Propelled by standardization, diversification and technology innovation, China education industry M&A embraces the return of rationality.
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Foreword

An explanation of data shown in this presentation

- The data is presented based on the information compiled by ChinaVenture public information and PwC analysis, unless stated otherwise;
- Detailed information or transaction size were not disclosed in many deals, which would affect the comprehensiveness and trend of our analysis to a certain extent. For transaction size disclosed in the form of divisors shown in the table below, we used the corresponding rounded figures in our calculation and analysis;
- The deal value figures presented in this report refer only to those deals where a value has been disclosed;
- The deals presented in this report do not include deals that are known to lapse and are in process;
- “Domestic” refers to China including Hong Kong, Macau and Taiwan;
- “Outbound” refers to China company’s acquisitions abroad;
- “Financial investor” refers to an investor who makes an acquisition for the purpose of profiting from future sales, mainly including but not limited to private equity funds and venture capital funds;
- “Strategic Investor” refers to a corporate investor (as opposed to a financial investor) whose purpose is to incorporate the acquired company into its existing business scope;
- To exclude foreign exchange impact, deal values from 2016 to 2019 have been adjusted based on the average exchange rate of RMB against other foreign currencies on 31 Dec 2019.

<table>
<thead>
<tr>
<th>Disclosed fund raising amount</th>
<th>Converted amount</th>
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<tr>
<td>Nearly a million</td>
<td>1,000,000</td>
</tr>
<tr>
<td>A few millions</td>
<td>5,000,000</td>
</tr>
<tr>
<td>Nearly ten millions</td>
<td>10,000,000</td>
</tr>
<tr>
<td>Tens of millions</td>
<td>50,000,000</td>
</tr>
<tr>
<td>Nearly a hundred of millions</td>
<td>100,000,000</td>
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Industry classification

To better perform analysis of the M&A activities and trend of China’s education industry, we have divided the industry into sub-segments, as listed below. Note that online training is carried out across multiple sub-segments, and thus, it is not classified as a separate category.

- **Preschool education** refers to education services provided to students aged 0-6 years, including parent-child early childhood education, infant education, preschool care centres, kindergartens, etc.;
- **K12** relates to education services provided to students aged 6-18 years, including primary, secondary and high school academic education and extracurricular training;
- **Quality-oriented education** refers to afterschool training such as STEAM, coding, robotics, art and camping for students aged 6-12 years;
- **Vocational education** includes both academic and non-academic vocational education services, which include certificate exam training, vocational training and enterprise management services, etc., targeted mainly at the working group;
- **Educational informationisation** mainly refers to the effective application of information technology to teaching and research and the use of via information technology to digitalise, intellectualise, cyberise and multimedia educational resources; and
- **Others** refer to sub-segments that are not included above, such as higher education, overseas study agencies and comprehensive education services.
An overview of the development of China's education industry

At the beginning of 2020, the sudden outbreak of COVID-19 epidemic caught the education training institutions that were in the winter holiday peak period by surprise. The epidemic acts as a powerful catalyst, not only to boost online education nationwide, but also to impose certain impact on some sub-segments of education. At this moment, challenges and opportunities coexist for education industry.

- At this point of time, all schools and offline training institutions are not allowed to conduct offline classes due to the epidemic, leading to a shift to online education. On Jan 27, 2020, the Ministry of Education announced the postponement of the start of the 2020 spring semester. On January 28, the National Health Commission called for suspending all play-and-learn centers, child care centers and preschool institutions for children under 3 years old. The education bureau in each of the provinces have required all offline training institutions to suspend operations and postpone the opening of school till March 2020 in view of the epidemic situation.

- The impact on offline afterschool training institutions, especially on small ones, is tremendous. It is a difficult period for those small training institutions with poor online capability. They receive a large amount of refund applications, which exerts great pressure on cash flow, while fixed expenditures such as rents and labor cost worsen their cash gap. Along with the government’s introduction of supportive policies such as rent reduction and tax incentives to help small-to-mid companies to get through the tough period, training institutions actively seek self-rescue methods through negotiating course extensions with parents, cooperating with large-scale institutions and online training institutions/platforms to transfer classes to minimize losses on cash flow. In this race against time, the transformation is the key factor and the abundant cash flow will determine the life and death of these institutions.

- The epidemic is also a gold coin for online institutions or training institutions with online engagement, especially those with mid-to-large scale. Consumers' acceptance of online education is bound to increase, especially for the lower-tier markets that are known to be difficult to enter previously. Most of the national and regional leading education companies are already engaged in online education; therefore, it would be an ideal move for them to migrate the offline training courses to online or launch new online courses and promote online marketing. The long-standing pain point of high customer acquisition cost may be relieved with the large influx of user traffic "boosted" by the epidemic. However, “Nationwide Online” is just a temporary phenomenon, and the "spring" of online education also faces challenges. In the short term, the two key factors to be considered would be: the ability of the IT infrastructure to support the sudden surge of user traffic, and the sufficiency of teaching staff to provide corresponding teaching and after-class tutoring services. In the long run, schools and offline institutions will eventually return to the form of offline teaching after the epidemic. Indicators determining whether an online organization has benefited from the epidemic would include its rate of conversion of incremental users into paying users on its platform and the increase of retention rate of user traffic.
An overview of the development of China's education industry

- Educational informationisation is further promoted by schools and governments cooperation with various third-party companies and platforms to launch online courses timely. In the era of educational informationisation 1.0, more emphasis has been put on the popularization of Internet connection and hardware equipment. Upon the introduction of educational informationisation 2.0 in 2018, the focus has been shifted towards platforms, content, and practical applications, which reflected the upgrade from equipment infrastructure to education innovation and online and offline integration. However, most of the products and applications of educational informationisation in schools had been providing auxiliary functions, mainly for school-parent-student collaboration or construction of information platform, with the rare engagement with key content output. Following the government's announcement of the postponement of school opening and online teaching requirement, educational informationisation 2.0 is on its way to transforming from auxiliary functions to educational innovation and online and offline integration. Provinces and cities across the country have successively launched recorded learning courses online, and schools have leveraged their teaching practices to develop their own online programs and courses. For example, on February 18, 2020, it was announced that all universities, primary and secondary schools in Shanghai will launch online education programs instead of campus learning since March 2, 2020. The Municipal Education Commission of Shanghai has enacted online education guidance for primary education, vocational education and higher education, and has carried out a series of tasks including selecting teachers, recording courses, establishing network platforms, guaranteeing end-user services, gathering teaching resources and formulating online teaching management mechanism. 2B and 2B2C platform companies such as DingTalk and YIQIXUE, have benefited from the cooperation with schools and governments. However, the ways to successfully achieve an effective combination of online and offline and find appropriate application scenarios would become a new topic for companies and schools to explore after the epidemic.

