

China East Education (667 HK)

The leading vocational training education provider

- Largest vocational training education provider in China.** Under five renowned school brands, the Company ("CEE") provides culinary arts, information technology and internet technology, and auto services education through nationwide school network. CEE was the market leader of the above three segments and captured 2.5% market share of the whole vocational training education industry in terms of revenue generated for the year ended 31 Dec 2017.
- Nationwide school network empowered by highly replicable business model.** CEE adopts self-operated business model, centralized management, and standardized operations to ensure the quality of its education services. Empowered by its highly replicable business model, CEE has established a nationwide school network spanning 29 of the 31 provinces in China and Hong Kong, allowing it to build its brand reputation and serve potential employers across China.
- Strong job placement results.** For FY18, 90.5% of its total average students enrolled in long-term programs (>1-year) which ensure high quality and differentiate CEE from other vocational education providers that are examination oriented or focus on short-term training. Backed by cooperation with over 28,000 enterprises and its nationwide career counselling services, CEE achieved an average recommended employment rate of ~93.7% for its long-term programs for FY18.
- Favorable policies.** The State Council released the Implementation Plan for the Enhancement of Vocational Skills (2019-2021) (《职业技能提升行动方案(2019-2021年)》 in May 2019. The Plan stated to provide RMB100bn subsidies for training more than 50mn people in three years. Also, "Non-formal vocational training institutes" was the only sub-sector under education sector included in the nationwide encouraged foreign investment catalog.
- Growth strategies.** CEE plans to 1) establish 20/15/16 new schools and 0/2/4 new centers under Cuisine Academy, respectively, in FY19E/20E/21E, 2) establish five regional centers in China's five major geographical regions; and 3) diversify courses and curriculums. We forecast adjusted net profit to grow at 36% CAGR in FY19-21E, led by 11% CAGR of average student enrolled and 9% CAGR of ASP. Margins are expected to recover because total net losses for new schools opened in FY17/18 would decrease when they ramp up and expansion pace in FY19-21E is not as strong as that in FY17-18.
- Initiate at Buy with TP of HK\$16.30.** Our TP is based on 27.4x FY20E P/E, on par to the average of FY21E P/E of New Oriental Education and TAL Education. For cross-checking, our TP implies 18.3x/13.5x EV/EBITDA in FY19/20E, which is at 6%/5% discount compared to segment leaders' average of 19.4x/14.2x. This suggests our TP is not aggressive. **Catalysts:** (1) Inclusion of the stock into the Shenzhen-HK Connect list in Sep 2019; (2) M&A.

Earnings Summary

(YE 31 Dec)	FY16A	FY17A	FY18A	FY19E	FY20E	FY21E
Revenues (RMB mn)	2,336	2,850	3,265	4,079	4,906	5,770
YoY growth (%)	na	22	15	25	20	18
Net profit (RMB mn)	587	661	515	765	1,085	1,339
Adj. net profit (RMB mn)	587	661	547	916	1,165	1,399
YoY change (%)	na	13	(17)	67	27	20
Adj. EPS (RMB)	na	na	na	0.419	0.533	0.64
YoY change (%)	na	na	na	na	27	20
Adj. P/E (x)	na	na	na	29.2	23.0	19.1
Ex-net cash adj. P/E (x)	na	na	na	22.7	16.9	13.2
P/B (x)	na	na	na	4.6	4.0	3.5
Yield (%)	na	na	na	0.9	1.2	1.5
Adj. ROAE (%)	na	49.5	44.1	27.2	18.6	19.4
Net cash (RMB mn)	1,530	1,826	986	5,972	7,003	8,290

Source: Company data, CMBIS estimates

BUY (Initiation)

Target Price	HK\$16.3
Up/Downside	+20%
Current Price	HK\$13.64

China Education Sector

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Stock Data

Mkt Cap (HK\$ mn)	29,793
Avg 3 mths t/o (HK\$ mn)	64.84
52w High/Low (HK\$)	13.96/9.60
Total Issued Shares (mn)	2,184

Source: Bloomberg

Shareholding Structure

Wu Junbao	34.13%
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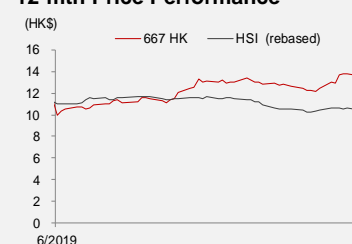
Source: HKEx

Share Performance

	Absolute	Relative
1-mth	6.2%	15.9%
3-mth	na	na
6-mth	na	na

Source: Bloomberg

12-mth Price Performance



Source: Bloomberg

Auditor: Deloitte

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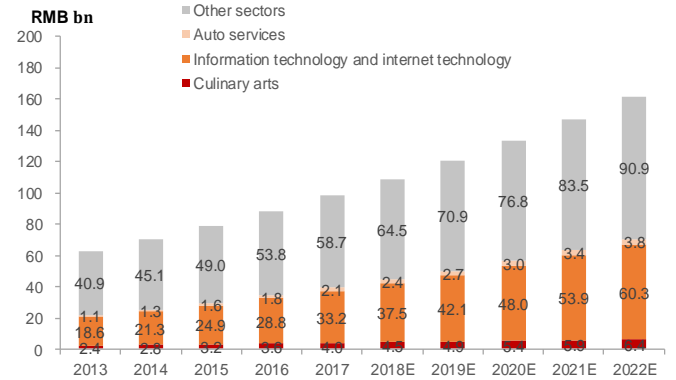
Focus Charts and Tables

Figure 1: CEE is a leader in the three industry sectors it covered in 2017

Culinary arts			Information technology			Auto services		
Group	Average students enrolled	Market share	Group	Average students enrolled	Market share	Group	Average students enrolled	Market share
CEE	65,372	23.1%	CEE	21,442	3.4%	CEE	15,236	9.7%
Group A	8,077	2.9%	Group C	20,882	3.3%	Group E	15,000	9.5%
Group B	2,600	0.9%	Group D	20,023	3.2%	Group F	2,000	1.3%

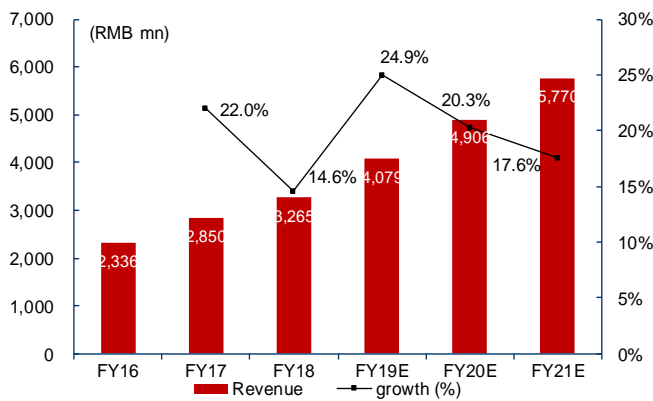
Source: Frost & Sullivan

Figure 2: Revenue of vocational training education industry is expected to grow at a CAGR of 10.5% in 2017-2022



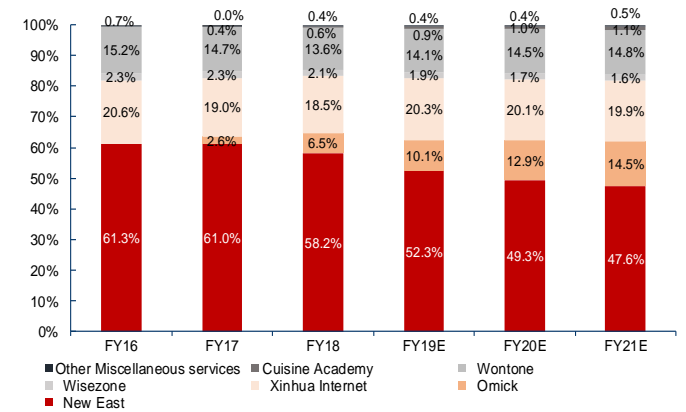
Source: Frost & Sullivan

Figure 3: Revenue of CEE to grow at CAGR of 21% in FY19-21E



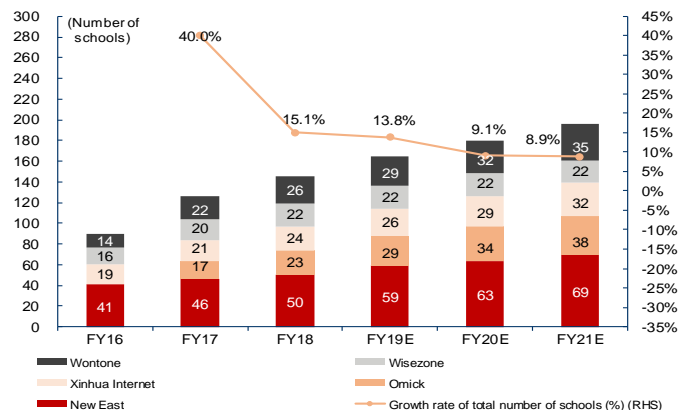
Source: Company data, CMBIS estimates

Figure 4: Revenue mix of CEE by brand



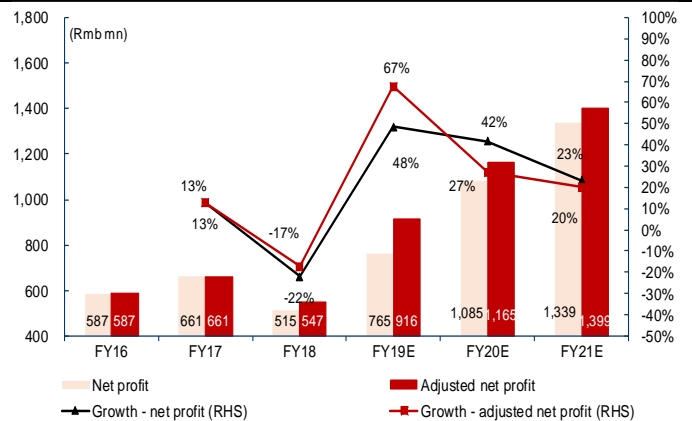
Source: Company data, CMBIS estimates

Figure 5: Number of schools of CEE to grow at a CAGR of 11% in FY19-21E



Source: Company data, CMBIS estimates

Figure 6: Adj. net profit of CEE to grow at a CAGR of 37% in FY19-21E



Source: Company data, CMBIS estimates

Investment Thesis

Company Overview

Largest vocational training education provider in China

CEE is the largest vocational training education provider in China in terms of average students enrolled and revenue generated for the year ended 31 Dec 2017, capturing a market share of 1.7% and 2.5%, respectively. It provides vocational training education in three segments, namely, culinary arts, information technology and internet technology and auto services. CEE has established a nationwide school network consisting of 145 Schools as of YE18, with 123,957 average students enrolled, spanning 29 of the 31 provinces in mainland China and Hong Kong. CEE also provides customized catering experience services in 18 centers under Cuisine Academy. Its fundamental educational philosophy is to “focus on practical skills training, combining theory with practice” (以技能教育為根本,知行合一).

Reputable culinary art schools

CEE's culinary arts segment consists of two school brands, New East Culinary Education, and Omick Education of Western Cuisine and Pastry. In FY18, New East and Omick contributed RMB 1,900mn and RMB 213mn, or 58.2%/6.5% of revenue of CEE, respectively.

Cutting-edge information technology and internet technology schools

CEE's information technology and internet technology segment consists of two school brands, Xinhua Internet Technology Education, and Wisezone Data Technology Education. In FY18, Xinhua Internet/Wisezone contributed RMB 604mn/RMB 70mn, or 18.5%/2.2% of revenue of CEE, respectively.

Comprehensive auto services schools

Wontone Automotive Education was founded in 2005. As of YE18, it operated 26 schools in 21 provinces in the PRC. In FY18, Wontone contributed RMB 444mn, or 13.6% of revenue of CEE.

Customized catering experience center

Cuisine Academy was founded in 2017. As of YE18, it operated 18 customized catering experience centers in 14 provinces in the PRC. In FY18, Cuisine Academy contributed RMB 21mn, or 0.6% of revenue of CEE.

Key Positives and Growth Drivers

1. Largest vocational training education provider in China
2. Nationwide school network empowered by highly replicable business model
3. Strong employment rates underpinned by well-established curriculums and strong school-enterprise relationship
4. Visionary and stable management team with proven track record
5. Strengthening market leadership by establishing regional centers
6. Expand school and center network domestically and overseas
7. Diversify and innovate course offerings and curriculums

Industry Analysis

The government has promulgated a series of stimulus policies.

The State Council promulgated the Implementation Plan for the Nationwide Reform of Vocational Education (《国家职业教育改革实施方案》) in Jan 2019 to promote the transition of vocational education from mainly sponsored by the government to the private sector.

Unmet demand of skilled workers and expected salary increase underpin market potential for vocational training education industry

According to the Frost & Sullivan Report, total revenue of vocational training education is expected to reach RMB 161.4bn in 2022, representing a CAGR of 10.5% from 2017-2022. Because of China's economic growth and structural transformation, there has been a structural problem of lacking technician and skilled talents. The supply and demand gap for skilled workers in culinary arts/information technology and internet technology/auto services industry was 2.2/7.7/4.0 million people in 2017, and is expected to widen to 3.1/16.8/8.7 million people in 2022, respectively.

