population of educators and students who are now much more open to digital learning, EdTech could transform education as we know it.

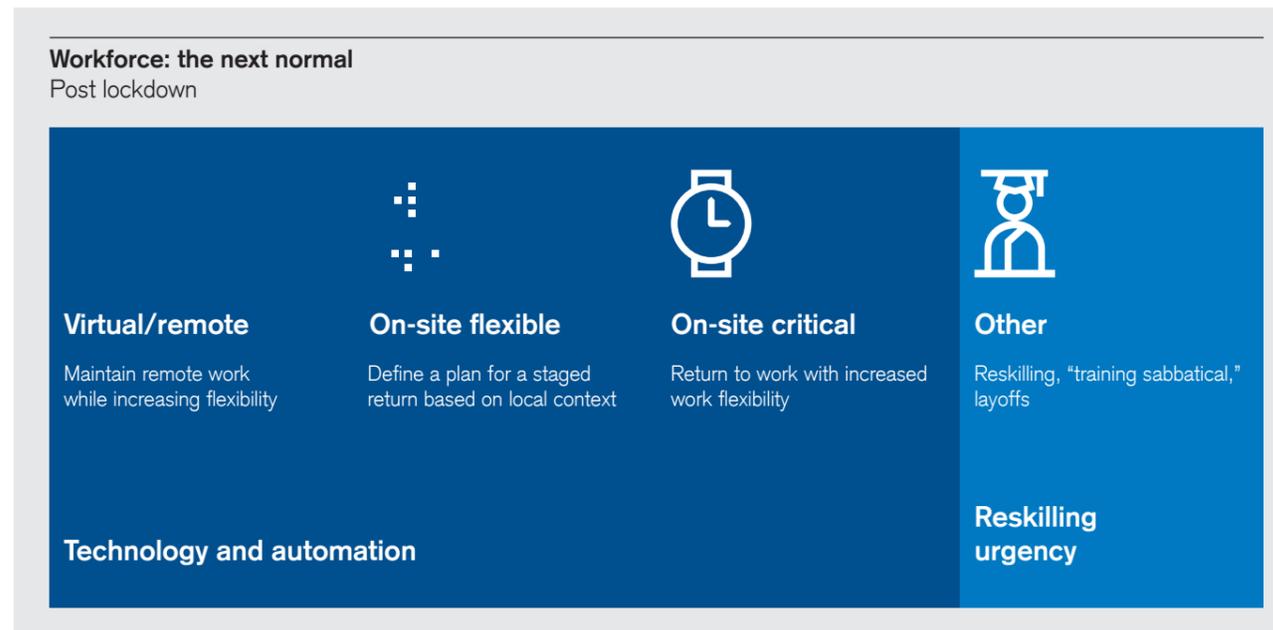
The COVID-19 pandemic had an unintended consequence – it made educators and administrators, not to mention students and families, realize that many of these online applications are as effective as – and in some cases more effective than – traditional learning models. The pandemic has accelerated the blended learning model, which does not replace, but rather empowers the educator. Across both developed and emerging markets, millions of students and teachers have signed up for free versions of EdTech learning apps and are experimenting with different formats and technologies.

Once the world's students return to the classroom, it is likely that they will continue to use the most engaging subset of these apps. Furthermore, as students embrace the flexibility and adaptive learning advantages that online learning affords, it is likely that many of these technologies will be increasingly integrated into the brick-and-mortar classroom or university seminar room.

Profound changes in the workforce

Society is emerging cautiously from lockdown and grappling with a plethora of new normals. Among them might also be fundamental changes in the workforce. The world will never be the same. The share of flexible work is going to increase, and with it the need for technology and automation. Unfortunately, the COVID-19 crisis is likely to have also plunged the world into a

deep recession, resulting in significant job losses. That means that the need for reskilling of those being laid off is more urgent than ever to enable them to quickly reintegrate themselves into the workforce. As a result, online professional training and the certification sector will see a significant boost in demand.



Source Credit Suisse, chart from "COVID-19, The (Great) Disruptor of Education and Work," used with kind permission of EdTechX



Pluralsight – our top ten holding as of June 2020

One of our top ten holdings is Pluralsight, which will play a key role in retraining people who have lost their jobs or need to reskill to meet the challenges of the new normals of the disrupted economy. The company specifically targets social impact, and its response to the COVID-19 pandemic was truly exemplary.

Pluralsight has the largest library of IT courses in areas such as cybersecurity and cloud computing, and with over 7,500 courses, it is seven times larger than its nearest competitor. The content is proprietary and is based on the company's relationship with 1,550 authors who are experts in their respective fields. Between 40% and 50% of content is renewed every two years, which is important in a field that is evolving rapidly. The company offers individuals access to the entire library of courses for an affordable USD 29 per month or USD 299 per year. It is this type of content and access that will help those willing to retool their skills and upgrade their knowledge to be quickly reintegrated into the workforce.