In summary, this epidemic will bring a positive impact for online education in the short term as a powerful catalyst. We are cautiously optimistic about its long-term development. Many large-scale education companies have already upgraded to comprehensive education groups. Besides offline consolidation, online engagement has been an indispensable business form that could help all-round extension in the education value chain. For educational informationisation, the epidemic will definitely promote its further development in schools. Whether it is the platform, hardware, technology or content provider, related parties will all benefit from the government's implementation of online education initiatives.
An overview of the development of China's education industry

The ‘black swan’ event will eventually come to an end and education industry will return its original path. Policies propel and guide the standardization of education industry. Along with the diversification of supply and demand and technology upgrade, education industry will continue to develop quickly with great power.

**Policy standardization**

Since 2016, the second draft of Law of “Non-governmental Education Promotion” and the “13th Five-year Plan for the Development of National Education” have been promulgated. Amid the continuous heat of capital investment and the high level of public attention, there have been many policies in the education industry since 2018 that encourage the acceleration of education industrialisation. The policy trends of second half of 2018 will continue in 2019, with close supervision aiming to ensure the healthy development of the education industry, promote education equity and reduce the cost of education.

**Supply and demand diversification**

As the post-80s and post-90s generations become main consumers as parents, they require a diversified and high quality education for their children:

• They attach great importance to education as they themselves experienced higher college enrolment rates and enjoyed educational preferences;

• They hope to cultivate comprehensive abilities as well as an international vision for their children, leading to a strong demand for STEAM and art quality-oriented education as well as private and international schools.

• Besides high-net-worth-individuals, middle class families become main constitution of overseas study, further promoting the corresponding market;

To respond the call of diversified demand, education also presents a diversified supply pattern. With the rising needs for high-quality education in lower-tier cities, the online education resources make their debut due to the epidemic. It’s no doubt a great opportunity for the popularization of online education and shift of education norms. To better utilize the chance, education companies will adopt digitalization and informationization approach to solve scarcity and uneven distribution of high-quality education resources, further exploit potentials of lower-tier cities to stimulate the penetration and promotion of education consumptions in small-to-mid cities.

**Technology innovation**

Unlike other industries that have been transformed by the internet, the education industry is yet to be fully penetrated by the internet. Due to the specification of education and the limitations of early technology, the integration of internet and the lack of innovation, the traditional education model still remains in the leading position.

In recent years, with the influx of large amounts of capital and talents, the application of science and technology in education has begun to develop gradually. At the same time, changes in users’ consumption pattern, learning behaviors and habits, as well as higher requirements for learning scenarios continue to promote the development of science and technology in education industry to better meet the more diversified needs of users. Currently, AI applications in the education industry include self-adaptive learning system, online classes with a dual-teacher mode, man-computer interactive dialogues, oral test ratings, and obtaining answers through screen shot of questions. The application scenarios imply penetration of AI from external auxiliary function to internal key process. Generally speaking, the greatest advantage of AI application is the improvement in teaching quality and efficiency. AI makes ‘tailoring teaching method to individual’s aptitude’ possible. Self-adaptive learning system provides customized solution to better fit each individual’s preference and guides the learning path based on the respective requirements and situation. In school, the application of AI would help teachers to reduce repetitive workload (such as homework correction) and provide visualized data analysis results which would facilitate their content R&D and interaction with parents.

For AI, hardware is the infrastructure, and the accumulation of big data is the driving force for its development. The development of various online education outside the school facilitates data accumulation, but there are still missing data in some key areas in schools, such as real-time feedback during the teaching process which makes each student’s persona incomplete. This might be one of the opportunities and directions for the development of in-school educational informationisation.

Companies that are highly sensitive to the market have already made progress in the field of “AI + education”. Companies that are specialized in the education industry include TAL, Koolearn, and Zuoyebang, and Internet giants include iFLYTEK, TouTiao, and Tencent, all continue to invest in “AI + education”.

We believe that AI will undergo extensive refine development in the sub-segments of the education industry, and give birth to more new business models. The education industry will embrace the intelligence trend.
An overview of the development of China's education industry

Affected by economic downward, intense supervision and hot money retreat, China's education M&A market has cooled down, and returned to the rational.

Funding stage

From 2016 to 2019, percentage of number of early-round financing decreased to 21% from 37%, indicating an overall trend of shifting to mid-to-late rounds with increasing percentage of deal number that is over Rmb10mn. On one hand, investors were more cautious due to ‘hot money’ retreat and increasing trail mistake cost. They had much more specific requirement for target’s performance and growth potential in order to ensure their future exit to gain financial return. On the other hand, start-up entrepreneurs were losing momentum in segments with insufficient policy support resources and unfeasible business models due to a lack of technology innovation and investment highlights. As a result, the overall financing market returned to a more rationale status.

Valuation

The education market has been going through a “bubble-squeezing” stage in recent years. In terms of primary market, it has become harder to obtain funds, the average financing cycle thus lengthened. Companies with delicate story now find it hard to bargain for a high valuation as before if they do not have endogenous growth capability. Securitization of education companies are overwhelming in capital winter and IPO became the main approach for investors to cash out. Regardless of where they are listed, some of the education companies see their multiples fluctuate before slumping while others see them fall into a broadly stable range. Investors' preferences shifted from seeking high valuation to pursuing high business performance. They favored outstanding targets with mature business model, making the valuation more rational.

Professionalism

With strict supervision by the government, investors have been guided by policy trends. They tend to evaluate potential from a long-term perspective and keep an eye on policy trends. Currently, they favor segments with supportive policy and resources, which is evidenced by the activeness of K12 and quality-oriented segments.

In terms of investor types, education companies and other strategic companies (such as internet giants, real estate companies) gradually outweighed the PE/VC investors. Those companies are much more insightful about education industry and familiar with resources allocation. Through investment, they can better penetrate the value chain of education and create business synergies to find new growth potential. Among financial investors, PE/VC specialized in the education industry were also of notable percentage. Those education-focus PE/VC can better leverage their portfolio companies and gain better return through business synergy.
China M&A activities in the education industry: review and current situation

Overview of M&A activities (2016 to 2019)
China M&A activities in the education industry – a snapshot

**Number of deals**
Cumulative number of domestic deals completed reached 1,747, of which 502 were closed in 2018, and 313 in 2019

**Deal value**
Total disclosed deal value exceeded Rmb130 billion; deals closed in 2018 contributed Rmb53.6 billion, while 2019 reported Rmb20.4 billion

**Average deal size**
Deal size averaged some Rmb90 million. 2018 ranked top in terms of average deal size at Rmb120 million

**Mega deals**
28 mega deals (>Rmb1 billion in deal size) were recorded historically; these deals have a combined size of more than Rmb52.8 billion, of which were 5 mega deals in 2019

**Review of China M&A deals in education industry**

**Investment hotspots**
Investment buzz has centred on K12, quality-oriented education and vocational education

**Major investors**
More than 70% of the deals were PE/VC-led with disclosed deal value exceeding Rmb87 billion

**Geographic focus**
Over 70% of the China deals were located in developed cities and provinces including Shanghai, Beijing and Guangdong

**Outbound deals**
Cumulative number of outbound M&A deals totalled 34, of which 2019 is the most active year with 16 deals

Source: ChinaVenture and PwC analysis
In the 2016 to 2019 period, China domestic M&A investments in the education industry exceeded Rmb130 billion, with the following attributes:

1. The total scale of investments expanded from 2016 to 2018. The activity of M&A investments reached a peak in 2018, and an overall downturn was displayed in 2019;
2. K12, quality-oriented education and vocational education were the top three areas of investments. In terms of amount invested, the K12 enjoyed stable performance and remained in the top position. In terms of the number of deals, the performance of quality-oriented education was even more eye-catching;
3. Average deal size has increased, but fallen slightly after reaching its peak in 2018;
4. More than 70% of the deals were PE/VC-led. The proportion of strategic investors in the number of deals has increased year by year, and nearly half of them were in early rounds and non-controlling acquisition.