Financial Analysis

CEE plans to 1) establish 20/15/16 new schools and 0/2/4 new centers under Cuisine Academy, respectively, in FY19E/20E/21E, 2) establish five regional centers in China's five major geographical regions to relocate students enrolled in long-term courses in existing schools located in major geographical regions to these centers and improve efficiencies; and 3) diversify courses and curriculums. We forecast adjusted net profit to jump by a CAGR of 37% in FY19-21E, led by 11% CAGR of average student enrolled and 9% CAGR of ASP. Margins are expected to recover because total net loss for new schools opened in FY17/18 would decrease when they ramp up and expansion pace in FY19-21E is not as strong as that in FY17-18.

Valuation

Our TP of HK\$16.30 is based on 27.4x FY20E P/E, on par to the average FY20E P/E of the two giant education companies, New Oriental Education (EDU.US, NR) and TAL Education (TAL.US, NR). Such P/E valuation represents 33% premium on segment leaders' 20.6x FY20E P/E. We think CEE is deserved to trade on par with the two giants because it: (1) is a large-sized company with scarcity premium; (2) is a dominant market leader with highly replicable business model; (3) has lower risk profile. Apart from the three reasons above, we have CEE's high income tax rate is an extra reason to support its premium valuation over segment leaders. CEE had an effective tax rate of 25% in FY18 (vs higher education peers' single-digit effective tax rate). Therefore, if the higher education peers gradually elect their schools to register as for-profit schools in future, their effective tax rates will increase and their P/E valuation will become higher.

For cross-checking, our TP implies 18.3x/13.5x EV/EBITDA in FY19/20E, which is at 6%/5% discount compared to segment leaders' average of 19.4x/14.2x. Therefore, we think our TP is not aggressive.

Income statement

YE 31 Dec (RMB mn)	FY17A	FY18A	FY19E	FY20E	FY21E
Revenue	2,850	3,265	4,079	4,906	5,770
Cost of sales	(1,281)	(1,560)	(1,851)	(2,181)	(2,515)
Gross profit	1,569	1,705	2,228	2,724	3,255
Other income	17	38	51	61	73
Other gains and losses	60	58	59	72	81
Selling expenses	(457)	(648)	(708)	(868)	(1,037)
Administrative expenses	(350)	(438)	(629)	(684)	(752)
R&D expenses	(24)	(28)	(33)	(39)	(46)
EBIT	815	687	969	1,267	1,575
Net finance income	17	24	66	97	103
Listing expenses	0	(24)	(31)	0	0
Profit before tax	832	687	1,003	1,364	1,678
Income tax expenses	(171)	(172)	(239)	(280)	(339)
Net profit	661	515	765	1,085	1,339
Net profit	661	515	765	1,085	1,339
Listing expenses	0	24	31	0	0
Share-based expenses	0	8	120	80	60
Adjusted net profit	661	547	916	1,165	1,399

Cash flow summary

YE 31 Dec (RMB mn)	FY17A	FY18A	FY19E	FY20E	FY21E
Profit before tax	813	682	1,003	1,364	1,678
D&A	242	360	452	580	685
Change in working capital	171	182	247	265	278
Others	(228)	(245)	(245)	(370)	(464)
Net cash from operating	997	980	1,458	1,840	2,177
Capex	(644)	(666)	(892)	(750)	(750)
Others	43	93	126	171	186
Net cash from investing	(601)	(573)	(766)	(579)	(564)
Equity raised	0	1	4,329	0	0
Dividend paid	(100)	(874)	(34)	(229)	(325)
Change of borrowings	0	0	0	0	0
Others	0	(582)	0	0	0
Net cash from financing	(100)	(1,456)	4,294	(229)	(325)
Net change in cash	296	(1,048)	4,986	1,031	1,287
Cash at the beginning of the year	1,739	2,035	986	5,972	7,003
Exchange difference	0	0	0	0	0
Cash at the end of the year	2,035	986	5,972	7,003	8,290

Balance sheet

YE 31 Dec (RMB mn)	FY17A	FY18A	FY19E	FY20E	FY21E
Non-current assets	1,259	1,545	1,993	2,168	2,240
PPE	1,060	1,361	1,804	1,977	2,045
Prepaid lease payments	126	123	120	118	115
Prepayments for rental	32	18	20	22	24
Others	41	43	48	52	57
Current assets	2,259	1,270	6,324	7,424	8,783
Cash	2,035	986	5,972	7,003	8,290
Receivables	191	242	303	364	428
Others	34	42	49	57	64
Current liabilities	1,871	1,883	2,388	2,813	3,234
Contract liabilities	1,090	1,233	1,479	1,738	2,008
Payables	471	508	571	641	716
Tax payables	102	108	108	108	108
Dividend payable	0	34	229	325	402
Others	209	0	0	0	0
Non-current liabilities	40	60	72	84	96
Government grant	4	4	4	4	4
Contract liabilities	36	56	68	80	92
Total net assets	1,607	873	5,856	6,696	7,693
Shareholders' equity	1,607	873	5,856	6,696	7,693

Key ratios

YE 31 Dec	FY17A	FY18A	FY19E	FY20E	FY21E
Sales mix (%)					
New East	61.0	58.2	52.3	49.3	47.6
Omick	2.6	6.5	10.1	12.9	14.5
Xinhua Internet	19.0	18.5	20.3	20.1	19.9
Wisezone	2.3	2.2	1.9	1.7	1.6
Wontone	14.7	13.6	14.1	14.5	14.8
Cuisine Academy	0.0	0.6	0.9	1.0	1.1
Others	0.4	0.4	0.4	0.4	0.5
P&L ratios (%)					
Gross profit margin	55.0	52.2	54.6	55.5	56.4
EBIT margin	28.6	21.0	23.7	25.8	27.3
Effective tax rate	20.5	25.0	23.8	20.5	20.2
Net profit margin	23.2	15.8	18.7	22.1	23.2
Adj. net profit margin	23.2	16.8	22.5	23.7	24.2
Payout ratio	na	na	30.0	30.0	30.0
Balance sheet ratios					
Current ratio (x)	1.2	0.7	2.6	2.6	2.7
Average inv. turnover days	8.1	7.8	8.0	8.0	8.1
Asset turnover (x)	0.8	1.2	0.5	0.5	0.5
Total asset/total equity (x)	2.2	3.2	1.4	1.4	1.4
Net cash (RMB mn)	1,826	986	5,972	7,003	8,290
Returns (%)					
Adjusted ROAE	49.5	44.1	27.2	18.6	19.4
Adjusted ROAA	21.4	17.3	16.5	13.0	13.6

Source: Company data, CMBIS estimates

Company Overview

Largest vocational training education provider in China

Largest vocational training education provider in China

CEE is the largest vocational training education provider in China in terms of average students enrolled and revenue generated for the year ended 31 Dec 2017, capturing a market share of 1.7% and 2.5%, respectively. It provides vocational training education in three segments, namely, culinary arts, information technology and internet technology and auto services. In culinary arts/information technology and internet technology/auto services industry, CEE ranked the first with 65,372/21,442/15,236 average students enrolled as of YE17, capturing a market share of 23.1%/3.4%/9.7%. It operates these three segments under five renowned school brands, namely, New East Culinary Education, Omick Education of Western Cuisine and Pastry, Xinhua Internet Technology Education, Wisezone Data Technology Education and Wontone Automotive Education.

Headquartered in Hefei, Anhui province, CEE has established a nationwide school network consisting of 145 Schools as of YE18, with 123,957 average students enrolled, spanning 29 of the 31 provinces in mainland China and Hong Kong. CEE also provides customized catering experience services in 18 centers under Cuisine Academy with 577 average customer registered as of YE18.

Figure 7: Five school brands and Cuisine Academy

Segments	Brands	Chinese name	No. of schools	No. of provinces covered	Average GFA per school or center (sq.m.)	Average students enrolled in FY18	Average students enrolled as of 20 May 2019
Culinary Arts	New East	新东方烹饪教育	50	29	16,400	69,141	66,634
	Omick	欧米奇西点西餐教育	23	22	4,700	3,106	4,140
Information Technology and Internet Technology	Xinhua Internet	新华电脑教育	24	17	17,300	31,023	37,681
	Wisezone	华信智原DT人才培养基地	22	21	1,400	1,364	1,119
Auto Services	Wontone	万通汽车教育	26	21	18,500	19,323	20,465
Total			145			123,957	133,984
Customized Catering Experience Center	Cuisine Academy	私人订制烹饪体验中心	18	14	1,000	577	535

Source: Company data, CMBIS

Note: Figures for number of schools, number of provinces covered and average GFA per school or center are as of YE18.

Reputable culinary art schools

CEE's culinary arts segment consists of two school brands, New East Culinary Education, and Omick Education of Western Cuisine and Pastry.

New East Culinary Education

New East Culinary Education is a reputable brand in China. As of YE18, it operated 50 schools in 29 out of 31 provinces in the PRC and Hong Kong. For FY18, it had an average students enrolled of 69,141 and a total of 71,335 new student enrollment. In 2018, New East contributed RMB1,900mn, or 58.2% of revenue of CEE.

New East teaches students cooking traditions and practices of Chinese cuisines, including but not limited to the well-known eight regional cuisines, being the cuisines of Sichuan, Hunan, Guangdong, Anhui, Shandong, Jiangsu, Fujian and Zhejiang, as well as Western cuisines such as making dessert and pastries. It offers various training programs with different program lengths, mostly ranging from one to three years. It also offers short-term programs with flexible schedules, mostly ranging from one to six months, as well as weekend programs. Course arrangement of most programs include a large segment of simulation training. As of YE18, New East has established 388 employer-tailored training programs, such as Hilton Garden Hotel in Guizhou, Hefei Crowne Plaza Hotel, Grandma's

Home, Shanghai's Aisi Bixi and Wowprime (China) Catering Co. Ltd., and the recommended employment rate of long-term program graduates was 93.2% for the year ended 31 Dec, 2018.

Figure 8: Chinese cuisine training



Source: CMBIS

Figure 9: Western cuisine training



Source: CMBIS

Omick Education of Western Cuisine and Pastry

Omick Education of Western Cuisine and Pastry was founded in 2016. As of YE18, it operated 23 schools in 22 provinces in the PRC. For FY18, it had an average students enrolled of 3,106 and a total of 9,180 new student enrollment. In 2018, Omick contributed RMB 213mn, or 6.5% of revenue of CEE.

Omick provides high-quality western-style catering education programs, including pastry and dessert, western cuisine, bartending, and coffee workshop. It offers various training programs with different program lengths, ranging from 80 to 1,200 class hours. Course arrangement includes a large segment of simulation training. Omick has established employment-oriented cooperation with various bakeries, western style restaurants and hotels in China, such as Shanghai Aisi Bixi and Beijing Holiland.

Cutting-edge information technology and internet technology schools

CEE's information technology and internet technology segment consists of two school brands, Xinhua Internet Technology Education, and Wisezone Data Technology Education.

Xinhua Internet Technology Education

Xinhua Internet Technology Education has a history dating back to 1990s. As of YE18, it operated 24 schools in the PRC. For FY18, it had an average students enrolled of 31,023 and a total of 24,415 new student enrollment. In 2018, Xinhua Internet contributed RMB604mn, or 18.5% of revenue of CEE.

Xinhua Internet provides a wide range of information technology and internet technology-related training, and has strengths in certain areas, including 3D and graphic design, internet network development, e-commerce, and software development. It provides 125 courses with course lengths primarily ranging from three months to three years with a focus on the long-term programs. It regularly updates curriculums to ensure that students learn the latest technologies, for example, e-sports, AI, internet security, and VR. Each school

has established various simulation training facilities, equipped with resources from enterprise partners. Xinhua Internet has established partnerships with approximately 200 enterprises, such as Lenovo, Baidu and JD.com. The recommended employment rate of long-term program graduates was 93.1% for the year ended 31 Dec, 2018.

Figure 10: Anhui Xinhua Internet Institute in Hefei city



Source: CMBIS

Figure 11: Students were having class in Baidu laboratory



Source: CMBIS

Wiszone Data Technology Education

Wiszone Data Technology Education was founded in 2005. As of YE18, it has set up 22 data training bases in the PRC. For FY18, it had an average students enrolled of 1,364 and a total of 4,558 new student enrollment. In 2018, Wiszone contributed RMB 70mn, or 2.2% of revenue of CEE.

Wiszone provides short-term training programs ranging from one to six months to junior college students. As of YE18, it offers six categories of career-oriented curriculums, including UI design, Java software engineering, big data engineering, AI, cross-border e-commerce, and internet marketing. Wiszone has established cooperative relationship with over 3,000 corporate partners across 21 provinces in China. In January 2018, Anhui Wiszone entered into cooperation with Hefei Tianyuan DIC Information Technology Co., Ltd. (合肥天源迪科信息技术有限公司) to establish "Wiszone-DIC Big Data Academy" ("华信•迪科大数据学院"), which was the first Big Data Academy in Anhui province.

Comprehensive auto services schools

Wontone Automotive Education

Wontone Automotive Education was founded in 2005. As of YE18, it operated 26 schools in 21 provinces in the PRC. For FY18, it had an average students enrolled of 19,323 and a total of 20,263 new student enrollment. In 2018, Wontone contributed RMB444mn, or 13.6% of revenue of CEE.