In 2017, Pluralsight launched a social enterprise, Pluralsight One, with the mission of democratizing technology skills and driving significant, lasting social impact by improving access to technology skills and funding solutions that scale. Specifically, it provides non-profit access to IT courses. Today it has more than 500 nonprofit and K-12 clients in 17 countries with over 25,000 learners.³¹ "Believing technology has the power to create freedom, equality, and opportunity around the globe, Pluralsight co-founder and CEO Aaron

Skonnard launched Pluralsight One in 2017 as a social enterprise to embed social impact into the fabric of the company and to lead the company's global social impact strategy in support of the company's mission to democratize technology skills. Pluralsight One leads all global social investments, volunteer strategies, advances advocacy efforts around Computer Science education, and the strategy, development, and ongoing management of the Pluralsight One product suite."³²

One client example is the Norwegian Refugee Council (NRC), where Pluralsight One is investing USD 750,000 over three years to support digital transformation and providing 8,000 Pluralsight licenses with tech support and implementation.

“
The goal is to create a sustainable social impact for displaced and crisis-affected populations around the world, as well as to increase the efficiency and efficacy of the NRC staff who serve them.”³³

³¹ Pluralsight One Impact Report 2019, <https://www.pluralsightone.org/impact/impact-book#page/18>.

³² https://www.pluralsight.com/newsroom/press-releases/second-annual-pluralsight-one-impact-book-showcases-another--yea?_ga=2.62004076.1337080658.1595319251-1677728896.1595319251.

³³ Pluralsight One Impact Report 2019, <https://www.pluralsightone.org/impact/impact-book#page/37>.

Pluralsight is democratizing technology skills in the US and worldwide



Improving opportunity

Increase access to technology skill development and promote inclusion across the globe.



Increasing employability

Equip individuals with the technology skills they need to access dignified employment, thrive, and keep pace in any industry.



Transforming education

Revolutionize the way the world learns and address the root issues contributing to the increasing technology skills gap to prevent nonprofit organizations, educators, and the populations they support from getting left behind.



Investing in innovation

Invest in catalytic solutions that accelerate our mission.

In response to COVID-19, Pluralsight One provided its nonprofit partners with over USD 1 mn in immediate cash grants:

- The Norwegian Refugee Council received an immediate cash grant of USD 250,000 in addition to the scheduled cash grant of USD 250,000 in 2020 to "prevent the spread of COVID-19 to refugee camp settings, enable the NRC teams to create digital solutions that serve those who are most vulnerable, and ultimately focus resources on flattening the curve while maintaining critical, life-saving programs and services."
- Year Up is receiving an immediate cash grant of USD 250,000 to support program continuity for its nationwide network of 4,500 program participants and alumni. Pluralsight One notes that "the COVID-19 crisis will continue to disproportionately impact low-income minority communities, and Pluralsight One is working with Year Up to lessen this impact."
- The Malala Fund is receiving an immediate cash grant of USD 300,000 to support the work of five Malala Fund Champions across Afghanistan, India, Nigeria, and Pakistan in 2020 and 2021. One such Champion is Haroon Yasin in Pakistan, who has developed an education app

that is enabling digital learning for school-aged children across the country. With Pluralsight One's support, Haroon can scale his work to reach over one million school-aged children whose learning has been disrupted as a result of COVID-19.

- CSTA has received a cash grant of USD 250,000 to support the development and implementation of digital resources for teachers with a focus on equity and inclusion. Pluralsight One's support will develop teacher resources that enable learning continuity during COVID-19, scale the CSTA Equity Fellowship to grow and establish an active Equity Fellow Alumni network, continue to build capacity and sustain CSTA's chapters, and develop rigorous professional development that grows the number of English-language-learner students enrolled in AP computer science.
- In addition to the cash grants to its strategic partners, the Pluralsight One Fund is deploying grants of USD 50,000 each to the Utah COVID Fund, the Boston COVID Fund, the Ireland Community Foundation's COVID Fund, and the UN/WHO COVID Fund to support the communities where Pluralsight team members live and work.³⁴

³⁴ Pluralsight One press release, https://www.pluralsight.com/newsroom/press-releases/pluralsight-one-commits-over--1-million-to-strategic-nonprofit-p?_ga=2.166420350.1337080658.1595319251-1677728896.1595319251.

Key outcomes



How our portfolio companies are generating impact

Our portfolio can be split into two roughly equal parts: one part serving children and students, and the other part serving adult learners and professionals. The main outcomes of the activities of our portfolio companies are:

- For children and students:** Our portfolio companies are expanding access, lowering costs, and improving the efficacy of education by delivering affordable and high-quality technical, vocational, and tertiary education; they increase the number of young people and adults with relevant skills for employment and entrepreneurship, and ensure educational inclusion and safety.

- For adult learners and professionals:** Our portfolio companies help to develop, upskill, and future-proof professionals and employees; they enable seasoned professionals to make career pivots or broaden employment opportunities; they enable enterprises and professional groups to better serve the professional development needs of their workforce and communities; they combine leisure and a zest for knowledge to deliver lifelong learning.

Our portfolio companies represent three main subsegments: innovative services, digital content, and systems and tools. The table on the next page shows key impacts made by those companies per subsegment. The companies' names have been removed for commercial reasons.

A new education paradigm	
Traditional education	New approach
Classroom-based, teacher-centered	EdTech
	 <p>Innovative services Disruption in the service model: education delivery anytime and anywhere, thus improving access to education and training</p>
	 <p>Digital content Disruption in terms of content: from standard to customized, from analog/print to digital and beyond (e.g. virtual reality/augmented reality)</p>
	 <p>Systems and tools Disruption in terms of tools: reduction in costs through digitalization, reduction in labor intensity, and better scalability</p>

Quantitative impact summary

Innovative services

90%

The US online program manager's short courses and boot camps have a 90% completion rate and are accessible, with 30% of students not holding a bachelor's degree.