The education industry doesn’t not generally enjoy a cyclical pattern. H2 of 2018 and since has witnessed stricter government supervision and frequent policies release. Under the main theme of focusing on compliance, the performance of investment and financing in the education industry was also “strictly controlled” in 2019. Only 216 M&A deals were announced in 2019, fewer than half the comparable number reported in 2018. The disclosed value of M&A deals in the whole year was Rmb20.4 billion, less than 2/5 of the size in 2018.

The capital market cooled down further due to the impact of financial deleveraging and the continued economic downturn continued to linger. The loss of “hot money” and startups’ "falsification" has made investment institutions more rational, and the investment in primary market has plummeted. Targets with mature business models and good profitability in the sub-segments with clear tiers (such as K12) were preferred by the capital, while in some Blue Ocean or pro-policy sub-segments (such as quality-oriented education and educational informationisation), the early stage “small trials and errors” were preferred.
The Chinese education industry has been enjoying rapid growth, with the mutual support from regulatory bodies and the abundant flow of funds promoting the development of service providers. The continuous growth of K12 extracurricular training and tutoring, the investment attractiveness of private kindergartens, the rise of online education and the strong momentum of STEAM have contributed to a steady supply of investment opportunities. Nonetheless, the revision of policies and regulations, as well as the change in the investment environment have resulted in a shift in the investment trends in 2019, demonstrating the susceptibility of some sub-segments to regulatory changes.
The changing trend of M&A deals in preschool education is heavily influenced by policies. Very much favoured by the capital market, the private kindergarten sector is highly commercialised. In 2018, 6 deals occurred, with more than Rmb100 million per deal. As the government launched a new regulation on preschool education in November 2018, under which private kindergartens are banned from listing as a whole or in part while listed companies are not allowed to invest in for-profit kindergartens through secondary market, or purchase the assets of any for-profit kindergartens, be it in cash or shares. After that, kindergarten asset-related M&A deals have disappeared in 2019.

In terms of teaching type, there are 16 offline institutions involved in preschool education M&A deals, accounting for 50% of the total deal number. This is mainly due to the dual effects of infants’ nature and policy promotion: on the one hand, infants need more personal companionship and interaction, and online education can only play a supplementary role; on the other hand, the country has issued a number of policy on infant care services in 2019 to guide social capital to set up and organize child care centres in order. In terms of sub-segments, early childhood education and logical thinking training have become the most popular categories. There were 15 deals in the field of early childhood education and care, accounting for 47% of the total number of deals; 9 deals in the field of logical thinking training, accounting for 28% of the total deal number.

The K12 segment enjoys a massive market size. The outstanding effect of economies of scale demonstrated by market leaders has been followed by start-ups in various sub-sectors. They range from offline institutions, private/international schools to online education institutions, from 2C education to 2B content creator, from teaching to homework database. The investment targets are abundant and diversified, allowing this segment to be highly attractive to capital.

The government has been balancing the people’s wellbeing and market trends, and has successively issued a number of policies, including the standardized supervision of various details of training institutions’ qualifications for running schools, charging standards, fire qualifications, and teaching content.

Competition in the online K12 education market has always been fierce. The core industrial chain has formed competition echelons in facing the customers (including students and parents). Investors prefer targets with mature business models, certain brands and reputation, and with previously several rounds of financing. Dada ABC, VIPKID, Zhangmen 1 to 1, etc. all received more than Rmb100 million in a single round of financing in 2019. With the opening up of one end of the core industrial value chain, investors have also begun to turn their eyes on companies that serve the demand of business users since 2018. As a result, products for school services have received great attention. Knowbox received financing of more than Rmb100 million in 2019. As a means of synergistic reinforcement, derivative services on the industrial chain are also emerging. Companies that provide platforms for training institutions or schools, R&D and content outputs are beginning to show attractiveness. In 2019, Gaosi Education, which provides tooled online solutions for schools, received financing of over Rmb100 million. This deal was the largest one in the K12 2B sub-segment.

At present, the "3+X" model is still used in the entrance examination. Therefore, Chinese, Math and English subjects are always the mainstream of the K12 afterschool tutoring market.
Quality-oriented education

Quality-oriented education is a blue ocean market in the middle of rapid development while enjoys unstable and unclear competitive landscape. M&A deals are becoming increasingly active, and the average single deal value is also picking up. With the recognition by policy and standardized implementation, quality-oriented education is moving from high-level quality education to "rigid" requirements by proposing to integrate comprehensive quality evaluation into the performance evaluation system and paying more attention to the training of comprehensive talents. Among quality-oriented education, STEAM and logical thinking training enjoy highest attractiveness. There were many leading companies that have received large amounts of financing, such as Huohua Thinking and CODEMAO. Language and literature also became a hot topic in 2019 with a total of 11 M&A deals, accounting for 11% of the total number of deals. At the same time, the quality-oriented education sub-segment also showed a trend of diversification. In 2019, a variety of art (music, painting) and sports (tennis, football) oriented startups have emerged.

Educational informationisation

The IT training market is thriving and attracts most attention of entrepreneurs among all the subdivisions due to the strong customer demand and uncertainty in the overall competition landscape. Of the total 44 M&A deals in 2019, 11 occurred in the IT training division, accounting for 25% of the total number of deals.

Vocational education

Although vocational education was promoted by supportive policies, they were biased towards the on-campus vocational education system. The performance of M&A in various fields outside the school system was average, thus the overall vocational education investment activity was lower than expected. The market for certificate exam training for adults is extremely hot due to the impact of the economic downturn. However, investment institutions are still very cautious about this market because of its market limitations.

Among the large M&A deals in vocational education in 2019, training institutions that can provide certificate exam training and integrated curriculum MOOC platforms were still the mainstays, which also confirms the prudence of investment institutions toward investments in this sub-segment.