Wontone provides hands-on training of auto repair skills as well as practical training of automobile commerce. It offers long-term as well as short-term training focusing on automobile diagnosis, automobile repair, automobile detailing, automobile body painting,

automobile remodeling, automobile commerce, and new energy automobile. It works with a chain automotive service stores in over 270 cities across China. This provider provides certain curriculum of this program, shares industry insights and guarantees employment rate of no less than 80% for the Company's students who successfully complete the program. The recommended employment rate of long-term program graduates was 97.3% for the year ended 31 Dec, 2018.

Figure 12: Anhui Wontone Automobile Vocational College in Hefei city



Source: CMBIS

Figure 13: Students were having auto services training class



Source: CMBIS

Customized catering experience center

Cuisine Academy

Cuisine Academy was founded in 2017. As of YE18, it operated 18 customized catering experience centers in 14 provinces in the PRC. For FY18, it had 5,778 new customers. In 2018, Cuisine Academy contributed RMB 21mn, or 0.6% of revenue of CEE.

Cuisine Academy provides customized catering experience programs with flexible schedules to customers who are interested in cooking or who plan to establish their own businesses in the catering industry. Currently, it provides 19 entrepreneurship-oriented programs and 12 interest-oriented programs, covering over 1,000 workshops for popular cooking skills or dishes in the market. It offers 31 programs in six specialized areas, including featured local snacks, fashionable western pastry, new-style Chinese dishes, featured Chinese pastry, new-style drinks and western light meals.

Figure 14: Revenue by segments and brands

	2016		2017		2018	
	RMB mn	%	RMB mn	%	RMB mn	%
CULINARY ARTS						
New East	1,432	61.3%	1,739	61.0%	1,900	58.2%
Omick	0	0.0%	75	2.6%	213	6.5%
INFORMATION TECHNOLOGY						
Xinhua Internet	481	20.6%	542	19.0%	604	18.5%
Wisezone	53	2.3%	64	2.3%	70	2.2%
AUTO SERVICES						
Wontone	354	15.2%	419	14.7%	444	13.6%
CUISINE ACADEMY						
Others	16	0.6%	11	0.4%	12	0.4%
Total	2,336	100.0%	2,850	100.0%	3,265	100.0%

Source: Company data, CMBIS

Figure 15: Tuition fee and service fee by brand

(RMB)		2016	2017	2018
Schools				
New East	Long-term	10,400-34,500	11,400-36,800	5,600-76,000
	Short-term	1,200-18,100	1,200-58,000	800-58,000
Omick	Short-term	na	9,000-47,000	5,000-50,000
Xinhua Internet	Long-term	5,980-35,800	6,680-39,800	6,680-37,800
	Short-term	1,900-22,590	800-28,800	800-29,300
Wisezone	Short-term	2,000-14,800	2,000-29,800	999-26,800
Wontone	Long-term	12,800-36,800	6,680-38,500	4,800-38,500
	Short-term	680-32,600	680-37,400	800-37,400
Cuisine Academy	Customized catering experience program	na	360-16,000	1,980-18,800

Source: Company data

Note: The high-end of the tuition fee of Xinhua Internet dropped from RMB 39,800 in 2017 to RMB 37,800 in 2018 is because CEE ceased to offer Visual Communication Design course which charged RMB 39,800 per year in 2018 as student enrollment for this course did not meet the Company's expectations.

Secondary vocational education

Technical schools and secondary vocational schools

CEE also provides secondary vocational education under brands of New East, Xinhua Internet and Wontone. As of 31 Dec 2018, CEE operated a total of 26 schools providing secondary vocational education, including 17 technical schools and 9 secondary vocational schools.

Figure 16: Differences between secondary vocational schools and vocational training schools

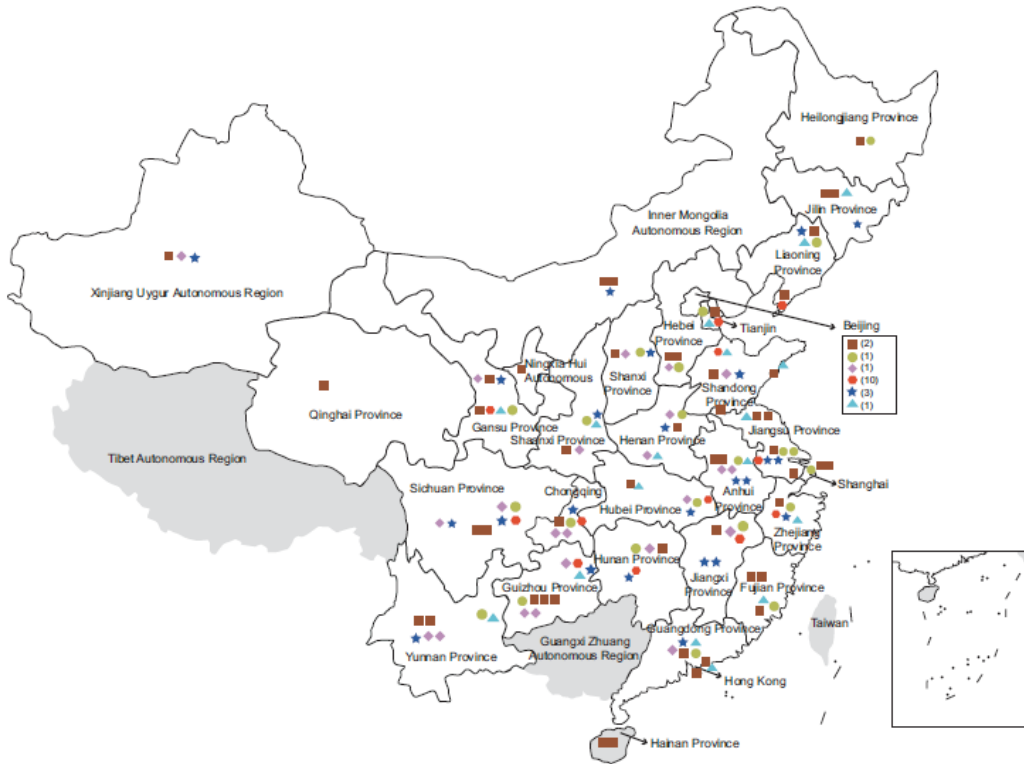
Differences	Technical schools/ Secondary vocational schools	Vocational training schools (non-secondary)
Regulating authorities	Local educational authorities for secondary vocational schools, and local authorities of MHRSS for technical schools	Local authorities of MHRSS (for most vocational training schools)
School type and services	Formal education	Non-formal education
Certificates issued by schools	CEE's technical schools issue professional qualification certificates specified with technical level and graduation certificates recognized by the relevant PRC government authorities. CEE's secondary vocational schools issue academic certificates recognized by the relevant PRC government authorities	CEE's vocational schools issue completion certificates for the training courses
Program length	3 years in general	1-3 years in general

Source: Company data, CMBIS

Remarkable growth trajectory

From 2016 to 2018, number of schools grew at CAGR of 27% to 145 schools, spanning 29 of the 31 provinces in mainland China and Hong Kong. Average students enrolled grew at CAGR of 9% to 123,957. During the same period, revenue grew at CAGR of 18%, reaching RMB3,265mn.

Figure 17: Geographic coverage of schools and centers in the PRC and Hong Kong as of YE18



Source: Company data, CMBIS

Note:

- New East – 50 schools
- Omick – 23 schools
- ◆ Xinhua Internet – 24 schools
- Wisezone – 22 schools
- ★ Wontone - 26 schools
- ▲ Cuisine Academy – 18 centers

Key Positives and Growth Drivers

Largest vocational training education provider

Largest vocational training education provider in China

CEE is the largest vocational training education provider in China in terms of average students enrolled and revenue generated for the year ended 31 Dec 2017, capturing a market share of 1.7% and 2.5%, respectively. In FY18, average students enrolled reached 123,957, +6% YoY. Headquartered in Hefei, Anhui province, CEE has established a nationwide school network consisting of 145 Schools as of YE18, spanning 29 of the 31 provinces in mainland China and Hong Kong. CEE also provides customized catering experience services in 18 centers under Cuisine Academy.

A portfolio of renowned brands

CEE provides vocational training education in three segments, namely, culinary arts, information technology and internet technology and auto services. In culinary arts/information technology and internet technology/auto services industry, CEE ranked the first with 65,372/21,442/15,236 average students enrolled as of YE17, capturing a market share of 23.1%/3.4%/9.7%. It operates these three segments under five renowned school brands, namely, New East Culinary Education, Omick Education of Western Cuisine and Pastry, Xinhua Internet Technology Education, Wisezone Data Technology Education and Wontone Automotive Education.

Long and successful track record

As a result of its leading market positions and the strong growth in the vocational training education industry, CEE achieved significant growth in terms of revenue and average students enrolled. From 2016 to 2018, revenue grew at CAGR of 18%, reaching RMB3,265nm. During the same period, average students enrolled grew at CAGR of 9% to 123,957. Leveraging its market leadership, extensive operational experience, and unparalleled nationwide network, we believe CEE is well-positioned to capture the significant growth potential in the vocational education industry in China.

Figure 18: CEE's leadership positions in each segment

Segments	Description	Average students enrolled as of YE18
Culinary Arts	No. 1 culinary arts vocational training education provider in China Brands: New East, Omick Curriculums: administrative chef, hotel management, western cuisines chef, fashionable western pastry and Chinese herbal cuisine, pastry baking, etc.	72,247
Information Technology and Internet Technology	No. 1 information technology vocational training education provider in China Brands: Xinhua Internet and Wisezone Curriculums: 3D and graphic design, internet network, e-commerce, software development, e-sports, virtual reality, artificial intelligence, internet security, big data, etc.	32,387
Auto Services	No. 1 auto services vocational training education provider in China Brands: Wontone Curriculums: automobile remodeling, new energy automobile, automobile inspection and repair, automobile plating and painting, automobile detailing, and automobile quick repair and maintenance	19,323
TOTAL		123,957

Source: Company data, CMBIS

Note: According to the Frost & Sullivan Report, rankings are based on average students enrolled as of YE17

Nationwide school network empowered by highly replicable business model

Nationwide school network

CEE adopts self-operated business model, centralized management, and standardized operations to ensure the quality of its education services. Empowered by its highly replicable business model, CEE has established a nationwide presence in 29 out of the 31 provinces in the PRC and Hong Kong, with a network of 145 self-owned schools, and over 1.59mn sq m of aggregate gross floor area as of YE18. Such nationwide presence allows CEE to build its brand reputation and serve potential employers across China.

Figure 19: CEE's nationwide presence as of YE18

Segments	Brands	Number of schools/centers in operation as of YE18	Number of provinces covered	Average GFA for each school/center (sq m)	Number of new schools/centers commencing operation under planning	Number of schools/centers under planning
Culinary Arts	New East	50	29	16,400	2	3
	Omick	23	22	4,700	1	3
Information Technology and Internet Technology	Xinhua Internet	24	17	17,300	0	1
	Wisezone	22	21	1,400	0	N/A
Auto Services	Wontone	26	21	18,500	1	3
Total Schools		145			4	10
Cuisine Academy		18	14	1,000	1	1

Source: Company data, CMBIS

Note:

(1) The number of schools and centers include provinces in mainland China and Hong Kong.

(2) Number of Schools/centers under planning are calculated as of the Latest Practicable Date.

Centralized and standardized management system

CEE adopts a centralized and standardized management system across its business operations throughout China. It centrally manages teaching, logistics, procurement, finance, R&D of curriculums, and career counseling services, so that all schools are able to maintain the same high standards in terms of education quality, business operations, and financial efficiencies, while achieving internal synergies.

Highly replicable business model

The centralized and standardized management system is essential for CEE to expand school network, replicate business efficiently, maintain quality standards, and capitalize on the business opportunities in China's vocational training education industry. In 2016/17/18, it commenced operations of 19/36/19 new schools, respectively. In FY17/18, it also commenced operations of 6/12 new centers of Cuisine Academy.

Well-positioned to capitalize on market opportunities

Economic development in China have caused the influx of migrant workers from rural areas to developed areas, which has led to the increase of urban population. Urbanization, or the shift in population distribution, has underpinned demand for skilled workers. To address these changes, the State Council promulgated the National Plan on New Urbanization (《国家新型城镇化规划(2014-2020年)》) in 2014 to encourage rural workforce to receive appropriate education, acquire technical skills, and become skilled workers.

In Jan 2019, the State Council promulgated the Implementation Plan for the Nationwide Reform of Vocational Education (《国家职业教育改革实施方案》), which stated that (1) vocational education will have a more prominent role in the education reform, and in the social and economic development in China, (2) the government will promote the transition of vocational education from mainly sponsored by the government to the private sector, (3) the government will support and cooperate with private sector to improve the quality of vocational education.

On 30 Apr 2019, the Executive Meeting of the State Council mentioned to spend RMB100bn from unemployment insurance fund to enhance vocational skills and initiate large scale vocational skill training campaign to provide training for more than 15mn people in 2019 and more than 50mn people within three years.

Furthermore, on 18 May 2019, the State Council promulgated the Implementation Plan for the Enhancement of Vocational Skills (2019-2021) (《职业技能提升行动方案 (2019 - 2021 年》) stated to raise the proportion of skilled/highly-skilled laborer to total laborer to >25%/>35% by 2021 and subsidize the vocational training of veteran soldiers, unemployed people, disabled and children of poor families etc.