8,306

Since the Brazilian medical education group's founding in 1999, it has graduated 8,306 physicians, many of whom practice medicine in underprivileged regions of the country.

1 year

92% of alumni report satisfaction with their nursing studies, which have a payback period of one year or less thanks to low tuition and salary increase after graduation.

98%

The US-based provider of daycare has an annual client retention rate of 95% for employer-sponsored daycare centers, and 98% of parents and employers report satisfaction with the service.

95%

The average employment rate of students who complete the Chinese vocational school's long-term programs in the culinary, IT, and automotive industry fields ranges from 93% to 95%.

Digital content

155 million

In the last five years, the professional services online recruitment company has nearly doubled its registered users to 155 million and its repository of résumés to 142 million.

43,000

Over four years, the online IT recruitment company in Japan doubled its quarterly job postings to 17,000 and tripled its active users to 43,000.

92%

Aided by 37 million pieces of learning library content and 24/7 access to tutors, 92% of students say that the online textbook and tutoring platform helps them get better grades.

3.8 billion

The global leader in real-life entertainment delivers over 8,000 hours of original programming each year in 50 languages across 220 countries, reaching 3.8 billion cumulative viewers.

31 million

The largest online recruiting platform in Russia has 588,000 annual job postings across 322,000 clients and posts over 31 million CVs.

Systems and tools

95%

The Brazilian education management company has an NPS of 83 with parents and a 95% retention rate with its 4,800 partner schools in Brazil, which educate 1.2 million students nationally. Over the last two years, its branded schools have shown 22 times the growth in ENEM diploma scores compared to competitors, and 5 times higher growth over the last five years.

2.6 million

The education conglomerate's English-language program supports 2.6 million students in Japan and thousands more via its global programs.

95,000

Through its learning centers and online platform, the company improves math, language, and creativity skills for over 95,000 children in Korea and Vietnam.

3,600

The leader in corporate learning management systems has 75 million users across 3,600 companies in more than 180 countries.

9.5 million

The learner-centric learning management platform had 1,930 clients and more than 9.5 million registered users last year.

Innovative services

257,000

The online language school in China offered low-cost, conversational English to 257,000 children last year, 2.2 times as many as in 2016, the year of its IPO.

63

The number of Chinese cities in which the 100% online school's 572,000 K-12 students are enrolled for tutoring and language learning, in addition to its 1.3 million college test prep students.

95%

The salary increase that graduates of the Brazilian post-secondary education company received upon graduation was 95%. In some disciplines, such as Health and Sciences, the increase was 150% to 200%.

20 points

The improvement in English language arts proficiency for grade 3-8 students enrolled four or more years vs. under one year at K-12 partner schools.

100

The learning-centric adventure cruise company offers 100 expeditions that take place on seven continents and are led by field experts who foster active traveler engagement.

Digital content

180,000

The company offers 180,000 courses and programs across 650 leading universities to international students who wish to study abroad in English-speaking countries.

69 million

The online recruitment platform is the largest in India, with 69 million résumés posted and 5 million recruiter connections forged in the most recent period.

5.5 million

The largest trade show company in the world brings over 550 brands together each year to provide connections and engagement to more than 5.5 million attendees.

31,800

The corporate continuing education company in Japan offered 31,800 types of workplace training, online and offline, in the past 18 months.

34,000

The online staffing platform in Japan connected 34,000 freelance clients last year, an increase of more than 50% from five years prior.

Systems and tools

3.36 million

The English-language-learning specialist in Japan provided educational services for 3.36 million individuals at universities and enterprises last year.

1.9 million

K-12 paid enrollments to the Chinese after-school online tutoring company increased by 374% last year to 1.9 million.

3.4 million

The US workforce training company for the healthcare industry had 3.4 million contracted subscribers to its platform last year.

87%

This learning gamification company has penetrated 87% of the global top 500 universities.

1,789

The provider of a SaaS-based employee management and evaluation platform in Japan served 1,789 client companies in 2019, 38% more than the previous year.

Quantitative impact summary

Innovative services

111

Teachers at the Japanese social services and human resources company provided social skills training and academic support to 7,447 special needs children at 111 locations in the country.

50

The healthcare recruiting company in Japan covers 50 subspecialties and charges success fees that are at least 50% more competitive than peers.

80%

The doctor-to-doctor social media site in Japan, which includes one-third of national physicians as members, is entering the online medical consultation market, which 80% of users rate "good to use."

1.6 million

A leading K–12 tutoring, test prep, and language instruction company in China is educating 1.6 million students across 1,500 schools and learning centers.

2,300

The online language platform's 6,000 teachers work with 2,300 Japanese corporations to teach English to employees.

Digital content

3.2 million

The EdTech company with a civil service focus has trained 3.2 million students in China with its more than 35,000 teachers.

3.0 million

The education publishing company has enabled 2.1 million students to access more affordable digital course materials since 2016, with a goal of reaching 3 million students in the next few years.

70%

The talent training, management, and analytics company for the IT industry serves 980,000 business users across 70% of the Fortune 500, and nearly 18,000 B2B clients.

10/second

The recruiting site, owned by a Japanese HR technology entity, has 150 million résumés on its platform and adds ten jobs per second globally.