The Ministry of Education issued the “Action Plan for Educational Informationisation 2.0” in 2018. It is required that the development goal proposed in this action plan will be basically achieved by 2022, that is, education software applications will cover all teachers, learning software applications will cover all school-aged students, and digital campus construction will take place in all schools; the level of informationisation application and the information literacy of teachers and students will be generally improved; and an “Internet + Education” platform will be established. However, the number of M&A deals in education informationisation has been decreasing year by year despite of the supportive policy. The market was still disperse, and most of deals were concentrated in the early and middle stages. Among the educational informationisation M&A deals that occurred in 2019, 30 were school enrollment products / services, accounting for 51% of the total number of deals. The market of customised software development for public schools has begun to show its scale, and various products regarding teaching cloud platform have gradually opened up access to schools. The ultimate demand for schools is a systematic education informationisation solution, which can only met by the mutual support of industry experts who understand the various pain points in the process of school informationisation and leading online information technology implementers. In addition, regulatory requirements must be considered. A very high industry barrier can be expected taking all the above into account.
1. Mega deals

In recent years, education unicorn companies targeting the age of 6 to 18 have been favored by capital. Leading players in K12 online English subsector (VIPKID, Dada etc.) and homework database subsector (Knowbox, Zuoyebang etc.) have received substantial funding several times in the past two years. In 2019, 9 out of top ten M&A deals were focused on this age span.

After a period of exploration, content-driven online companies have gradually built their core competitiveness and have been recognized by the market. Leading players with scalability ability and mature business model that focus on content have emerged in different sub-segment of education industry. Online one-to-one education is able to overcome geographic limitation, to enhance the interactive experience, and to ensure the effectiveness of teaching. Therefore, it has been unanimously recognized by investment institutions in areas such as English training, mathematical thinking training, and children’s coding.

In 2019, the top outbound M&A deal is Bright Scholar Education’s acquisition of the British education group CATS Colleges Holdings Limited for nearly Rmb1.3 billion. In terms of value chain extension, the main source of income for private schools is the annual tuition fees paid by students. As a private K12 education group, Bright Scholar Education covers the age of 4 to 18 for school education and features in international teaching. As an international education provider, CATS Colleges has several international language schools in United Kingdom, US, Canada and China. Bright Scholar Education has introduced overseas K12 education resources and viability of overseas higher education through the acquisition. Driven by the growing demand for overseas education, Bright Scholar has gained the ability to further optimize the learning experience of students and increase user stickiness, moving forward to the strategic goal of a global high-quality school network.

### Mega deals in education in 2018

<table>
<thead>
<tr>
<th>Target</th>
<th>Sub-segment</th>
<th>Investment amount</th>
<th>Funding stage</th>
</tr>
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<tbody>
<tr>
<td>Zuoyebang</td>
<td>K12</td>
<td>USD 350m/500m</td>
<td>Round D/E</td>
</tr>
<tr>
<td>VIPKID</td>
<td>K12</td>
<td>USD 500m</td>
<td>Round D+</td>
</tr>
<tr>
<td>Yuantiku</td>
<td>K12</td>
<td>USD 300m</td>
<td>Round E+</td>
</tr>
<tr>
<td>17Zuoye</td>
<td>K12</td>
<td>USD 250m</td>
<td>Round E</td>
</tr>
<tr>
<td>Better Sun Education</td>
<td>Preschool</td>
<td>USD 250m</td>
<td>Strategic</td>
</tr>
<tr>
<td>Gaodun</td>
<td>Vocational</td>
<td>RMB 800m</td>
<td>Round C</td>
</tr>
<tr>
<td>VIP Peilian</td>
<td>Quality</td>
<td>USD 150m</td>
<td>Round C</td>
</tr>
<tr>
<td>Dada</td>
<td>K12</td>
<td>USD 100m</td>
<td>Round C</td>
</tr>
<tr>
<td>Knowbox</td>
<td>K12</td>
<td>USD 100m</td>
<td>Round C</td>
</tr>
</tbody>
</table>

Source: ChinaVenture, public information and PwC analysis

### Mega deals in education in 2019

<table>
<thead>
<tr>
<th>Target</th>
<th>Sub-segment</th>
<th>Investment amount</th>
<th>Funding stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zhangmen</td>
<td>K12</td>
<td>USD 350m</td>
<td>Round E</td>
</tr>
<tr>
<td>Dada</td>
<td>K12</td>
<td>USD 255m</td>
<td>Round D</td>
</tr>
<tr>
<td>CATS</td>
<td>Higher Education</td>
<td>GBP 150m</td>
<td>Buyout</td>
</tr>
<tr>
<td>Knowbox</td>
<td>K12</td>
<td>USD 150m</td>
<td>Round D</td>
</tr>
<tr>
<td>VIPKID</td>
<td>K12</td>
<td>USD 150m</td>
<td>Round E</td>
</tr>
<tr>
<td>GaosiEdu</td>
<td>K12</td>
<td>USD 140m</td>
<td>Round D</td>
</tr>
<tr>
<td>Huohua</td>
<td>Quality</td>
<td>USD 85m</td>
<td>Round D</td>
</tr>
<tr>
<td>Codemao</td>
<td>Quality</td>
<td>RMB 400m</td>
<td>Round C</td>
</tr>
<tr>
<td>Hetao Coding</td>
<td>Quality</td>
<td>RMB120m/USD 50m</td>
<td>Round A+/B</td>
</tr>
<tr>
<td>KaiShu</td>
<td>Quality</td>
<td>USD 50m</td>
<td>Round C</td>
</tr>
</tbody>
</table>
2. Funding stage

1. The number of early stage investments has declined, with concentration on certain sub-sector

In the overall funding stages distribution in 2019, the number of early stage deals decreased significantly. After the explosive entrepreneurial wave experienced by the education industry from 2016 to 2018, "impulse entrepreneurship" has since waned, and entrepreneurs have been more rationale. In 2019, government has proposed a series of plans and policies to enhance comprehensive quality of students and explore STEAM education. Such tendencies of government also lead to concentration of early-stage start-ups in quality-oriented sector in 2019. A total of 66 angel/seed stage investments took place in 2019, among which 31 deals involve quality-oriented education.

2. K12 and quality-oriented education become popular sub-sectors for M&A in mid-to-late stages

Similarly, fierce competition continues in all market, and the number of companies gaining the Round C and later round investments has dropped sharply. K12 and the quality-oriented education has become dominant in the mid-to-late financing stages, accounting for about 75% of the total. After years of development, K12 sector has formed a relatively clear competitive landscape. Companies in K12 sector reached out for further financing in order to further consolidate its position and increase its market share. 11 out of 24 Round C and later investments in 2019 were from K12 sector; with quality-oriented education becoming a popular sector in recent years. It’s now a blue ocean market with both product and model innovation continue to emerge. Aiming to achieve scalable expansion and become the top-tier companies, the proportion of quality-oriented education in M&A deals in the mid-to-late stages also remain a high level with a total of 7 deals.