We think CEE's business is aligned with PRC government policy directions so it is well-positioned to capitalize on market opportunities.

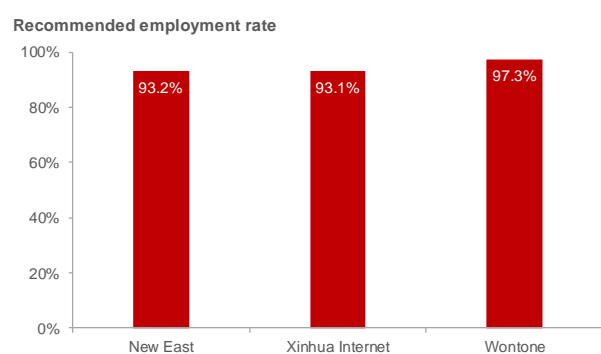
Strong employment rates underpinned by well-established curriculums and strong school-enterprise relationship

Backed by cooperation with over 28,000 enterprises, nationwide career counselling services and alumni network, CEE achieved an average recommended employment rate of ~93.7% for its long-term programs for FY18.

Well-established curriculums catering the economy needs

CEE provides tailor-made curriculums aiming to address unmet demand for vocational training education and increase graduates' employability and their average compensation levels. It has established a curriculum research and development center under each school brand (except for Omick), researching industry trends and employer needs, reviewing existing curriculums and integrating resources to develop new ones. For FY18, 90.5% of its total average students enrolled in long-term programs (> 1-year). The long-term nature of programs ensures high quality (help to increase average compensation of graduates) and differentiate CEE from other vocational education providers that focus on short-term training or are examination oriented.

Figure 20: Strong recommended employment rates for three school brands for FY18



Source: Company data, CMBIS

Note: CEE provides graduate placement service to all students of long-term programs. The recommended employment rate represents total number of students of long-term programs who are hired through CEE's graduate placement service program in a certain period, excluding students who start their own business ventures or are employed through other channels divided by total number of graduates of long-term programs during such period.

Figure 21: Long-term programs increase graduates' average compensation levels



Source: CMBIS

Strong school-enterprise relationship

Across the three business segments, CEE has cooperated with a wide range of enterprises. Students enrolling in employment-oriented school-enterprise cooperation programs will have easier access to internships and job opportunities offered by the cooperative enterprises. As of YE18, CEE has established cooperation with over 28,000 enterprises and established 388/219/92 employer-tailored training programs under New East/Xinhua Internet/Wontone, respectively.

For examples, CEE has been cooperating with Baidu Inc. since Jan 2017 to establish the Baidu-Xinhua Internet Marketing Laboratories for students to gain practical training in internet marketing and data analysis. Also, CEE has set up an e-commerce training base in Yiwu, Zhejiang province to give Xinhua Internet and Wisezone students to work with business owners, vendors and suppliers in Yiwu to gain hands-on knowledge and experience on how to run a business.

Dedicated career counselling service

CEE offers career counselling service to all of its students. Its highly dedicated and experienced staff at career advice centers provides students with customized services. School-level career advice centers also conduct regular market research to understand the evolving needs of employers. In addition, CEE established a career advice department at headquarter-level to optimize resource allocation and facilitate information sharing across the Group. Students can search recruitment information on CEE's online platform.

Nationwide alumni network

CEE has a strong alumni network with over 500,000 alumni spread across the country. It has maintained good relationships and smooth communications with its alumni. Through social media and alumni associations, alumni have introduced job opportunities and business connections to help students. CEE also invites alumni to give talks on career orientation and to share their working experience.

Figure 22: Cooperation with Hefei R&F Westin Hotel



Source: CMBIS

Figure 23: Strong school-enterprise cooperation



Source: CMBIS

Visionary and stable management team with proven track record

The Company is a pioneer in the vocational training education industry. Mr. Wu Wei, the chairman of CEE, has over 30 years of experience in the PRC vocational training education industry. Mr. Xu Shaobing, the executive vice president of CEE, has over 20 years of experience in education industry. He is also the vice president of the China Hospitality Association and International Culinary Education of the World Federation of China Catering Industry. Mr. Sha Xu, the vice president of CEE, have over 19 years of experience in education. He has been recognized by Tencent Holdings Limited as the “10 Years of Tencent Internet – Education Business Leader”. CEE’s strong management capability, evidenced by its successful operation, together with its centralized and standardized management system, enables the Company to quickly replicate its success to newly established schools while maintaining high quality of education services.

Some of CEE’s outstanding achievements include:

- ❖ In 2007, Sichuan Xinhua Computer Institute (四川新华计算机学院) was recognized as the National Demonstrative Base of National Information Technology (国家信息化全国示范基地) by the Ministry of Information Industry of the PRC.
- ❖ In 2010, Wontone Automotive Education was awarded “National Model Vocational Training Group in Automobile Industry” (全国汽车行业示范职教集团) by China Association of Automobile Culture (中国汽车文化促进会) and China Auto Talents Training Project Committee (中国汽车人才培养工程委员会).
- ❖ In 2012, Anhui Xinhua Computer Institute was appointed by MHRSS to organize the “Developing Talent with New Skills for China New Project” (国家新技能人才培养新项目) and “Four New Talent Development Plan” (四新人才培养计划).
- ❖ In 2016, Shijiazhuang Xinhua Computer School (石家庄新华计算机学校) was recognized as the “National Information Technology Talent Development Demonstration Training Unit” (“国家信息化人才培养示范培训单位”) by the Computer Education Authorization and Certification Office (信息化培训认证管理办公室).
- ❖ In 2017, Beijing Wisezone Education Technology Co., Ltd. (北京华信智原教育科技有限公司) was recognized as the “China Big Data Talent Development Demonstration Base” (“中国大数据人才培养示范基地”) by the Computer Education Authorization and Certification Office (信息化培训认证管理办公室).
- ❖ In 2017, Anhui Xinhua Education was recognized as a “National Demonstrative Training Base of National Catering Industry Talent” (“全国饭店业人才培养示范基地”) by the China Hospitality Association (中国饭店协会).

Strengthen market leadership by establishing regional centers

CEE plans to establish five regional centers in the suburbs (where land costs are generally lower) of five large cities, namely Beijing, Xian, Shanghai, Guangzhou and Chengdu (“Major Regions”). The population coverage of each regional center is anticipated to reach over 200mn. There are several benefits to establish these regional centers because:

- ❖ **Solidify market leadership and enhance brand recognition.** Regional centers can improve overall campus environment, foster a positive brand image and enhance education service quality;
- ❖ **Self-owned premises is necessary for stable and sustainable development.** Currently most of CEE’s schools are located on leased premises. Leasing costs as a percentage of cost of revenue increased from 15.6% in FY16 to 17.6% in FY18. This uptrend is expected to continue, especially in prime commercial centers in China. Also, there are uncertainties whether the leases of existing schools can be renewed upon expiry. School relocation could incur additional costs for setting up new premises and purchasing equipment.
- ❖ **Build more advanced and high standard training facilities.** CEE has built simulated kitchens of restaurants, coffee shops and bars, simulated VR studios and game broadcasting studios to provide best possible simulation experience to students. It is a challenge to find suitable premises to accommodate the Company’s needs for installing fixtures. On the contrary, CEE can build better and more advanced facilities on self-owned premises to better serve students.
- ❖ **Economies of scale and costs synergies.** CEE can enjoy economies of scale from a larger pool of students, centralized and standardized management within one regional center and cost synergies across brands. CEE also can develop high-end and niche courses with higher tuition fees.
- ❖ **Attract and retain staff.** A permanent school site eliminates concerns for disruption to staff’s working environment or family life arising from relocation.
- ❖ **Extension of centralized and standardized management from regional centers to serve network expansion.** Regional centers will house research and development, human resources and marketing centers which support the further expansion of school network outside Major Regions. Currently, CEE has limited presence in less developed areas with less population (“Unserved Areas”). In future, CEE plans to establish relatively small size in the Unserved Areas which are not expected to offer full range of courses. Students from Unserved Areas can have more courses to pick in nearby regional centers.

CEE targets to establish each regional center with land areas of 200,000 – 330,000 sq.m., which can each accommodate at least 10,000 – 15,000 students. Investment amount of each regional center is expected at RMB500-600mn, including RMB 200-300mn for purchase of land, around RMB 200m for construction service fee and RMB 100mn for purchase of fixed assets.

It plans to begin constructing one regional center every year after 2019 depending on the availability of land. CEE plans to gradually relocate existing students enrolled in long-term programs located in Major Regions to regional centers. The need for capacity at existing leased premises will gradually reduce. CEE expects some of the leased premises will be kept for the use of offering short-term programs.

Figure 24: Existing number of schools and students expected to be covered by regional centers

Regional Centers	Provinces or cities to be covered	No. of existing schools / centers	Total GFA for existing schools / centers (sq.m.)	Average students enrolled in existing schools / centers	School / center capacities	Utilization rate (%)
Beijing	Beijing, Tianjin, Hebei, Inner Mongolia	13	156,898.0	13,097	14,627	89.5%
Shanghai	Shanghai, Zhejiang, Jiangsu	12	206,384.9	10,785	20,882	51.6%
Guangzhou	Guangdong, Jiangxi, Hunan, Fujian, HK	18	221,088.8	23,480	26,452	88.8%
Chengdu	Sichuan, Chongqing, Yunnan, Guizhou	15	332,256.9	29,470	39,405	74.8%
Xian	Shaanxi, Gansu, Qinghai, Ningxia, Xinjiang	13	174,073.5	10,009	16,676	60.0%
Total		71		86,841	118,042	
	% of company's total schools and centers	42%		67%		

Source: Company data, CMBIS estimates
As of 20 May 2019

Expand school and center network domestically and overseas

Expand domestic network

In addition, CEE plans to establish around 51 new schools and 6 new customized catering centers across a number of major capital cities, and in less developed areas with less population in 2019-2021. CEE has plans in place to establish new schools or centers in cities which have a population of over five million in densely populated provinces including Guangdong, Zhejiang, Jiangsu, Hunan, Hebei, Sichuan, Inner Mongolia and Heilongjiang. Furthermore, CEE may plan to build new schools or centers in areas not covered by regional centers which include Henan, Shandong, Liaoning, Hubei, Shanxi, Anhui, Guangxi and Tibet. Total capital expenditure is around RMB 670.5mn for these 51 new schools and 6 new centers.

Figure 25: CEE's expansion plan, 2019-2021

Brands	Number of schools/centers in operation	Expected number of schools/centers to be established in year			Expected capex for new schools/centers (RMB'000)	Capital expenditure plan for new schools/centers
		2018	2019	2020		
New East	50	9	4	6	285,000	~RMB 10mn for renovation and RMB 5mn for procurement
Omick	23	6	5	4	112,500	~RMB 5mn for renovation and RMB 2.5mn for procurement
Xinhua Internet	24	2	3	3	120,000	~RMB 10mn for renovation and RMB 5mn for procurement
Wisezone	22	-	-	-	-	-
Wontone	26	3	3	3	135,000	~RMB 10mn for renovation and RMB 5mn for procurement
Total	145	20	15	16	652,500	
Cuisine Academy	18	-	2	4	18,000	~RMB 2mn for renovation and RMB 1mn for procurement

Source: Company data, CMBIS

Expand overseas

CEE plans to set up a vocational school in California, the US to enhance its brand in the international vocational education market. It already filed an application on 16 Nov 2018 for its Xinhua Training School US to the BPPE to offer degree-granting programs. Planned investment is around RMB100mn.

Potential acquisitions

CEE may make potential acquisitions of vocational training schools in the future though it currently has not identified any acquisition targets. In addition, for some of its brands, CEE plans to expand to overseas market and enhance its brand recognition in the international vocational education industry. It intends to seek potential opportunities to acquire or enter into partnerships with high-quality overseas private vocational training schools in the US, Europe and ASEAN countries, which have high demand for quality vocational training education.

Diversify and innovate course offerings and curriculums

Further diversify and innovate course offerings and curriculums

In the three industry sectors CEE currently operates in, it plans to expand and diversify course offerings in response to industry trends and market demand. For example,

- ❖ New East is exploring new programs including Japanese cuisine, Korean cuisine, food nutrition and diet, dessert and western food, and hotel management.
- ❖ Xinhua Internet is exploring new programs including 3D modelling and printing, intelligent IoT and new retail digital culture and creativity.
- ❖ Wontone is exploring new programs including commercial automobile technologies, intelligent network for automobile, manufacture of industrial robots and cars, and welding.

In the potential new industry sectors, CEE is conducting research on market demand. For example, it's exploring the market for vocational training education in service industry and new economy, such as beauty, AI, and healthcare. Equipped with 30 years' experience in vocation training industry, the highly replicable business model and the centralized and standardized management system, we think these will help accelerate the process to establish new program offerings.

In addition, CEE plans to offer more short-term programs for adult students, expand collaboration with enterprises, and establish certain study abroad programs.