25%

In 2018, the output of the company's scientific publication segment accounted for 18% of global research output while garnering one in four of all citations.

Systems and tools

4 times

The company's monthly active users of its AI-based English language courses increased nearly fourfold to 3 million students in the past two years.

25 million

The company's talent management system impacts the career progression of 25 million active users across more than 1,500 clients.

#1

Korea Research SKY University Survey ranks the large-scale classroom learning services company as number one for helping students improve their grades.

265,000

The China-based designer of digital education products signed a contract in January 2019 to deliver 265,000 high-tech pop-up classrooms throughout Egypt.

21,000

The company's global network of 2,500 institutes delivered 21,000 hours of custom content and 150,000 training days to professionals in 25 languages.

Innovative services

70,000

The education management company helps over 19,000 on-campus students and 70,000 online students prepare for careers via more than 200 academic program offerings.

1,600

Three million K–12 students in China received after-school tutoring and test prep support at the company's 1,600+ learning and service centers.

94%

The Japanese outsourcing firm matches its 21,200 engineers on payroll with client businesses who hire them at a utilization rate of 94%.

20,000

The Japan-based staffing company for the manufacturing sector has over 20,000 graduates and seasoned technicians on staff.

85%

The majority of the Brazilian education services company's 630,000 students are undergraduates, and their retention rate at university is 85%.

Digital content

> 45 million

The online job matching company has relationships with more than 200,000 employers and over 45 million candidates in Asia and the Americas.

70%

The company has a 70% share of the elderly care recruiting market in Japan and 20% to 30% of the nurse and paramedic recruiting market, working with roughly 8,400 national hospitals.

75%

Of the over 1 million subscribers to the audiobook company, 75% say they consume more books since joining the platform.

Systems and tools

#1

The company is number one in the UK for both end-to-end academic assessments and curriculum resources, and has 38,000 clients.

5×

The leader in digital learning literacy programs is five times more effective than the average middle-school reading intervention program, with 67% of high-risk students gaining two or more grade levels of skills in one school year.

100

The online digital learning provider in Taiwan has assembled more than 100 course experts and professional technology R&D teams to deliver its classes to K–12 students.

359,000

The entity's premium online courses have 833,000 students enrolled in China, of whom 359,000 are K–12 tutoring and coding students.

97%

The leading provider of enterprise cloud applications for HR has had 95% gross retention rates and 97% client satisfaction since its IPO.

Active ownership



The Credit Suisse Sustainable Investing Framework assumes an active approach to ownership that facilitates impactful change and promotes sustainability in our investee companies. Through proxy voting and engagement, we put our values into action, providing leadership on environmental, social, and governance issues.

Active ownership allows us to transform our role from that of a capital allocator into an agent of change. We use two of the most important tools in our repertoire – engagement and proxy voting. On behalf of our clients, we hold significant investments in various companies

through our funds and other solutions, which gives us influence over decision-making. Our focus is on establishing a continuous dialogue with the management of investee companies in order to work together toward more sustainable practices and ESG excellence. This stems from our belief that it is our duty and responsibility to address ESG issues as part of an open dialogue with companies. The prime objective of active ownership is to maintain and increase the value of investee companies so that their sustainability efforts make a positive impact on risk-adjusted investment returns over the long term.

Credit Suisse Sustainable Investing Framework

Exclusions

- Norms-based exclusions
- Values-based exclusions
- Exclusions due to involvement in controversies
- Country exclusions

ESG reporting

- Reporting on ESG performance
- Full transparency



ESG integration

- ESG data and rankings
- ESG risks and opportunities

Thematic and impact

- Thematic and impact aligned
- Impact investing



Active ownership

- Exercising shareholders rights (proxy voting) in line with ESG principles
- Engagement



Proxy voting

Proxy voting is the fiduciary exercise of our voting rights at general shareholder meetings. In the context of our ESG approach, it means that we use the voting rights afforded to shareholders whose funds we manage to influence investee companies' policies and practices in areas critical to ESG issues. Credit Suisse Asset Management is fully compliant with the European Shareholder Rights Directive II (SRD II), which encourages long-term shareholder engagement. We use proxy voting to improve corporate governance, strengthen shareholders' positions, and ensure decisions are made to boost the long-term stability of companies.

Proxy voting enables us to exert influence over the election of BoD members, as well as over compensation schemes and articles of association. We use our proxy voting power to help elect

directors who are committed to a long-term vision of strengthening their companies' sustainability practices and are sufficiently independent to see those efforts through. By voting to reduce overboarding – where board members are burdened with an excessive workload – we seek to ensure that BoD members are able to focus their efforts on the task of providing the most responsible management to their companies. We also encourage transparent compensation packages that are both attractive and rewarding to directors who demonstrate sustainability leadership through their actions.

We used our influence to make a strong push for governance best practices in our investee companies and ensure that shareholders' voices are heard.



Instructure, Inc., voting case study

In December 2019, the management of one of our top ten holdings at the time, Instructure, Inc., agreed for the company to be acquired at what we deemed was too low a price. At an extraordinary general meeting on February 13, 2020, we voted against the three proposed resolutions. The result was an improved offer price, which we later accepted.