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Source: ChinaVenture and PwC Analysis
Note: Data presented above include the 234 domestic deals with unannounced deal size
3. Investment geography

Geographically speaking, economically developed cities and provinces exhibit high demand and emphasis on education. Higher expenditures on education and a more open market have led to a high concentration of educational start-ups. As representatives of economically developed cities and provinces, Beijing, Shanghai and Guangdong maintain the leading position in both deal volume and size, especially Beijing.

The uneven level of development of education and the relatively scattered resources allocation result in certain regional barriers in the education industry. Local brands or institutions in the region can build up their brand influence by deep exploiting and breeding the local market and become regional leading players. Taking Only Education as an example, it started its business in Shanghai and after cultivating the Shanghai market for more than 30 years, it has now become a regional comprehensive education and training institution group. Its business lines include pre-school education, K12 after-school tutoring, Japanese language education, self-study training for higher education, vocational education, overseas study, etc. It has built up a good reputation and decent market share in Shanghai, Jiangsu and Zhejiang.

### Education M&A deals by geographic location in 2016–2019

<table>
<thead>
<tr>
<th></th>
<th>2016 — 2019</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rmb in billion</td>
<td>Deal volume</td>
</tr>
<tr>
<td>Domestic</td>
<td>1,513</td>
<td>98%</td>
</tr>
<tr>
<td>Beijing</td>
<td>673</td>
<td>44%</td>
</tr>
<tr>
<td>Shanghai</td>
<td>262</td>
<td>17%</td>
</tr>
<tr>
<td>Guangdong</td>
<td>200</td>
<td>13%</td>
</tr>
<tr>
<td>Zhejiang</td>
<td>105</td>
<td>7%</td>
</tr>
<tr>
<td>Jiangsu</td>
<td>55</td>
<td>4%</td>
</tr>
<tr>
<td>Sichuan</td>
<td>34</td>
<td>2%</td>
</tr>
<tr>
<td>Fujian</td>
<td>40</td>
<td>3%</td>
</tr>
<tr>
<td>Others</td>
<td>144</td>
<td>9%</td>
</tr>
<tr>
<td>Overseas</td>
<td>26</td>
<td>2%</td>
</tr>
<tr>
<td>Total</td>
<td>1,539</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: ChinaVenture and PwC Analysis
Note: Data presented above are statisticied according to the location of the headquarters of the target company and exclude the 234 domestic deals with unannounced deal size.
Impacted by the new regulations on asset management issued in April 2018 and the challenges in obtaining funding in the midst of the capital market cool-down, the proportion of investments led by RMB funds has decreased year by year, while USD funds rose to feature more prominently. Large deals in the education industry were driven primarily by USD funds.

Generally, with the exit of “hot money” in the overall capital market, investors are more cautious and rational. The proportion of investment of tens of millions and above has increased significantly, and the deals have been concentrated in the mid-to-late stages. Large amounts of funds have continued to favor leading companies in K12, quality-oriented education and other sub-segments, and some of them have received multiple rounds of financing in recent years.

Source: ChinaVenture and PwC Analysis

Note: Data presented above exclude the 234 domestic deals with unannounced deal size.
Overall, over 70% of the deals in the education industry were led by **PE / VC**, that is, **financial investors**. This is mainly because the education industry has been gaining increasing attention in national economy, and there are always new demands in many sub-segments that stimulate new business opportunities, attracting entrepreneurs to enter. The involvement of financial investors acts as the basis for promoting the rapid growth of certain sub-segment by continuously exploring and developing, as well as support for high-quality companies to become leading companies. While at the same time, as capital market activeness has decreased, the proportion of financial investors in terms of deal volume shrunk in 2019.

The proportion of **strategic investors** in terms of deal volume, on the other hand, was rising. For **education companies**, with the continuous expansion of scale, horizontal integration and vertical extension through M&A is another important exogenous growth driver in addition to endogenous capabilities. However generally, education companies are more cautious, and the overall investment value is less than that of non-education companies. Comparing with **non-educational companies**, education bears anti-cyclical economic characteristics due to its rigid needs. So investment in education can help non-educational companies to achieve diversification to reduce systemic risk exposure. Another point to note is that M&A deals allow them to explore new business opportunities or growth potential. Among non-education companies, high-tech internet companies, such as BATT, are part of the main players.

**Education company-TAL**: Taking TAL as an example, as an education company listed in 2010, TAL’s original business focus has been K12 off-campus training, while outreach other sub-segments mainly by M&A deals. It can be proved from the types of education companies they have invested over the years.

As a K12 training giant, TAL tried to expand the age coverage of its business in the early stage, and also paid certain attention on the expansion of its online business. Its investment portfolios include Knowbox which focuses on K12 in campus, Finding school, a platform for sharing information about overseas study, Squirrel AI which is driven by AI, and Xiaoe-Tech with education information system as the core.

At the same time, TAL is also actively expanding to overseas markets. Investments include Indian online education company Vandatu, American AI education company Knewton, Ready4 and etc.

**Non-educational company-Tencent**: With its superior advantage in traffic entrance and volume, Tencent’s has begun its investment layout for online education for a long time with preferences for mature companies in K12 and quality-oriented education. Tencent has made several investments in companies such as Yuaniku, a K12 homework database software, VIPKID, which focus on online children’s English training and VIP Peilian which provides online musical instrument training.
6. Outbound deals

1. Market activeness
Operation models of education cannot be easily replicated across countries and cultural environments. Therefore, number of outbound M&A deals is not that many. A total of 34 deals have been recorded in the period of 2016-2019, and reached a new high record of 16 in 2019 alone.

2. Investor types
Corporate investors are the main players in outbound deals; among which more than half are education institutions/companies including notable names such as TAL Education, Bright Scholar Education, Full Circle Education Group and China First Capital Group.

3. Deal size
Small to medium deals with an average deal size of Rmb340 million accounted for the majority of the outbound deals. Mega deals with over Rmb1billion are rare.

4. Sub-segment of target: private schools are favored
In the past four years, 10 outbound deals were for acquisition of private schools. Bright Scholar Education executed four private schools acquisition consecutively in the UK in October 2018, June 2019 and July 2019. Many education companies invested in overseas schools to generate synergy and to achieve its strategic international blueprint. Through the introduction of excellent overseas education resources and system, domestic education companies can enrich its teaching experience and improve the teaching standards.

5. M&A destination: USA, the UK and India are hot candidates
The UK and USA are market leaders in international education. Considering that English is the most preferred foreign language in China currently, the UK and USA have become the major destination for outbound investments. The targets are mainly schools, test tutoring and English training. In the 2016-2019 period, the UK and USA respectively reported 9 deals, constituting 53% of the total outbound deal volume.