Industry Analysis

Supportive policies to promote quality vocational education

Aiming to have sufficient quality vocational training to fulfill the market demand for skilled labor, the PRC government has promulgated a series of stimulus policies and regulations:

1. *The 2015 Opinion on Deepening the Promotion of Vocational Education Group Management* (《关于深入推进职业教育集团化办学的意见》) issued by the MOE stated the importance of accelerating the development of modern vocational education, increasing the participation rates of vocation training groups, and improving the operating environment of vocational education service providers by implementing policies to further encourage vocational training managed by a group;
2. *The 2016 Notice on the 13th Five Year Plan for Technical Education* (《技工教育“十三五”规划》) issued by the Ministry of Human Resources and Social Security emphasized the need to improve the technical training environment through policy support, capital support, project support, and marketing support;
3. *The 2017 Opinion on Further Promoting the Development of Informatization of Vocational Education* (《关于进一步推进职业教育信息化发展的指导意见》) issued by the MOE stated to promote the allocation of resources to accommodate market needs, encourage social capital to participate in building informatized vocational education, and to develop protection mechanisms for intellectual property as well benefit sharing.
4. In Jan 2019, the State Council promulgated the Implementation Plan for the Nationwide Reform of Vocational Education (《国家职业教育改革实施方案》), which stated that (1) vocational education will have a more prominent role in the education reform, and in the social and economic development in China, (2) the government will promote the transition of vocational education from mainly sponsored by the government to the private sector, (3) the government will support and cooperate with private sector to improve the quality of vocational education. CEE's business is aligned with PRC government policy directions, and it's well-positioned to capitalize on market opportunities.
5. 2019 Government Work Report (“政府工作报告”) mentioned to (1) improve job-seeking of graduates of higher education, veteran soldiers and migrant workers; (2) spend RMB100bn from unemployment insurance fund to enhance vocational skills training for more than 15mn people; (3) support social capital to invest in vocational education industry.
6. The Executive Meeting of the State Council stated on 30 Apr 2019 to (1) initiate large scale vocational skill training campaign to provide training for more than 15mn people in 2019 and more than 50mn people within three years; (2) spend RMB 100bn from unemployment insurance fund to enhance vocational skills; (3) support local government to optimize vocational training subsidy policies for workers; (4) push vocational schools to expand training scale.
7. On 18 May 2019, the State Council promulgated the Implementation Plan for the Enhancement of Vocational Skills (2019-2021) (《职业技能提升行动方案 (2019 - 2021 年)》). The Plan stated to (1) provide subsidized vocational training to more than

50mn people in three years; (2) raise the proportion of skilled/highly-skilled laborer to total laborer to >25%/>35% by 2021; (3) encourage enterprises and vocational schools to jointly build training studios and factories as well as integration of enterprises with vocational schools; (4) provide subsidies and let the veteran soldiers, unemployed people, disabled, rural migrant workers and children of poor families etc have free vocational training; (5) local government should increase financial support on vocational skills training, and withdraw funding from the RMB100bn taken from the unemployment insurance fund to enhance vocational skills; (6) raise the tax deduction limit of staff training expenses to 8% of enterprises' total staff payroll.

8. On 30 Jun 2019, NDRC and MOC jointly published the Encouraged Foreign Investment Catalog (2019 Version) (《鼓励外商投资产业目录 (2019 年版)》). “Non-formal vocational training institutes” was the only segment under education sector included in the nationwide encouraged foreign investment catalog.

China's proportion of highly-skilled laborer far below Germany and Japan

According to an expert from the Ministry of Human Resources and Social Security, China's proportion of highly-skilled laborer was around 29% at the end of 2017, which was far below Japan and Germany's around 75%. The shortage of highly-skilled laborer is a nationwide and recurring phenomenon. Therefore, we expect vocational training education sector has bright growth outlook.

Unmet demand of skilled workers and expected salary increase underpin market potential for vocational training education industry

Market size of vocational training education industry in China is expected to reach RMB 161.4bn in 2022, representing a 2017-2022 CAGR of 10.5%

According to the Frost & Sullivan Report, total revenue of vocational training education industry increased from RMB63.0bn in 2013 to RMB98.0bn in 2017, representing a CAGR of 11.7%, and is expected to reach RMB161.4bn in 2022, representing a CAGR of 10.5%. Of vocational training education industry, revenue from culinary arts/information technology and internet technology/auto services industry increased from RMB2.4/18.6/1.1bn in 2013 to RMB4.0/33.2/2.1bn in 2017, representing a CAGR of 13.6%/15.6%/17.5%, and is expected to reach RMB6.4/60.3/3.8bn in 2022, representing a CAGR of 9.9%/12.7%/12.6%. The aggregated market share of these three industries is expected to increase from 40.1% in 2017 to 43.7% in 2022E.

Market drivers of culinary vocational training education

1. **Expanding catering industry.** Total revenue of catering industry grew at a CAGR of 10.7% during 2013 to 2017, reaching RMB3,964.4bn in 2017, led by development of economy, mass consumption and living standard. Japanese and Korean cuisine market and western cuisine market are expected to achieve higher growth rates than the Chinese cuisine market from 2017 to 2022 due to consumers' preference of more diversified cuisine choices. This should increase demand of talent for Japanese and Korean cuisine and western cuisine.
2. **Consumption upgrade.** Increasing demand for high quality catering service requires more professional cooks.
3. **Competitive salary package of professional cooks.** Cooks have relatively higher salary than other industries that have lower qualification requirements such as agriculture, manufacturing and residential service industry. Attractiveness of careers in catering service drives growth in culinary vocational training education.

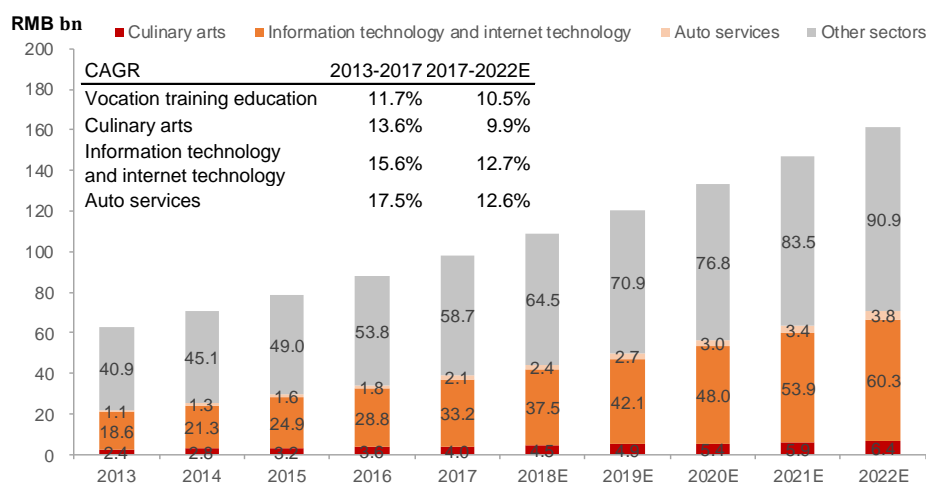
Market drivers of information technology and internet technology vocational training education

- Growing industry.** According to Frost & Sullivan, China's information technology industry is expected to grow at a CAGR of 10.8% from 2017 to 2022. Such rapid growth generates strong demand for professional talents.
- Rapid industry innovation and upgrade.** Rapid development of new information and internet technologies leads students and employed working professionals to seek training on a regular basis.
- Enhancement of the requirement of employee skills.** Demand for talents in the industry leads to an increasing demand for higher quality of information technology and internet technology vocational training.
- Supportive policy.** "The Opinions on Integration of Enterprises with Vocational Schools and Universities" (《关于深化产教融合的若干意见》) released by the State Council states to vigorously develop information technology and internet technology vocational training related disciplines such as network security and AI.

Market drivers of auto services vocational training education

- Emerging market of new energy automobiles.** The development of new energy automobile market pushes upgrade for related repair and maintenance technology.
- Development of second-hand car market.** The rapid development of second-hand car market suggests potential demand on the auto services. Vocational education on second-hand car evaluation or related education courses have become popular in recent years.

Figure 26: Total revenue of vocational training education by industry in China



Source: Frost & Sullivan, CMBIS

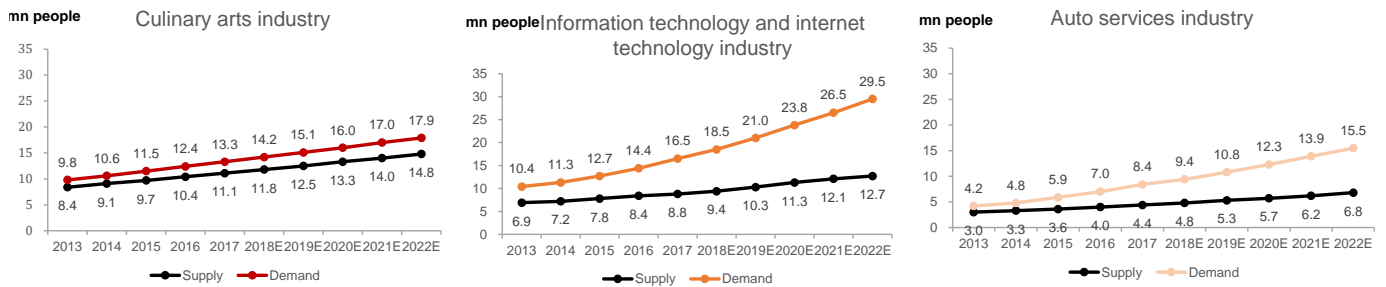
Unmet demand of skilled workers and expected salary increase indicate potential opportunities for vocational training market growth

Because of China's economic growth and structural transformation, there has been a structural problem of lacking technician and skilled talents. According to the Ministry of Human Resources and Social Security, the job vacancies-to-seekers ratio showed an

upward trend from 1.09 in 2013 to 1.16 in 2017. Such ratio is estimated to reach 1.20 in 2022 according to Frost & Sullivan.

The supply and demand gap for skilled workers in culinary arts/information technology and internet technology/auto services industry was 2.2/7.7/4.0 million people in 2017, and is expected to widen to 3.1/16.8/8.7 million people in 2022, respectively.

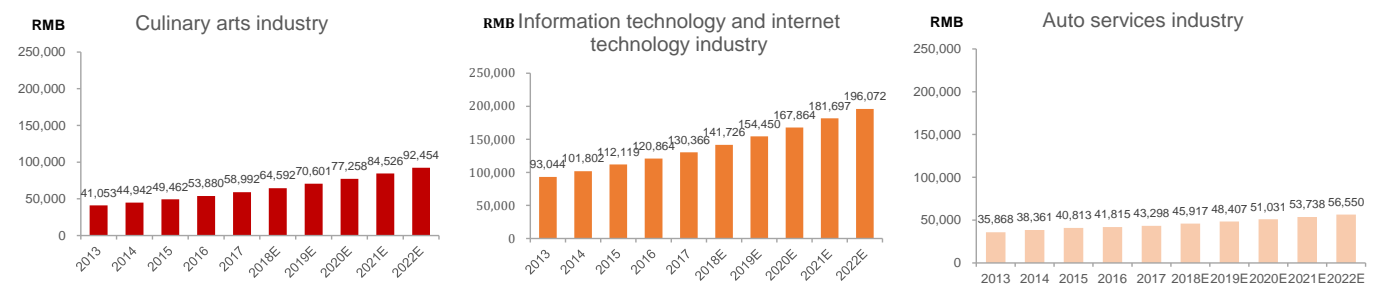
Figure 27: Supply and demand for skilled workers by industry in China



Source: Frost & Sullivan

Average annual salary of cooks in culinary arts industry/workers employed in information technology and internet technology/workers employed in auto services industry increased from RMB 41,053/93,044/35,868 in 2013 to RMB 58,992/130,366/43,298 in 2017, representing a CAGR of 9.5%/8.8%/4.8%, and is expected to reach RMB 92,454/196,072/56,550 in 2022, representing a CAGR of 9.4%/8.5%/5.5%, respectively.

Figure 28: Average annual salary of workers employed by industry in China



Source: Frost & Sullivan

Competitive landscape

CEE is the largest vocational training education provider as a whole as well as the largest player in each of the industry sector that it operates

The vocational training education market in China is highly fragmented. According to the Frost & Sullivan Report, CEE is the largest vocational training education provider in China, with 102,050 average students enrolled as of YE17, capturing a market share of 1.7%. The second and third largest providers had market shares of 0.5% and 0.3%, respectively. In culinary arts/information technology and internet technology/auto services industry, CEE is the largest vocational training education provider as well, with 65,372/21,442/15,236 average students enrolled as of YE17, capturing a market share of 23.1%/3.4%/9.7%.

Figure 29: Leading players by industry

Culinary arts			Information technology and Internet Technology			Auto services		
Group	Average students enrolled	Market share	Group	Average students enrolled	Market share	Group	Average students enrolled	Market share
CEE	65,372	23.1%	CEE	21,442	3.4%	CEE	15,236	9.7%
Group A	8,077	2.9%	Group C	20,882	3.3%	Group E	15,000	9.5%
Group B	2,600	0.9%	Group D	20,023	3.2%	Group F	2,000	1.3%

Source: Frost & Sullivan, CMBIS

Note: as of YE17

Financial Analysis

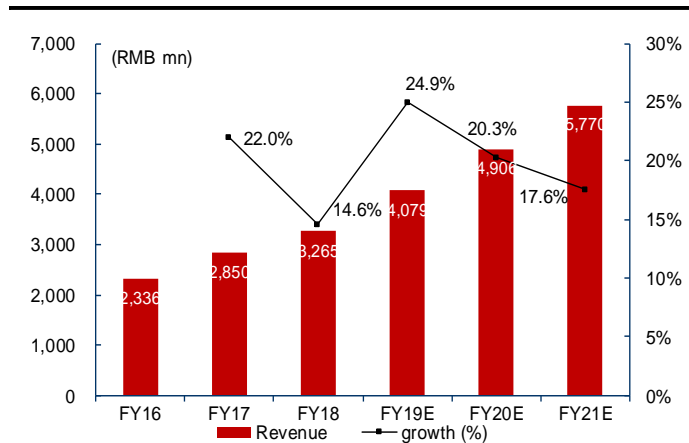
Revenue to grow at 21% CAGR from FY18 to FY21E

In FY17, revenue rose 22% led by 11% growth of average students enrolled and 10% growth of average tuition fee per student. By brand, revenue growth of both New East and Wisezone jumped 21%, followed by Wontone (+18%) and Xinhua Internet (+13%) and beginning contribution of Omick.