Our voting at the Instructure, Inc., shareholder meeting, February 13, 2020:

1

To consider and vote on the proposal to adopt the Agreement and Plan of Merger, dated December 4, 2019, (the "Merger Agreement"), by and among Instructure, PIV Purchaser, LLC, a Delaware limited liability company ("Parent"), and PIV Merger Sub, Inc., a Delaware corporation and a wholly owned subsidiary of the Parent ("Merger Sub"). Pursuant to the terms of the Merger Agreement, Merger Sub will merge with and into Instructure and the separate corporate existence of Merger Sub will cease, with Instructure continuing as the surviving corporation (the "Merger") and a wholly owned subsidiary of the Parent:

 Against

2

To consider and vote on the proposal to approve, on an advisory (non-binding) basis, the compensation that may be paid or become payable to Instructure's named executive officers that is based on or otherwise relates to the Merger Agreement and the transactions contemplated by the Merger Agreement (the "Compensation Proposal"):

 Against

3

To consider and vote on any proposal to adjourn the special meeting to a later date or dates if necessary or appropriate to solicit additional proxies if there are insufficient votes to adopt the Merger Agreement at the time of the special meeting:

 Against

This information should be treated as a case study presented for illustrative purposes only.

Engagements

Engagement is the process of conducting a continuous and active dialogue with investee companies' management in order to encourage and assist them in furthering their ESG and sustainability efforts. We believe that Credit Suisse Asset Management's engagement practices have a positive impact on investment returns over the medium and long term, as well as on society in a broader sense. Through direct, one-on-one conversations with our counterparties' key stakeholders and meetings where we explain the how and why of our proxy votes, we help direct our partners toward a more sustainable development trajectory.

We started by sending our proprietary socially responsible investing (SRI) and impact questionnaire to all of our portfolio companies. The questionnaire included questions that took into consideration the specifics of those companies' businesses. Throughout the year, we have also had specific discussions on ESG issues with twelve of our portfolio companies from Brazil to Japan. Because we tend to be among the largest institutional shareholders in a given company, we generally engaged senior management during these discussions, securing a positive outcome in most cases.



Our socially responsible investing (SRI) and impact questionnaire

Credit Suisse (Lux) Edutainment Equity Fund SRI and impact questionnaire

Product/service

- How does your product or service improve access to education (UN SDG 4), specifically:
 - Does it offer significant cost savings vs. traditional methods? If so, how?
 - Does it widen access to education for those in remote areas? If so, how?
 - Do you target specific areas where there is a shortage of skills? If so, how?
 - Could you please provide a demographic of the users of your service (age, gender, etc.)?

Quality of the product/service

- How do you ensure quality of your product/service?
- How does the quality of your product/service compare with traditional methods?
- Have you had any complaints, formal (e.g. legal cases) or informal, about your product/service?
- How do you ensure the quality and sustainability of your product/service?

Outcomes/impact of the activity

- How do you measure outcomes as a result of using your product/service?
- What outcomes do you measure?
- What outcomes would you find useful to measure but are unable to (for whatever reason)?
- What outcomes do you report on?
- Can you tell us any quantification methodology and quantitative metrics regarding the achieved outcomes (e.g. number of students taught, grades or career placements achieved, number of students from disadvantaged backgrounds helped, etc.)?
- Do you have any reports available on the above-mentioned metrics? If so, could you please provide us with some examples?

Privacy and data security

- How do you ensure the privacy and security of user data?
- How do you ensure protection against increasingly sophisticated cyber threats?
- Have you had any data breaches, loss of data, or successful cyberattacks? If so, please describe how these were dealt with and what measures have been put into place to minimize the risk of similar events in the future.

Human capital development

- What training is provided to your employees for this increasingly demanding and high-tech job? Please describe the regularity and nature of the training.
- How do you recruit and retain the best talent in the industry?
- What is your approach to inclusivity and diversity? What policies do you have in place, for example, against any kind of discrimination, ensuring the rights to collective bargaining and freedom of association (UN Global Compact Principle 3)?

Environment

- What initiatives do you undertake to promote greater environmental responsibility and encourage the development of environmentally friendly technologies (UN Global Compact Principles 8 and 9)?
- Can you quantify your scope 1 and 2 carbon emissions and your carbon intensities (carbon emissions per million USD of sales)? Are there any initiatives to reduce carbon emissions going forward, for example at the server farm you are operating? If you do not think this is relevant for your business, please explain why.
- Is there a climate change policy in place?

Governance

- What policies do you have in place against bribery, corruption, and money laundering (UN Global Compact Principle 10)?
- What was the total compensation including options vesting/granting of your CEO last year?
- Have you ever been accused of misleading investor communication, fraud, tax evasion, tax optimization, anti-competitive practices, aggressive accounting, violation of international standards or national legislation, or any other significant issues?
- Have you been involved in any controversies? If so, please elaborate.
- What safeguarding policies and procedures are in place to ensure the safety of your online users?
- Have you had any safeguarding issues, and if so, how have they been resolved?

2U reporting on impact and ESG issues case study



UN SDG 4: Ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all.

- 2U was founded on the belief that digital education could be as good as – if not better than – on-campus education. This helps to increase access to lifelong learning opportunities.
- More than 44,000 students have enrolled in 2U-powered graduate programs and more than 86,000 students have enrolled in a short course offered by our university partners.
- Real-time interaction with professors and other students is critical to learning. Digital education is driven by collaborative learning, the same as any on-campus program.
 - 2U programs have held over 530,000 live classes, with an average class size of approximately twelve students.
 - Clinical placements are a necessary part of graduate programs in a number of verticals,

including nursing, social work, physical therapy, and others. 2U currently employs a team of over 130 placement specialists who have helped students gain hands-on experience, with over 45,000 placements.