India has become one of the hot countries for outbound deals given the popularity and rapid development of the Internet. By March 2019, the number of Internet users in India has reached 630mn, with an annual growth rate of 29%. But it still accounted for less than half of total population of 1.4bn, and there is still huge potential and space for development. Currently, Chinese companies invest mainly in leading companies in online education platforms in order to seize the dividend of Indian Internet development. One of the players is Byjus, focusing on educational technology and providing video courses and online personalized interactive teaching services to K12 students. Byjus has obtained financings from Sequoia Capital, Tencent and other companies for four times, with a cumulative financing value of approximately Rmb760 million.
7. Domestic and overseas IPOs

1. Sub-segment

From 2016 to 2019, a total of 42 education companies in China were successfully listed and the number has been increasing year by year. Especially in 2019, 15 education companies were successfully listed, reaching the peak of the past four years.

From a sub-segment perspective, the majority of listed education companies are K12 training institutions and private universities. At the same time, with the formation of leading companies in the vocational education and higher education sub-segments, the sub-segments of listed education companies exhibit a more diversified trend.

Another trend worthy of attention is the emergence of Internet-type listed education companies. In 2019, online education companies has gone through intensive securitization. Koolearn, Wah Fu Education, GSX Techedu, and Youdao successively went public. However, the profitability of these education companies is not that optimistic, and they are still in a state of burning cash in return of market share.

2. Listing destination

Limited by strict domestic IPO policies, education companies turned to the US and Hong Kong market for listing opportunities. However, the trade disputes between China and US and political turmoil in 2019 have made Hong Kong a more popular IPO destination than US. In 2019, education companies listed in Hong Kong accounted for 67% of the total listed education companies.

By the end of 2019, there were only two education companies lining up for hearings in Hong Kong market, namely Neutech and Shanghai Jianqiao University, which is far fewer than that in early 2019. We expect that the momentum of education companies going public in Hong Kong will slow down in 2020.

3. IPO Failure

There were also failures in the IPO of education companies in 2019, partly due to policy reasons. For example, Lianwai Education that includes kindergarten assets failed to be listed, as the State Council issued a new policy at the end of 2018 restricting private kindergartens from being listed individually or as a part of assets that are to be listed.

Another key reason would be investors’ rational judgment on valuation. Investors’ preference changed from high-valuation-driven to high-performance-driven. They value the liquidity and profit-generating ability of companies, and pay more attention to the effective combination of short-term return and long-term strategic planning.

The unicorn company Huijiang English experienced multiple IPO failures, due to its poor three key performance indicators of online education industry: “conversion rate, renewal rate, and CAC (customer acquisition cost).” According to its updated prospectus in December 2018, the conversion rate and renewal rate of Huijiang’s own brands had been decreasing year by year, while advertising and marketing expense accounted for 48% of revenue, much higher than that of Koolearn (~ 16%) which is successfully listed in early 2019.
From the end of 2017 to H1/18, P/E ratios of many listed education companies were at high level, but the multiples have fallen to various degrees since H2/18. The preference of the secondary market on the education industry has gradually changed ever since, of which high-quality assets were favored and the valuation of certain companies have returned to a rational level.

The reason is that the education industry has undergone tremendous changes in recent years. More and more “online”, “platform”, and “new concept” companies have emerged in various sub-segments comparing with the traditional business model. Upon the development of these new models, long-term growth potential has become the key benchmark which gave rise to high P/E multiples of various education companies. However, the so-called “business model” has gradually been implemented, and the “profit model” has been verified, amid the continued introduction of industry policies, the high P/E multiple of the education industry has been differentiated.

For traditional education companies with mature business model (such as Eastern Pioneer, TAL and Offcn Education), their business performance and profitability have been widely verified. Even in the general downturn of the economic cycle, such companies continued to deliver a relatively excellent performance and hence, the small semi-downside volatility of P/E multiple, and some even saw an increase to a higher level. For “new concept” education companies (such as Guangzhou Shiyuan Electronic Technology, Jiafa IE and other educational informationisation companies), their “future potential” came to reality and profit model was revised and matured, thus recognized by the market. Therefore, although the P/E ratio fluctuates, it remains stable or shows a rising trend generally. On the contrary, some listed education companies have been directly affected by education policies, some exhibited weak performance due to prior excessive expansion. The market and investors remain skeptical about their profitability.

At the same time, we also found large differences in sub-segments and valuation of education companies in the three major listing destinations. Most of the companies listed in China are educational informationisation companies, most of the companies listed in Hong Kong are private education companies, while companies listed in the US are mainly afterschool training institutions, as well as some online education institutions.
## Newly listed companies in education industry from 2016 to 2019