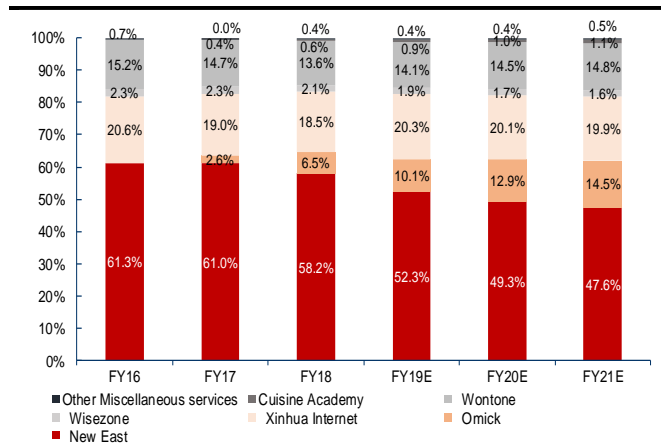
In FY18, revenue increased by 15% driven by 6% growth of average students enrolled and 7% growth of average tuition fee per student. By brand, Omick delivered 185% revenue growth after its operation began in FY17, followed by Xinhua Internet (+11%), New East and Wisezone (+9%) and Wontone (+6%).

We forecast revenue to grow at 21% CAGR from FY18 to FY21E, driven by 11% growth of average student enrolled and 9% growth of average tuition fee. The growth of average student is led by 11% CAGR of number of schools and ramp-up of existing schools. By brand, we forecast Cuisine Academy and Omick to deliver the highest CAGR of revenue growth because both brands just began operation in FY17.

Figure 30: Revenue to grow at CAGR of 20% in FY19-21E **Figure 31: Revenue mix by brand**

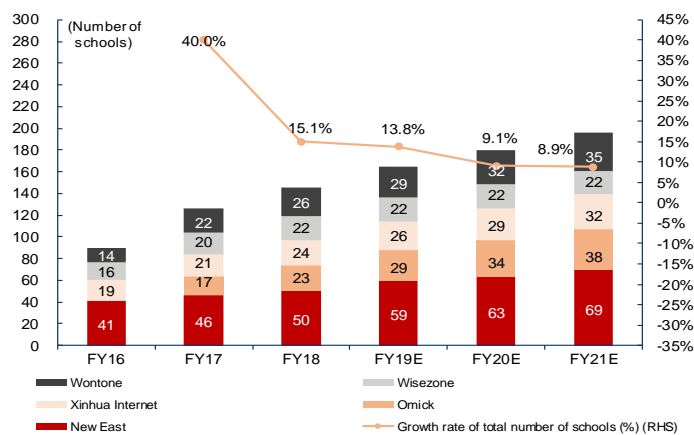


Source: Company data, CMBIS estimates



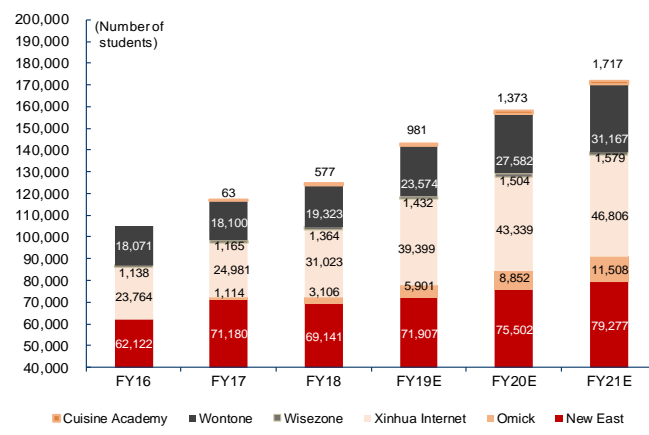
Source: Company data, CMBIS estimates

Figure 32: Number of schools to grow at CAGR of 11% in FY19-21E



Source: Company data, CMBIS estimates

Figure 33: Number of average students enrolled to grow at a CAGR of 11% in FY19-21E



Source: Company data, CMBIS estimates

Figure 34: Revenue estimates

Revenue (RMB mn)	FY16	FY17	FY18	FY19E	FY20E	FY21E	3-yr CAGR
Schools	2,320	2,839	3,232	4,028	4,835	5,679	21%
New East	1,432	1,739	1,900	2,134	2,420	2,745	13%
Omick	0	75	213	413	632	838	58%
Xinhua Internet	481	542	604	829	985	1,149	24%
Wisezone	53	64	70	77	85	94	10%
Wontone	354	419	444	575	713	854	24%
Centers - Cuisine Academy	0	0	21	35	50	64	46%
Other Miscellaneous services	16	11	12	16	20	26	30%
Total	2,336	2,850	3,265	4,079	4,906	5,770	21%

YoY growth rate (%)

New East	na	21%	9%	12%	13%	13%
Omick	na	na	185%	94%	53%	33%
Xinhua Internet	na	13%	11%	37%	19%	17%
Wisezone	na	21%	9%	10%	10%	10%
Wontone	na	18%	6%	29%	24%	20%
Cuisine Academy	na	na	6145%	70%	43%	28%
Total		22%	15%	25%	20%	18%

Revenue breakdown

New East	61%	61%	58%	52%	49%	48%
Omick	0%	3%	7%	10%	13%	15%
Xinhua Internet	21%	19%	19%	20%	20%	20%
Wisezone	2%	2%	2%	2%	2%	2%
Wontone	15%	15%	14%	14%	15%	15%
Cuisine Academy	0%	0%	1%	1%	1%	1%
Other Miscellaneous services	1%	0%	0%	0%	0%	0%
Total	100%	100%	100%	100%	100%	100%

Source: Company data, CMBIS estimates

Figure 35: Number of schools and centers estimates

Number of schools/centers	FY16	FY17	FY18	FY19E	FY20E	FY21E	3-yr CAGR
Schools	90	126	145	165	180	196	11%
New East	41	46	50	59	63	69	11%
Omick	0	17	23	29	34	38	18%
Xinhua Internet	19	21	24	26	29	32	10%
Wisezone	16	20	22	22	22	22	0%
Wontone	14	22	26	29	32	35	10%
Centers							
Cuisine Academy	0	6	18	18	20	24	10%

Source: Company data, CMBIS estimates

Figure 36: Number of average student enrolled/customer registered estimates

Average student	FY16	FY17	FY18	FY19E	FY20E	FY21E	3-yr CAGR
Average students enrolled	105,095	116,540	123,957	142,214	156,779	170,337	11%
New East	62,122	71,180	69,141	71,907	75,502	79,277	5%
Omick	na	1,114	3,106	5,901	8,852	11,508	55%
Xinhua Internet	23,764	24,981	31,023	39,399	43,339	46,806	15%
Wisezone	1,138	1,165	1,364	1,432	1,504	1,579	5%
Wontone	18,071	18,100	19,323	23,574	27,582	31,167	17%
Average number of customers registered							
Cuisine Academy	na	63	577	981	1,373	1,717	44%
YoY growth rate (%)	na	11%	6%	15%	10%	9%	
New East	na	15%	-3%	4%	5%	5%	
Omick	na	na	179%	90%	50%	30%	
Xinhua Internet	na	5%	24%	27%	10%	8%	
Wisezone	na	2%	17%	5%	5%	5%	
Wontone	na	0%	7%	22%	17%	13%	
Cuisine Academy	na	na	816%	70%	40%	25%	

Source: Company data, CMBIS estimates

Note: Average students enrolled for a year represents the sum of the number of students enrolled at all schools at the end of each month divided by the number of months during such period without taking into account any transfer or withdrawal. Average number of customers registered for a year represents the sum of the number of customers registered at Cuisine Academy at the end of each month divided by the number of months during such period, without taking into account any withdrawal.

Figure 37: Average tuition fee estimates

Average tuition fee	FY16	FY17	FY18	FY19E	FY20E	FY21E	3-yr CAGR
Average tuition fee per student	22,076	24,363	26,075	28,326	30,841	33,341	9%
New East	23,053	24,427	27,482	29,680	32,055	34,619	8%
Omick	na	67,180	68,659	70,033	71,433	72,862	2%
Xinhua Internet	20,221	21,706	19,483	21,041	22,725	24,543	8%
Wisezone	46,738	55,055	51,375	53,944	56,641	59,473	5%
Wontone	19,604	23,168	22,994	24,373	25,836	27,386	6%
Average service fee per customer							
Cuisine Academy	0	5,286	36,043	36,043	36,764	37,499	1%
YoY growth rate (%)	na	10%	7%	9%	9%	8%	
New East	na	6%	13%	8%	8%	8%	
Omick	na	na	2%	2%	2%	2%	
Xinhua Internet	na	7%	-10%	8%	8%	8%	
Wisezone	na	18%	-7%	5%	5%	5%	
Wontone	na	18%	-1%	6%	6%	6%	
Cuisine Academy	na	na	582%	0%	2%	2%	

Source: Company data, CMBIS estimates

Note: Average tuition/service fee is calculated by dividing revenue generated from tuition or service fees by average students enrolled/customers registered in the corresponding year

Gross profit margin to expand from FY18 to FY21E

Gross profit margin declined from 56.6% in FY16 to 55.0% in FY17 mainly because two new brands (Omick and Cuisine Academy) established new schools and began operations in 2017. Also, CEE added 36 new schools (New East, Omick, Xinhua Internet, Wisezone and Wontone) and 6 new centers (Cuisine Academy) in total in FY17. During the initial ramp-up period, a new school incurred substantial fixed costs for staff compensation, rent and other fixed costs while its revenue is limited due to the relatively small beginning number of student enrollment. The significant increase of new schools and centers in FY17 had negatively affected gross profit margin.

Gross profit margin further dropped from 55.0% in FY17 to 52.2% in FY18 because CEE opened another 19 new schools and 12 new centers in FY18, following the addition of 42 new schools and centers in FY17. The increased losses from these new schools and centers caused the decline of gross profit margin.

We forecast gross profit margin to expand from 52.2% in FY18 to 56.4% in FY21E mainly because we expect average student enrolled to increase by a CAGR of 11% from FY18 to FY21E (vs 9% from FY16 to FY18). Also, average tuition fee is estimated to grow at 9% CAGR from FY18 to FY21E. Moreover, the growth rate of number of schools in FY19-21E (a CAGR of 11% for total number of schools in FY19-21E) will be moderated from 27% CAGR in FY17-18, suggesting the losses from new schools could decrease.

Figure 38: Utilization rate for the year ended 31 Dec 2018

Brand	Range of capacity (estimated)	No. of schools / centers	Utilization rate (%)	No. of schools / centers	Utilization rate (%)	No. of schools / centers	Utilization rate (%)	No. of schools / centers	Utilization rate (%) *	Brand average utilization rate (%)
New East	500-8,572	6	31.5-49.3	32	50.0-100.0	4	>100.0	7	na	74.5
Omick	136-831	1	47.6	1	50.0-100.0	1	>100.0	20	na	63.1
Xinhua Internet	200-5,000	2	22.9-44.2	11	50.0-100.0	6	>100.0	5	na	95.4
Wisezone	134-457	16	31.08-38.4	na	na	na	na	6	na	24.6
Wontone	782-5,340	2	40.6	12	50.0-100.0	na	na	12	na	60.9
Cuisine Academy	62-220	na	na	na	na	na	na	18	na	na

Source: Company data, CMBIS estimates

Brand utilization rate for the year is calculated by the average student enrolled of the brand for the year divided by the classroom seats that the brand has as of ending date of the year. Such calculation excludes the schools started to admit students from 1 Jan 2017 to 31 Dec 2018 and centers commenced operations from Sep 2017.

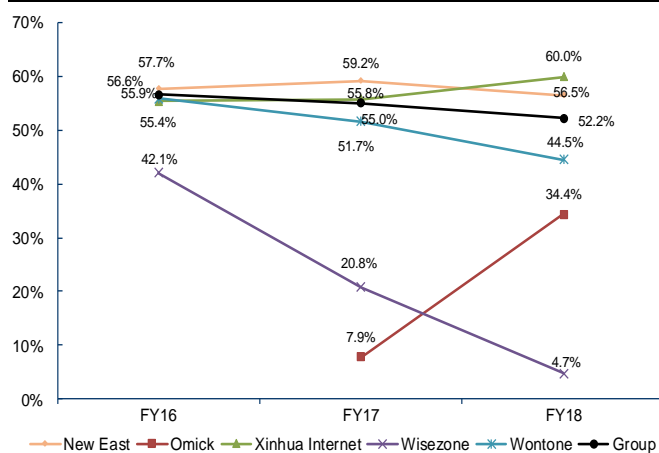
*These schools and centers started to commence operation between 1 Jan 2017 and 31 Dec 2018 and are still in ramp-up periods.