- Within the Georgetown midwifery program alone, students at clinical placement sites have helped deliver more than 8,000 babies.
- 2U employs a team of over 240 employees focused on student and faculty success, analyzing data and providing resources to help our partners' programs run smoothly.
- 2U-powered graduate programs have a diverse student population relative to the national average for graduate students, an indication of how digital education is increasing access:
 - 2U demographic breakdown (vs. national average for graduate students):
 - 64% Female (vs. 59%)
 - 54% White (vs. 63%)
 - 18% Black or African American (vs. 14%)
 - 14% Hispanic or Latino (vs. 11%)
 - 11% Asian (vs. 8%)
 - 3% Multiracial (vs. 3%)
 - 1% American Indian or Alaskan Native (vs. 1%)
 - Compared to the national average, 2U-powered graduate programs enroll a higher percentage of Female, Black or African American, Hispanic or Latino, and Asian students.

UN SDG 3: Ensuring healthy lives and promoting well-being for all at all ages.

- 2U powers graduate degree offerings in the following verticals:
 - Public health: 7
 - Healthcare administration: 1
 - Mental health counseling: 2
 - Nursing: 7
 - Occupational therapy: 1
 - Physical therapy: 1
 - Physician's assistant: 1
 - School counseling: 4
 - Social work: 8
 - Speech pathology: 3
- More than 9,500 students have graduated from 2U-powered graduate programs in the healthcare space.

2U aims to create transformational experiences for students.

Human capital development and employee benefits: 2U aims to build a culture that supports employees in their efforts.

- 90% of US employees reported feeling that 2U is a great place to work in a 2018 third-party survey, resulting in a Great Places to Work certification.
- 2U was named a Top Workplace by the Washington Post for four consecutive years.
- 2U was named a Top Workplace by the Denver Post for two consecutive years.
- 2U's Glassdoor CEO Approval Rating was 87% as of March 2019.

Source 2U, data as of October 2020

- All eligible employees can receive a one-time full reimbursement for the cost of taking a 2U-powered graduate program offered by its university clients, and 2U reimburses eligible employees for the cost of one short course per rolling twelve-month period. In addition, the company provides partial reimbursement of tuition for eligible family members to complete one of its university clients' graduate programs.
- 2U offers unlimited PTO to full-time employees, encouraging them to take time when they need it. In addition, 2U employees are eligible for 24 hours (3 days) of volunteer time off to give back to their local and global communities without losing pay.
- 30% of employees received internal promotions in 2018 (of 2,128 total employees as at December 31, 2018).
- Additional employee benefits:
 - Medical plan
 - Dental plan
 - Vision plan
 - Employee assistance program
 - Retirement savings options
 - Flexible spending accounts
 - Disability benefits
 - Life and AD&D insurance
 - Parental benefits
 - Wellness program
 - Employee recognition program
 - Employee stock purchase plan



- 2U believes in creating meaningful relationships and leaving a lasting impact on both local communities and individual lives around the world.
 - Between September 2018 and March 2019, 2U partnered with seven organizations that align with its mission of providing access to education. Through these partnerships, 2U employees were able to give back to their local communities through volunteering, fundraising, in-kind donations, and pro-bono services.
 - 2U hosts Days of Service, a biannual, 2U-sponsored event that allows 2U employees to give back to their communities through volunteering and donations.
 - In 2018, 2Utes contributed 1,879 volunteer hours through Days of Service and donated over USD 8,000 of in-kind in school supplies and education materials.
- 2U appreciates a workforce that is diverse in thought and background.
 - Total workforce (based on employee survey data):
 - 60% female, 40% male
 - 5% Asian, 17% Black or African American, 5% Hispanic or Latino, 4% two or more races, 66% White, 3% other/not identified
 - Enterprise Leadership Team (based on employee survey data):
 - 45% female, 55% male
 - 6% Asian, 7% Black or African American, 4% Hispanic or Latino, 2% two or more races, 79% White, 2% other/not identified
- 2U takes pay equity seriously and conducts regular internal assessments on pay disparities, making adjustments as necessary.
- In 2018, 2U implemented an internal organization called Mosaic to advance understanding between and inclusion of employees with diverse backgrounds and interests, and help leaders keep a pulse on employee culture. Aligning with Mosaic, 2U developed three Business Resource Networks (BRNs):
 - LGBTQ + allies
 - Women + allies
 - Black/African American + allies

For a decade, 2U has been a trusted brand steward and the partner of choice to the world's top universities. To protect its partners and their students, 2U employs strong governance.

Corporate governance: 2U takes internal controls around privacy, data security, and ethical behavior seriously.