<table>
<thead>
<tr>
<th>Index</th>
<th>Company name</th>
<th>Sector</th>
<th>Stock Exchange</th>
<th>Date of IPO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Virscend Education</td>
<td>Comprehensive education group - school</td>
<td>Hong Kong</td>
<td>2016.01.15</td>
</tr>
<tr>
<td>2</td>
<td>Eastern Pioneer</td>
<td>Vocational education – driving training</td>
<td>Mainland China</td>
<td>2016.02.05</td>
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<tr>
<td>3</td>
<td>5ITalk</td>
<td>English Tutoring - online</td>
<td>USA</td>
<td>2016.06.10</td>
</tr>
<tr>
<td>4</td>
<td>Jiafa IE</td>
<td>Educational Informationisation</td>
<td>Mainland China</td>
<td>2016.11.01</td>
</tr>
<tr>
<td>5</td>
<td>Wisdom Education</td>
<td>Private school</td>
<td>Hong Kong</td>
<td>2017.01.26</td>
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<tr>
<td>6</td>
<td>Guangzhou Shiyuan Electronic Technology</td>
<td>Educational Informationisation</td>
<td>Mainland China</td>
<td>2017.01.19</td>
</tr>
<tr>
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<td>Yuhua Education</td>
<td>Comprehensive education group - school</td>
<td>Hong Kong</td>
<td>2017.02.28</td>
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<tr>
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<td>Minsheng Education</td>
<td>Private higher and vocational education group</td>
<td>Hong Kong</td>
<td>2017.03.22</td>
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<tr>
<td>9</td>
<td>New Higher Education</td>
<td>Higher vocational school</td>
<td>Hong Kong</td>
<td>2017.04.19</td>
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<tr>
<td>10</td>
<td>Bright Scholar Education</td>
<td>Comprehensive education group</td>
<td>USA</td>
<td>2017.05.18</td>
</tr>
<tr>
<td>11</td>
<td>RYB Education</td>
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<td>USA</td>
<td>2017.09.27</td>
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<td>RISE Education</td>
<td>English Tutoring</td>
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<td>Four Seasons Education</td>
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<td>2017.11.08</td>
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<tr>
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<td>2017.12.15</td>
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<td>Sunlands Online Education</td>
<td>Vocational education - online</td>
<td>USA</td>
<td>2018.03.23</td>
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<tr>
<td>16</td>
<td>OneSmart Education</td>
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<td>2018.03.28</td>
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<td>Xinhuia Education</td>
<td>Comprehensive education group</td>
<td>Hong Kong</td>
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<td>18</td>
<td>21st Century Education</td>
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<td>Puxin Education</td>
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<tr>
<td>21</td>
<td>Tianli Education</td>
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<td>2018.07.12</td>
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<td>Bojun Education</td>
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<td>Hope Education</td>
<td>Private higher and vocational education group</td>
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<td>Chunlai Education</td>
<td>Private college</td>
<td>Hong Kong</td>
<td>2018.09.13</td>
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<td>25</td>
<td>LAIX Inc</td>
<td>English Tutoring - online</td>
<td>USA</td>
<td>2018.09.27</td>
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<td>26</td>
<td>Offcn Education</td>
<td>Vocational education training</td>
<td>Mainland China</td>
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<td>27</td>
<td>Beststudy Education</td>
<td>K12 course training</td>
<td>Hong Kong</td>
<td>2018.12.27</td>
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<td>28</td>
<td>Gingko Education</td>
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<td>Kepei Education</td>
<td>Private higher and vocational education group</td>
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<td>2019.01.25</td>
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<tr>
<td>30</td>
<td>Koolearn</td>
<td>Comprehensive education group- online course training</td>
<td>Hong Kong</td>
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<tr>
<td>31</td>
<td>Wah Fu Education</td>
<td>Vocational education – online</td>
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<td>2019.04.30</td>
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<tr>
<td>32</td>
<td>Hitevision</td>
<td>Educational Informationisation</td>
<td>Mainland China</td>
<td>2019.05.23</td>
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<tr>
<td>33</td>
<td>GSX Techedu</td>
<td>K12 - online course training</td>
<td>USA</td>
<td>2019.06.06</td>
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<td>China East Education</td>
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<tr>
<td>35</td>
<td>JH Education</td>
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<td>Hong Kong</td>
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<td>36</td>
<td>Scholar Education</td>
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<td>Hong Kong</td>
<td>2019.06.21</td>
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<tr>
<td>37</td>
<td>Edvantage Group</td>
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<td>Hong Kong</td>
<td>2019.07.16</td>
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<td>40</td>
<td>ACG</td>
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<td>USA</td>
<td>2019.10.17</td>
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<td>38</td>
<td>Youdao</td>
<td>Comprehensive education service provider</td>
<td>USA</td>
<td>2019.10.27</td>
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<td>39</td>
<td>China Oriented International</td>
<td>Vocational education – driving training</td>
<td>Hong Kong</td>
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<td>Huali University</td>
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<td>Chen Lin Education</td>
<td>Private higher and vocational education group</td>
<td>Hong Kong</td>
<td>2019.12.13</td>
</tr>
</tbody>
</table>

Source: Wind, annual reports and PwC analysis
Industry Insights and M&A
Trends Outlook in 2020
Frequent policies released and capital winter, education industry may face increasing risks

Industry insight & outlook

• At the beginning of 2019, PerchingKids, a preschool education service provider, has closed part of its stores, and Chengzhangbao, an online critical thinking training institution for teenagers stopped operation, opening the curtain for the shutting down of certain education and training institutions in 2019. Throughout the year, there were more than 30 institutions that were in crisis or shutting down, involving multiple sub-sectors such as early childhood education, children's English, quality-oriented education, adult English, and overseas study. Of particular note is WEBI English, an English training institution with 20 years of history, which closed multiple stores in various cities with large amounts of unpaid salaries to teachers, is on the verge of bankruptcy in October 2019.

• Manipulated and whitewashed data will cover up operational problems in the operations. Blind pursuit of revenue growth and business expansion without responding promptly to changes of economic, industry trends, and customer needs will bury the seed for bankruptcy when facing failure of new rounding of finance and bad management. Similar to WEBI English, the closure and failure of most educational institutions are generally caused by capital chain rupture.

• Since the second half of 2018, the external environment of the education industry has been changing. In August the same year, the General Office of the State Council issued the “Opinions on Regulating the Development of Off-campus Training Institutions”. In Article 9 “Regulating Income Management”, it states that institutions are restricted from charging fees of over 3 months a time. Tighter supervision and regulations are no longer only affecting small training institutions. Institutions without endogenous growth capabilities and relying on external funds for survival will be gradually eliminated by the market and competition. Businesses, such as WEBI English with heavy reliance on prepayments to expand their stores and burn money excessively for diverting customer traffic, are typical examples.

M&A trend and spotlight

• When facing economy downturn and the sudden outbreak of the COVID-19, the education institutions is racing their cash flow against time. It is recommended for all companies to properly perform cash flow management, advanced financing plans and rational funds utilization plan to survive the hard time.

• The industry’s reshuffle may accelerate, and investors will continue to pay attention to the top companies in each sub-sector, be it offline or online institutions. In addition to the user scale and brand influence, the companies with high-quality teachers, stable cash flow, continuous updating of teaching content would deserve and attract attention.
Industry insights and M&A trends outlook in 2020

**Preschool education**

**Industry insight & outlook**

- In May 2019, the State Council published “the Guiding Opinions on Promoting the Development of Infant Care services under the Age of 3”, which was the first time the government provided a national-level development guidance for the education of 0-3 year olds, aimed at filling the previous policy vacuum. The regulations on early childhood education continue to be subject to improvement.

- The increase in the number of parents born in the post-80s and post-90s generation has, on the one hand, stimulated the emphasis on early childhood education, and demand for thinking training and children's English; on the other hand, boosted the need for young children's companionship and care. Commercial child and care agencies that can provide quality training systems have become the first choice for parents. Parents have become increasingly picky about thinking training for infants and young children which stimulated the number of companies that provide those training services.

- Triggered by the unfulfilled robust demand by the existing childcare centres, the number of for-profit early childhood education institutions are expected to grow rapidly to alleviate parenting pressure and satisfy parents’ demand for infant education.

**M&A trend and spotlight**

- Although overall investment in preschool education is waning, market demand has not subsided. At present, there are many competitors in commercial custody agency market, and there are also professional provider that provide various add-on services. The business model and profitability of commercial custody institutions have been verified, and we continue to be optimistic about commercial custody institutions of a certain size in various regions.

- Thanks to the parents' emphasis on enlightenment education, thinking training companies have emerged. The sub-sector is divided into many categories, including mathematical thinking training, English enlightenment, whole brain education, etc. The demand is clearly layered and deserves investor attention.
Industry insights and M&A trends outlook in 2020

K12

Industry insight & outlook

• Although the M&A deals of online K12 are thriving, current penetration rate of online K12 is only 10%, implying a vast market potential as compared to that of China's overall internet market. The offline K12 education and training market features regional differentiation. As parents in lower tier cities have started to attached greater importance to education with increasing spending, there will be more room for improvement in the penetration rate of afterschool tutoring in those cities. Especially under the main theme of strong supervision, many small and medium-sized institutions in various regions were closed due to unmet requirement such as qualifications, teachers, and venue spaces. As a result, the market prefers big brand training institutions with good reputation, which further leads to the emergence of local leading companies.