EBIT to grow at a CAGR of 32% from FY18 to FY21E

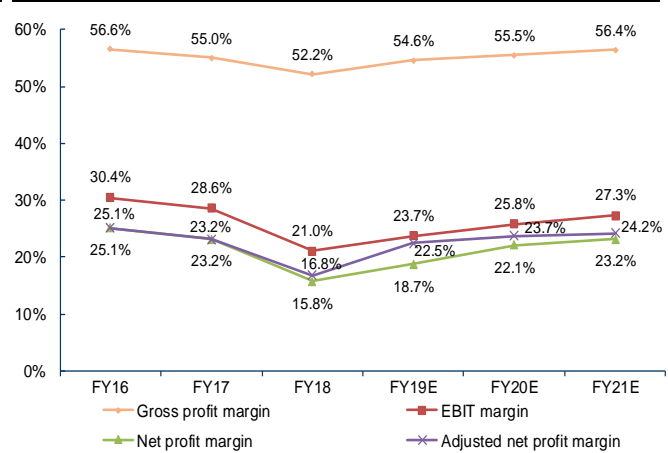
While EBIT increased 15% in FY17, EBIT margin dropped 1.8ppt to 28.6% in FY17 mainly due to 1.5ppt decrease of gross profit margin and 0.8ppt increase of SG&A expenses ratio, which was resulted from increasing market promotion, facilitating student recruitment and expanding school network.

In FY18, EBIT decreased 16% with EBIT margin narrowing from 28.6% to 21.0%. The decline of EBIT margin was attributable to (1) 2.8ppt decline of gross profit margin; (2) 3.8ppt increase of selling expenses ratio on promotion of brand name, especially Omick, and facilitating student recruitment of new schools; (3) 1.1ppt increase of administrative expenses ratio resulting from expansion of school network and adoption of share option in 2018.

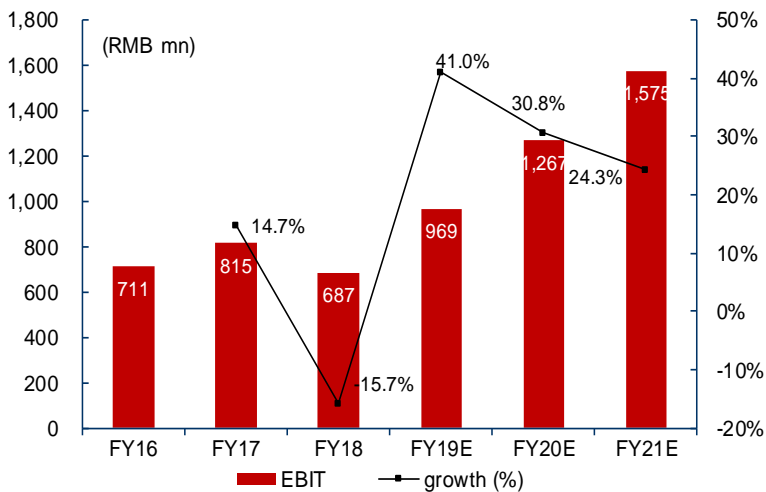
We forecast EBIT to grow at a CAGR of 32% from FY18 to FY21E, with EBIT margin increasing from 21.0% in FY18 to 27.3% in FY21E. The EBIT margin expansion is driven by 4.2ppt widening of gross profit margin, and 2.2ppt decrease of SG&A expenses ratio resulting from better revenue growth and a less strong new school expansion in FY19-21E compared to FY17-18.

Figure 39: Historical gross profit margin trend by brands

Source: Company data, CMBIS

Figure 40: Profit margin trends to improve from FY18 to FY21E

Source: Company data, CMBIS estimates

Figure 41: EBIT to grow at a CAGR of 32% in FY19-21E

Source: Company data, CMBIS estimates

Adjusted net profit to grow at a CAGR of 37% from FY18 to FY21E

Net profit to shareholders increased 13% in FY17. The growth was slightly less than the 13% growth of EBIT due to increase of effective tax rate from 18.4% in FY16 to 20.5% in FY17 on increase of net losses from new schools and centers.

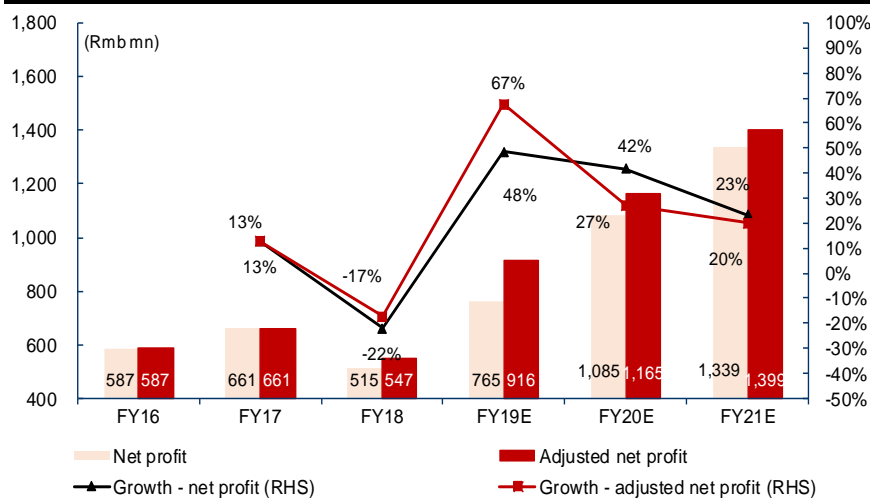
Net profit to shareholders decreased 22% in FY18. The decline was greater than the 16% drop of EBIT because (1) effective tax rate rose from 20.5% in FY17 to 25.0% in FY18 as net losses from new schools and centers further increased; (2) the Company recorded RMB 32mn professional services fees and share option expenses. Excluding professional services fees and share option expenses, the decline of adjusted net profit was 17% in FY18 which was in line with EBIT decline.

We estimate adjusted net profit (excluding share based expense and listing expenses) to increase by a CAGR of 37% from FY18 to FY21E, which is faster than EBIT's 31% CAGR during the same period because of rising interest income and lower effective tax rate (on trending down losses of new schools).

Figure 42: Total net loss of new schools in FY16-18

Total net profit/(loss) (RMB mn)	FY16	FY17	FY18
Net profit	587.4	661.2	515.1
New schools/centers opened in 2015	(10.9)	5.9	11.4
New schools/centers opened in 2016	(21.4)	(7.5)	(37.7)
New schools/centers opened in 2017	na	(116.3)	(115.6)
New schools/centers opened in 2018	na	na	(81.3)
Total net loss for new schools/centers	(32.3)	(123.8)	(234.6)

Source: Company data

Figure 43: Adj. net profit to grow at a CAGR of 37% in FY19-21E

Source: Company data, CMBIS estimates

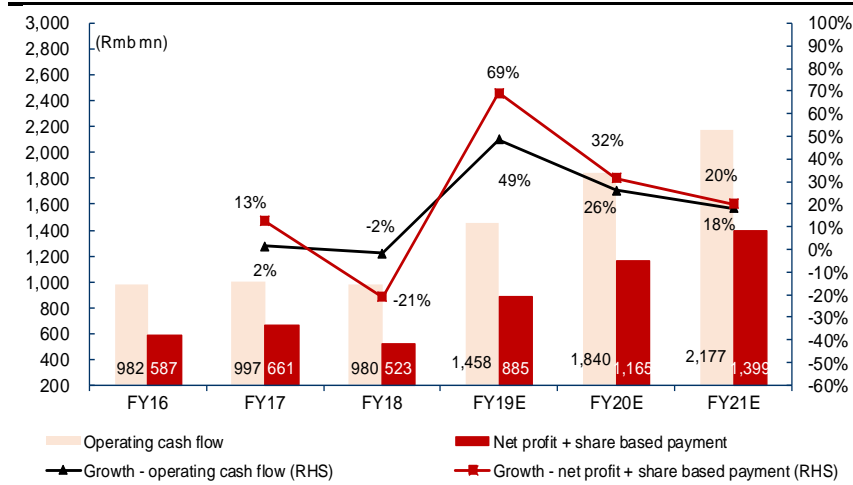
1H19 adjusted net profit growth >93%

On 22 Jun 2019, CEE released positive profit alert and expected 1H19E net profit after tax from continuing operations to increase by at least 40% to >RMB302mn compared to RMB216mn in 1H18. If excluding share based payment expenses (RMB75mn), listing expenses (RMB20mn) and adjustment of expenses related to HKFRS Standard 16 (RMB20mn), we estimate adjusted net profit would increase by at least 93% to >RMB417mn.

Operating cash flow to grow at a CAGR of 30% in FY19-21E

Like other education companies, the Company had strong operating cash flow given that long-term program students are required to pay tuition fees in advance for next 12 months and short-term program students are required to prepay tuition fees in full.

We forecast operating cash flow to grow at a CAGR of 30% in FY19-21E, driven by strong earnings growth.

Figure 44: Strong operating cash flow

Source: Company data, CMBIS estimates

Peer Comparison

Vocation training education industry is supported by policies and with lower risk profile

Pursuant to the Foreign Investment Catalog and the Negative List, “non-formal vocational training institutes” are encouraged foreign-invested industries. On the contrary, preschool education, high school education and higher education are belonged to restricted category while compulsory education is belonged to prohibited category.

The government is very supportive of vocational education development, evidenced by various favorable policies. Please see Industry Analysis section – “Supportive policies to promote quality vocation education”. CEE will be the first non-formal vocational education company in Hong Kong market.

Figure 45: Peer comparison

	The Company	New Oriental	TAL Edu	China Edu	Yuhua Edu	Bright Scholar	Tianli	Offcn Edu
Stock code	na	EDU.US	TAL.US	839.HK	6169.HK	BEDU.US	1773.HK	002607.CH
Operation metrics								
Financial year ended	31-Dec	31-May	28-Feb	31-Dec	31-Aug	31-Aug	31-Dec	31-Dec
Latest FY figures	FY18	FY19	FY19	FY17	FY18	FY18	FY18	FY18
Reporting currency	RMB	US\$	US\$	RMB	RMB	RMB	RMB	RMB
Professional education								Y
Non-formal vocational education	Y	Y						
Secondary vocational education	Y			Y				
Higher education				Y	Y			
K12 formal education		Y			Y	Y	Y	
K12 after school tutoring		Y	Y			Y	Y	
Location	Nationwide	Nationwide	Nationwide	Regional	Regional	Nationwide	Regional	Nationwide
Number of schools/centers	163	1233	676	3	27	65	33	701
Number of student	124,534	8,382,700	4,478,730	76,204	93,108	36,679	29,024	1,192,100
Number of student definition	Average	Total	Total	Total	Total	Average	Total	Total
ASP	26,075	369	572	12,110	12,836	41,522	17,671	4,840
Financials								
Revenue (mn)	3,265	3,096	2,563	949	1,195	1,719	641	6,210
Adj. net profit	547	411	445	475	609	278	222	1,149
GPM (%)	52.2%	55.6%	54.6%	59.0%	56.1%	36.6%	42.0%	58.9%
Selling expenses ratio	19.8%	12.4%	18.9%	1.0%	0.5%	21.4%*	1.8%	17.7%
G&A expenses ratio	13.4%	33.4%	22.6%	14.1%	11.1%	na	13.7%	14.1%
Tax rate	25.0%	27.1%	16.7%	0.4%	0.6%	21.3%	0.6%	13.9%
Adj. NPM (%)	16.8%	13.3%	17.3%	50.1%	51.0%	16.2%	34.7%	18.5%
Revenue growth	15%	27%	49%	10%	41%	29%	37%	55%
Adj. net profit growth	-17%	16%	81%	8%	70%	42%	58%	102%
ROAA	17%	10%	13%	8%	11%	7%	8%	22%
ROAE	44%	19%	22%	11%	18%	12%	14%	58%

Source: Company data, CMBIS estimates

* 21.4% stands for SG&A expenses ratio

Vocational training education vs formal education (K12 and higher education)

Fast expansion backed by highly replicable business model

Most of listed formal education companies adopt asset-heavy model (such as China Education, Yuhua and Wisdom) while Bright Scholar closely collaborates with Country Garden to launch greenfield schools with lower upfront capital expenditures. Because the capacity of a school of the Company can be low at 134-782 students, which is lower than that of formal education schools, it is easier to lease a suitable school site. Underpinned by the Company's highly replicable business model (asset-light and centralized and

standardized management), the Company can accelerate its nationwide network expansion. On the other hand, the barrier entry of formal education (especially university) is higher than vocational training education given formal education's larger capital expenditure and tighter regulatory approval process.