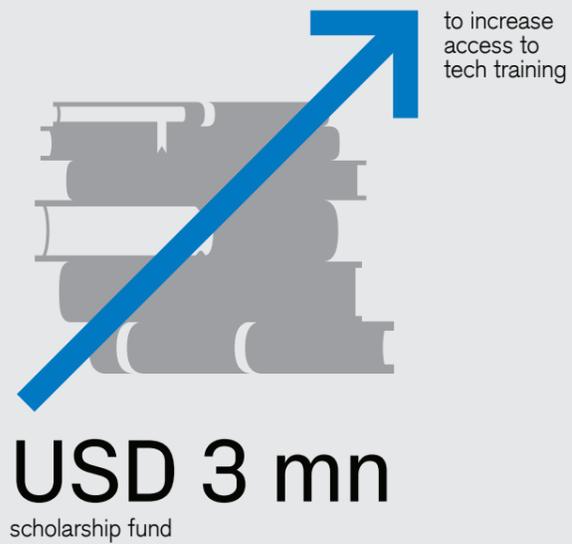
- The Board of Directors is headed by an independent chairperson, and all of the Board members (other than the CEO) are considered "independent directors" under relevant Nasdaq and SEC standards.
- 2U is committed to protecting the privacy and security of the information it collects in the course of providing its products and services.
- 2U's regulatory and audit-based controls include:
 - Internal Audit: 2U has an Internal Audit department comprised of operational, financial, and technology auditors. An annual Internal Audit Risk Assessment is performed, which drives the creation of the annual Internal Audit program. The department performs a variety of audits focused on operational and compliance risks.
 - SOC 2 Type 1 Report: 2U engages an independent audit firm to produce an annual SOC 2 Type 1 Report. The report describes the control structure of 2U's platform for the Security, Availability, and Confidentiality principles.
 - Sarbanes-Oxley Act: 2U complies with the Sarbanes-Oxley Act by conducting an annual audit of internal controls regarding financial reporting that addresses financial, technology, and corporate governance.
- Payment Card Industry Data Security Standard: 2U fills out an annual self-assessment questionnaire and hires a third party to conduct quarterly Attestation of Compliance assessments to ensure 2U's compliance with the Payment Card Industry Data Security Standard.
- 2U strives to maintain ethical marketing and advertising practices. Its approach is grounded in the principles of accuracy, transparency, and respect for the client.
- 2U's Marketing Compliance team provides oversight regarding marketing materials, including reviewing new marketing content to promote alignment with compliance standards.
- 2U has a Code of Business Conduct and Ethics that reflects the business practices and principles of behavior that support a commitment to maintaining the highest standards of business conduct and ethics. The Code of Business Conduct and Ethics addresses the following issues:
 - Honest and ethical conduct
 - Legal compliance
 - Fair dealing
 - Conflicts of interest
 - Compliance standards and procedure



Source 2U, data as of October 2020

Scholarships increase the affordability of training programs

In June 2020, 2U, in partnership with more than 30 top nonprofit universities nationwide, launched a USD 3 mn scholarship fund designed to expand access to critical tech training boot camps for historically underrepresented candidates experiencing job loss or financial hardship.



Source <https://2u.com/latest/2u-announces-3-million-scholarship-fund-to-expand-access-to-tech-boot-camps/>

Our efforts related to access and inclusion

We are particularly proud of the efforts on behalf of access and inclusion that we make together with our colleagues from the Sustainability Strategy, Advisory, and Finance team. Although we cannot cite our specific influence in each particular case, we are glad to see some of our portfolio

companies announcing initiatives aligned with our objectives, and we hope that our investment has been one of the influencing factors.

We will continue our efforts, hoping to see more initiatives like this from the EdTech industry.