• Limited vertical expansion of the K12 market has led to companies pursuing horizontal expansion for new customers as well as digging and meeting the diverse needs of existing customers. Companies, such as New Oriental Education and TAL Education will accelerate their pace in external expansion and regional integration so as to increase their market share.

• Looking forward, we believe that for 2C market, there will be more leading comprehensive K12 education and training institutions with focus on specific subject that can meet the diverse needs of users. For 2B market, companies will develop towards comprehensive online platforms, and regional leading players might come into being.

M&A trend and spotlight

• With the reform of the “3+X” college entrance examination and the increasing weight of Chinese subject in the exams, we believe that Chinese subjects will be the next hotspot for investors.

• With the further expansion and development to lower-tier cities and increasing acceptance of online education brought by the epidemic, we believe that the limitation of teacher and resources supply in lower-tier cities may be broken in 2020. For traditional offline training institutions, they may penetrate the lower-tier cities by combining online and offline resources and thus consolidate their market position. For online institutions, their top priority will be to grasp the opportunities and meet the challenges brought by this epidemic.
Quality-oriented education

Industry insight & outlook

• Encouraged by policies and quality-oriented capability as the key enrollment criteria, quality-oriented education has transformed and integrated into ‘in-school subject education’. The adoption of STEAM courses in campus, the expansion of the scope of Chinese subject to include cultivation of literary and the rise of mathematical thinking training, all are to support the in-school subject and entrance examination in the future. These in-school subject-related sub-sectors will remain active in the future and will certainly attract more startups to join the competition.

• For other quality-oriented education sub-sectors, the total addressable market is relatively limited due to its non-rigid user demand. Under such situation, in order to acquire more users and expand the scale, the online business models has become the mainstream. But it still takes time to verify whether pure online model or online and offline model works.

M&A trend and spotlight

• The in-school quality-oriented subject sub-sectors, including STEAM, literacy, and logical thinking training, are the top beneficiaries of policies, and they continue to be favoured by parents, which in turn determine the investors’ preferences in the different sectors of quality-oriented education.

• For part of the sub-subsectors (such as sports, in which a physical venue is required) that have compulsory offline requirement, horizontal integration and the extension of online auxiliary tools will lead their way. At the same time, we are also optimistic about the application of technical tools such as AR/VR to break scenario limitations and create a new blue ocean.
Industry insights and M&A trends outlook in 2020

Vocational education

Industry insight & outlook

• Since 2019, the Government has implemented a series of supportive policies for vocational education, which aims to promote the construction of vocational schools, enhancement of vocational upskills, and the integration of industries into education. These policies will inevitably give rise to presence of new highly-skilled talents in line with the national strategic development.

• The rapid development of the tertiary industry has introduced many service-oriented occupations, such as online anchors, infant's nurses, and wedding planners. There are huge potential for these emerging professions but we also need to take the cyclical effect into account.

• Thanks to the mature and stable information infrastructure, as well as the wide coverage and large base of potential users in vocational education, the combination of new technologies and vocational education continues to deepen and online vocational education has now been in the fast development track. In order to overcome the common pain points of online vocational education institutions, such as accurate user outreach, high customer acquisition costs, and low user conversion rates, BAT and other leading companies have expanded their business to online vocational education platforms. Taking Tencent Classroom as an example, by taking advantage of Tencent’s large online traffic and technology support, it has built a platform that incubates and supports high-quality vocational education institutions to go online. Served as a 2B2C online platform, Tencent Classroom connect institutions and end users online.

M&A trend and spotlight

• Policies support and economic development have boosted the enrollment number of vocational examinations for IT, teaching and accounting & finance to reach record highs. Although such sub-sectors may have low market ceilings, these "small and beautiful" sub-sectors also brings opportunities. A large-scale companies specialized in specific sub-sector can be the targets of M&A deals both by comprehensive education group and financial investors. With the unclear competition landscape in certain sub-sectors, investors might wait and see and make opportune decisions.

• In terms of modes, adults put more emphasis on the flexibility of both learning scenarios and time, so online and offline mode will be further explored, the application of technology will be broadened to meet user needs and achieve satisfying learning results.
Industry insights and M&A trends outlook in 2020

Educational informatisation

Industry insight & outlook

- The key promoter behind education informatisation is the government, and the direct buyer is the school. Therefore, with the limited number of buyers in the in-school market, the key success factor will be the ability to provide integrated service/product package that can meet diversified needs of an individual school. As the internet giants have successively expanded their business in education informatisation by providing schools with the infrastructure of information construction, the market competition for implementers will become more intense.

- 2019 witnesses the beginning era of the 5G commercialization, of which features high speed, ubiquitous network, low power consumption and low latency. Along with popularization of 5G and application of technologies such as VR/AR and AI, such combination will promote interactive and intelligent teaching methods, customization of education models, fairness and integration of educational resources, and create a new eco-system of smart education.

M&A trend and spotlight

- Favorable policies and the government spending on educational informatisation propel the development of this sub-segment. Despite the fact that government policies are guidance-oriented, the epidemic inevitably accelerates the education informatisation sector and see an increase in utilization.

- Uncertainty still exits about the pace of policy implementation, so investors are positive but still cautious about this sub-segment. Subject to high regional barriers, the market landscape is still fragmented without outstanding national leading players. 2B companies can break the barriers through the 2B2C platform and reach end-users. We expect regional integration opportunities in the future. Companies with rich resources, high product/service performance shall be favored.
Statistics contained in this presentation and the press release may vary from those contained in previous press releases. There are three reasons for this: ChinaVenture historical data is constantly updated; PricewaterhouseCoopers has excluded certain transactions which are more in the nature of internal reorganisations than transfers of control; and exchange rate data has been adjusted.

**Included deals**

- Acquisitions of private/public companies resulting in change of control
- Investments in private/public companies (involving at least 5% ownership)
- Mergers
- Buyouts/buy-ins (LBOs, MBOs, MBIs)
- Privatizations
- Tender offers
- Spinoffs
- Split-off of a wholly-owned subsidiary when 100% sold via IPO
- Divestment of company, division or trading assets resulting in change of control at parent level
- Reverse takeovers
- Re-capitalisation
- Joint Venture buyouts
- Joint Ventures
- Receivership or bankruptcy sales/auctions

**Excluded deals**

- Property/real estate for individual properties
- Rumoured transactions
- Options granted to acquire an additional stake when not 100% of the shares has been acquired
- Any purchase of brand rights
- Land acquisitions
- Equity placements in funds
- Stake purchases by mutual funds
- Open market share buyback/retirement of stock unless part of a privatization
- Balance sheet restructuring or internal restructuring
- Investments in greenfield operations
- Non-public transactions
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