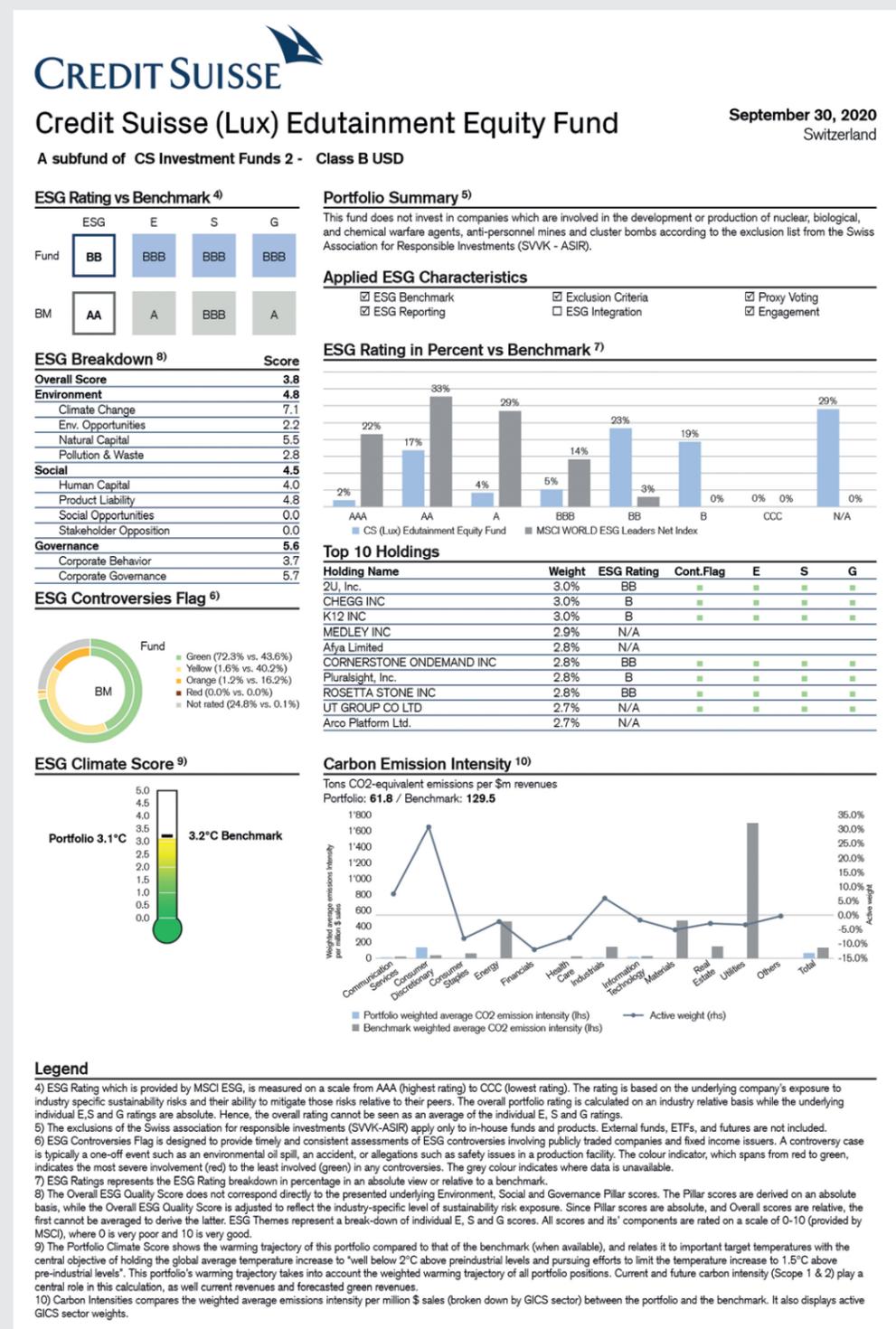
Summary of our activities

The table below summarizes our activities over the past year. Company names have been removed for commercial reasons.

Company	Outcome
Company 1 (US)	Positive response from the company on all questions/issues that we raised.
Company 2 (US)	We provided an ESG questionnaire to learn about the company's ESG practices. We encouraged the company to reach out to MSCI regarding its MSCI ESG rating and provide MSCI with missing information that could result in an improved rating for the company.
Company 3 (South Korea)	We did not have a lot of information about the company's ESG practices, and there was no MSCI ESG report available. Therefore, it was necessary to obtain answers to questions relating to the company's ESG practices and some quantitative impact and sustainability measures.
Company 4 (Japan)	We provided an ESG questionnaire to learn about the company's ESG practices. At first, the company did not provide much information on the governance questions in the questionnaire. MSCI also highlighted corporate governance as a key issue. We followed up, asking for more information on the company's corporate governance practices.
Company 5 (UK)	We provided an ESG questionnaire to learn about the company's ESG practices. In the ESG questionnaire, the company described how its product was of higher quality than those of its peers. However, MSCI pointed to an issue with the data privacy of the product (e-learning services), mentioning that the company was making efforts to improve the situation, which was also confirmed by the company itself. In the meantime, the company's rating was updated from B to BB. However, since the data privacy problem has not been solved, we decided to follow up on this issue.
Company 6 (Brazil)	Not covered by MSCI. We provided an ESG questionnaire to learn about the company's ESG practices.
Company 7 (Japan)	We provided an ESG questionnaire to learn about the company's ESG practices. We also highlighted the issues mentioned in the MSCI report.
Company 8 (Brazil)	We engaged with the company because we had insufficient information on its ESG practices, since it is not covered by MSCI ESG.
Company 9 (US)	We engaged with the company to gain some insight into its impact on society, especially during COVID-19.
Company 10 (US)	We engaged with this company to obtain its response regarding an industry initiative that we proposed.
Company 11 (China)	We reached out to this company to get more information concerning all of the ESG issues that are highlighted by MSCI and the progress it is making in the ESG area.
Company 12 (US)	We provided an ESG questionnaire to learn more about the company's ESG practices due to its poor MSCI ESG rating.

ESG reporting

The Credit Suisse (Lux) Edutainment Equity Fund has employed ESG screening of all portfolio companies since its inception in September 2019, which is reflected in our monthly fund fact sheets. An example of that report can be seen below. We realize that the overall portfolio score on traditional ESG metrics is below that of the reference index (MSCI World ESG Leaders). This is due to the disproportionately higher exposure to small- and mid-cap stocks and to emerging markets, both of which score poorly when compared to large-cap companies from developed markets. In fact, we consider this to be an opportunity to help our portfolio companies tackle ESG issues, which is often the focus of our ESG-related dialogues with them.



For illustrative purposes only.

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Education is the most powerful
weapon which you can use to
change the world.

Nelson Mandela



Risks

- The fund does not offer capital protection: investors may lose all or part of their investment in this product.
- Political developments concerning the education industry could have a significant adverse impact on the edutainment sector.
- Exposure to smaller companies can result in elevated short-term volatility and may carry liquidity risk.
- A higher concentration in specific sectors may fall out of investor favor at certain points in time.
- There are risks arising from a factor bias toward a growth investment style with an overweight in small- and mid-cap stocks in particular.
- Since the fund focuses on highly innovative companies, volatility can be significantly elevated. Exposure to emerging markets may result in even higher volatility.



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