Adjusted net profit margin less than formal education

The Company has a lower adjusted net profit margin than most of listed formal education companies mainly because:

- (1) **Paying tax.** Most of the formal education schools are schools whose sponsors do not require reasonable returns or not-for-profit schools, so they are not required to pay income tax, while most of the schools of the Company pay income taxes;
- (2) **Paying rental because of asset-light model.** The Company paid 8.4% of revenue as leasing expenses in FY18, while most of listed formal education companies adopt asset-heavy model;
- (3) **Lower economies of scale per school.** Formal education companies usually have better economies of scale given number of student at formal education school is usually greater than 1,000 (except international school operators like Maple Leaf and Bright Scholar);
- (4) **Higher selling expenses ratio.** Formal education schools usually have low selling expenses ratios given (i) parents usually choose K12 schools based on academic results (such as university admission rate, global top 100 university admission rate, university ranking, Zhongkao and Gaokao scores etc) which can be found in media; (ii) quality private K12 schools usually have high progression rates (from primary to middle schools and from middle to high schools) so marketing efforts are mostly focused on enrollment of grade 1 and grade 7 students; (iii) shortage of higher education places (higher education enrolment rate was 48.1% in 2018); (iv) the admission to high schools and higher education institutions are mainly based on Zhongkao and Gaokao scores.

Vocational training education vs K12 tutoring services

Roughly similar adjusted net profit margins

The Company and K12 tutoring services companies have similar adjusted net profit margins as they adopt asset-light approach to establish nationwide network and invest in advertising to enhance brand recognition.

Both industries are highly fragmented

The industry revenue of K12 tutoring services was RMB 465.3bn in 2017, greater than the industry revenue of vocational training education (RMB 309.2bn), according to Frost & Sullivan. The competitive landscapes of both industries in China are fragmented. In 2017, top 3 players of vocational training education accounted for 2.5% of total market share in terms of average students enrolled. On the other hand, top 3 players of K12 tutoring contributed 3.8% of total market share in terms of revenue.

Valuation

P/E comparison

Our TP of HK\$16.30 is based on 27.4x FY20E P/E, on par to the average FY20E P/E of the two giant education companies, New Oriental Education (EDU.US, NR) and TAL Education (TAL.US, NR). Such P/E valuation represents 33% premium on segment leaders' 20.6x FY20E P/E.

We think CEE is deserved to trade on par with the two giants because:

A large-sized company with scarcity premium: According to our estimates, CEE's revenue and adjusted net profit will reach RMB4,079mn and RMB916mn in FY19E, respectively, making it the largest education company in Hong Kong stock market. Also, CEE is the only vocational training education provider in Hong Kong stock market.

Dominant market leader with highly replicable business model: CEE is the market leader of all its three segments, namely culinary arts, information technology and internet technology and auto services. It also has proven track record of nationwide expansion.

Lower risk profile: CEE operates in "non-formal vocational training institutes" industry, which is an encouraged foreign-investment industry pursuant to the Foreign Investment Catalog and the Negative List. We think its risk profile is lower than compulsory education ("Prohibited") and higher education ("Restricted").

Apart from the three reasons above, we have one more reason to support CEE's premium valuation over segment leaders:

High income tax rate: CEE had an effective tax rate of 25% in FY18 (vs higher education peers' single-digit effective tax rate). Therefore, if the higher education peers gradually elect their schools to register as for-profit schools in future, their effective tax rates will increase and their P/E valuation will become higher. That means, CEE's P/E premium on the education segment leaders is not that high.

For cross-checking, our TP implies 18.3x/13.5x EV/EBITDA in FY19/20E, which is at 6%/5% discount compared to segment leaders' average of 19.4x/14.2x. Therefore, we think our TP is not aggressive.

Figure 46: Peers valuation table

	Ticker	Mkt Cap (US\$ m)	Price	Year end	P/E (x)			EV/EBITDA		Adj. net profit growth (%)			EPS growth (%)			PEG (x)			Revenue growth (%)		
					FY1	FY2	FY3	FY1	FY2	FY1	FY2	FY3	FY1	FY2	FY3	FY1	FY2	FY3	FY1	FY2	FY3
Non-formal vocational education services provider																					
China East Education	667 HK	3,798	13.64	Dec-18	29.2	23.0	18.7	14.5	10.6	67	27	20	na	27	20	1.24	25	20	18		
K12 tutoring services providers																					
New Oriental Education	EDU US	16,653	104.94	May-19	31.1	23.5	18.7	22.5	16.7	32	32	27	31	32	26	1.07	28	25	32		
TAL Education	TAL US	20,089	33.95	Feb-19	48.4	31.3	22.1	37.8	25.0	(8)	61	43	(5)	54	42	1.01	35	34	32		
Onesmart Education	ONE US	1,172	7.30	Aug-18	22.5	16.7	12.4	14.3	10.2	54	35	36	na	34	35	0.65	40	34	26		
Beststudy Education	3978 HK	216	1.99	Dec-18	9.9	7.7	6.0	2.1	1.7	167	25	28	na	28	28	0.35	26	23	22		
Average					28.0	19.8	14.8	19.2	13.4	61	38	34	13	37	33	0.77	32	29	25		
K12 education services providers																					
Wisdom Education	6068 HK	874	3.35	Aug-18	15.1	12.3	9.2	10.4	8.3	33	23	32	31	22	31	0.57	39	23	23		
Tianli Education	1773 HK	828	3.13	Dec-18	22.8	17.0	13.1	15.6	11.0	29	37	29	na	34	30	0.71	37	38	32		
Maple Leaf	1317 HK	928	2.43	Aug-18	10.3	8.7	7.3	7.9	6.7	18	19	18	13	19	20	0.53	22	21	16		
Bright Scholar	BEDU US	1,145	9.20	Aug-18	22.2	17.6	17.3	11.5	9.3	42	33	15	47	26	2	1.65	40	35	13		
Virscend Education	1565 HK	929	2.36	Dec-18	13.4	10.2	7.4	11.1	8.6	31	40	36	33	31	38	0.39	25	30	25		
Average					16.8	13.2	10.8	11.3	8.8	31	30	26	31	27	24	0.77	32	29	22		
Higher Education services providers																					
China Education	839 HK	2,766	10.74	Aug-18	25.7	20.7	17.3	17.7	14.3	na	23	21	na	24	20	1.17	na	22	15		
Yuhua Education	6169 HK	1,637	3.91	Aug-18	16.7	13.7	11.6	11.2	8.9	19	28	16	12	22	18	0.84	38	28	9		
Hope Education	1765 HK	1,062	1.25	Dec-18	16.6	12.9	10.2	8.5	5.9	43	29	24	22	29	24	0.63	23	23	16		
Minsheng Education	1569 HK	686	1.34	Dec-18	11.8	9.9	8.3	7.3	6.0	22	17	17	22	19	20	0.61	59	22	13		
Kepei Education	1890 HK	939	3.68	Dec-18	16.0	13.6	11.8	11.5	9.9	20	20	16	(9)	17	15	0.98	23	18	15		
Xinhua Education	2779 HK	550	2.68	Dec-18	13.3	11.4	9.7	5.2	4.2	12	17	16	5	17	16	0.82	18	18	15		
New Higher Education	2001 HK	542	2.76	Dec-18	10.0	7.9	6.7	6.5	5.0	27	25	17	26	27	17	0.45	83	25	10		
Chunlai Education	1969 HK	251	1.64	Aug-18	12.4	8.3	6.8	9.3	6.9	(4)	54	24	(14)	50	22	0.35	15	33	13		
Average					15.3	12.3	10.3	9.6	7.6	20	26	19	9	26	19	0.73	37	24	13		
Education sector average					18.7	14.3	11.5	12.4	9.3	34	30	24	16	29	24	0.75	34	27	19		
Segment leaders' average					27.8	20.6	16.7	19.4	14.2	23	36	25	21	32	23	1.08	35	30	20		

Source: Bloomberg estimates, CMBIS estimates

Note: We select New Oriental Education, TAL Education, Bright Scholar, Tianli Education, China Education and Yuhua Education as segment leaders. Segment leaders are the top two names in their respective segments in terms of market capitalization and P/E.

Price is closing price as of 26 Aug 2019.

Key Risks

Intense competition in the PRC vocational education industry

CEE faces intense competition in the PRC vocational education industry, financial condition and results of operations may be adversely affected if CEE is unable to compete effectively.

Threats from formal education

Students aged from 15 to 21 years old which consist of graduates from middle schools, high school, secondary vocational schools and junior colleges and universities are one of the major groups choosing vocational education. However, with the increasing emphasis of academic degrees in recent years, the number of formal education school students has increased, posing a threat to student recruitment of vocation training education.

Failure to maintain or enhance brand recognition

Failure to maintain or enhance brand recognition may have a material and adverse effect on CEE's ability to continue to attract students to enroll in its Schools, its business and prospects will be materially and adversely affected.

Failure to effectively and efficiently manage expansion

Failure to effectively and efficiently manage expansion may materially and adversely affect CEE's ability to capitalize on new business opportunities, and gross profit margin may also be negatively impacted by newly established Schools.

Failure to maintain the premium fee level or raise service fees

Failure to maintain the premium fee level or raise service fees materially and adversely affect results of operations.

Higher labor costs

Higher labor costs, particularly increasing teachers' and/or instructors' salaries, may adversely affect CEE's business and profitability.

Financial Statements

Income statement

Year-end 31 Dec (RMB mn)	FY16	FY17	FY18	FY19E	FY20E	FY21E
Revenue	2,336	2,850	3,265	4,079	4,906	5,770
Cost of sales	(1,014)	(1,281)	(1,560)	(1,851)	(2,181)	(2,515)
Gross profit	1,321	1,569	1,705	2,228	2,724	3,255
Other income	13	17	38	51	61	73
Other gains and losses	27	60	58	59	72	81
Selling expenses	(364)	(457)	(648)	(708)	(868)	(1,037)
Administrative expenses	(278)	(350)	(438)	(629)	(684)	(752)
Research and development expenses	(8)	(24)	(28)	(33)	(39)	(46)
EBIT	711	815	687	969	1,267	1,575
Net finance income	9	17	24	66	97	103
Listing expenses	0	0	(24)	(31)	0	0
Profit before tax	720	832	687	1,003	1,364	1,678
Income tax expense	(132)	(171)	(172)	(239)	(280)	(339)
Net profit to shareholders	587	661	515	765	1,085	1,339
Net profit to shareholders	587	661	515	765	1,085	1,339
Listing expenses	0	0	24	31	0	0
Share-based expenses	0	0	8	120	80	60
Adjusted net profit	587	661	547	916	1,165	1,399

Source: Company data, CMBIS estimates

Balance statement

Year-end 31 Dec (RMB mn)	FY16	FY17	FY18	FY19E	FY20E	FY21E
Fixed assets	752	1,259	1,545	1,993	2,168	2,240
PPE	611	1,060	1,361	1,804	1,977	2,045
Prepaid lease payments	89	126	123	120	118	115
Deferred tax assets	4	4	3	3	3	3
Prepayments for rental	19	32	18	20	22	24
Deposit for rental and utilities	30	37	40	45	49	54
Current assets	1,896	2,259	1,270	6,324	7,424	8,783
Inventories	27	30	37	44	52	60
Trade and other receivables	127	191	242	303	364	428
Others	3	4	5	5	5	5
Bank balances and cash	1,739	2,035	986	5,972	7,003	8,290
Total assets	2,648	3,518	2,816	8,316	9,592	11,023
Current liabilities	1,553	1,871	1,883	2,388	2,813	3,234
Contract liabilities	955	1,090	1,233	1,479	1,738	2,008
Trade payables	90	138	144	171	201	232
Other payables and accrued expenses	218	333	364	400	440	484
Amount due to controlling entity	209	209	0	0	0	0
Income tax payable	81	102	108	108	108	108
Bank borrowings	0	0	0	0	0	0
Dividend payable	0	0	34	229	325	402
Non-current liabilities	30	40	60	72	84	96
Government grant	3	4	4	4	4	4
Contract liabilities	27	36	56	68	80	92
Equity	1,065	1,607	873	5,856	6,696	7,693
Shareholders' equity	1,065	1,607	873	5,856	6,696	7,693
Total liabilities & equity	2,648	3,518	2,816	8,316	9,592	11,023

Source: Company data, CMBIS estimates

Cash flow statement

Year-end 31 Dec (RMB mn)	FY16	FY17	FY18	FY19E	FY20E	FY21E
Profit before tax	697	813	682	1,003	1,364	1,678
Depreciation and amortization	173	242	360	452	580	685
Net finance income	(9)	(17)	(24)	(66)	(97)	(103)
Others	(29)	(61)	(56)	60	7	(22)
Change of working capital	200	171	182	247	265	278
Tax paid	(52)	(150)	(165)	(239)	(280)	(339)
Operating cash flow	982	997	980	1,458	1,840	2,177
Capex	(241)	(644)	(666)	(892)	(750)	(750)
Interests received	9	17	24	66	97	103
Purchases and redemptions of other financial assets	77	61	58	59	72	81
Others	5	(36)	11	1	1	1
Investing cash flow	(149)	(601)	(573)	(766)	(579)	(564)
Change of borrowings	0	0	0	0	0	0
Capital contribution and equity raised	0	0	1	4,329	0	0
Interests paid	0	0	0	0	0	0
Dividend paid	0	(100)	(874)	(34)	(229)	(325)
Others	0	0	(582)	0	0	0
Financing cash flow	0	(100)	(1,456)	4,294	(229)	(325)
Net change of cash flow	832	296	(1,048)	4,986	1,031	1,287
Cash balance at beginning of the year	906	1,739	2,035	986	5,972	7,003
Forex changes	0	0	0	0	0	0
Cash balance at end of the year	1,739	2,035	986	5,972	7,003	8,290

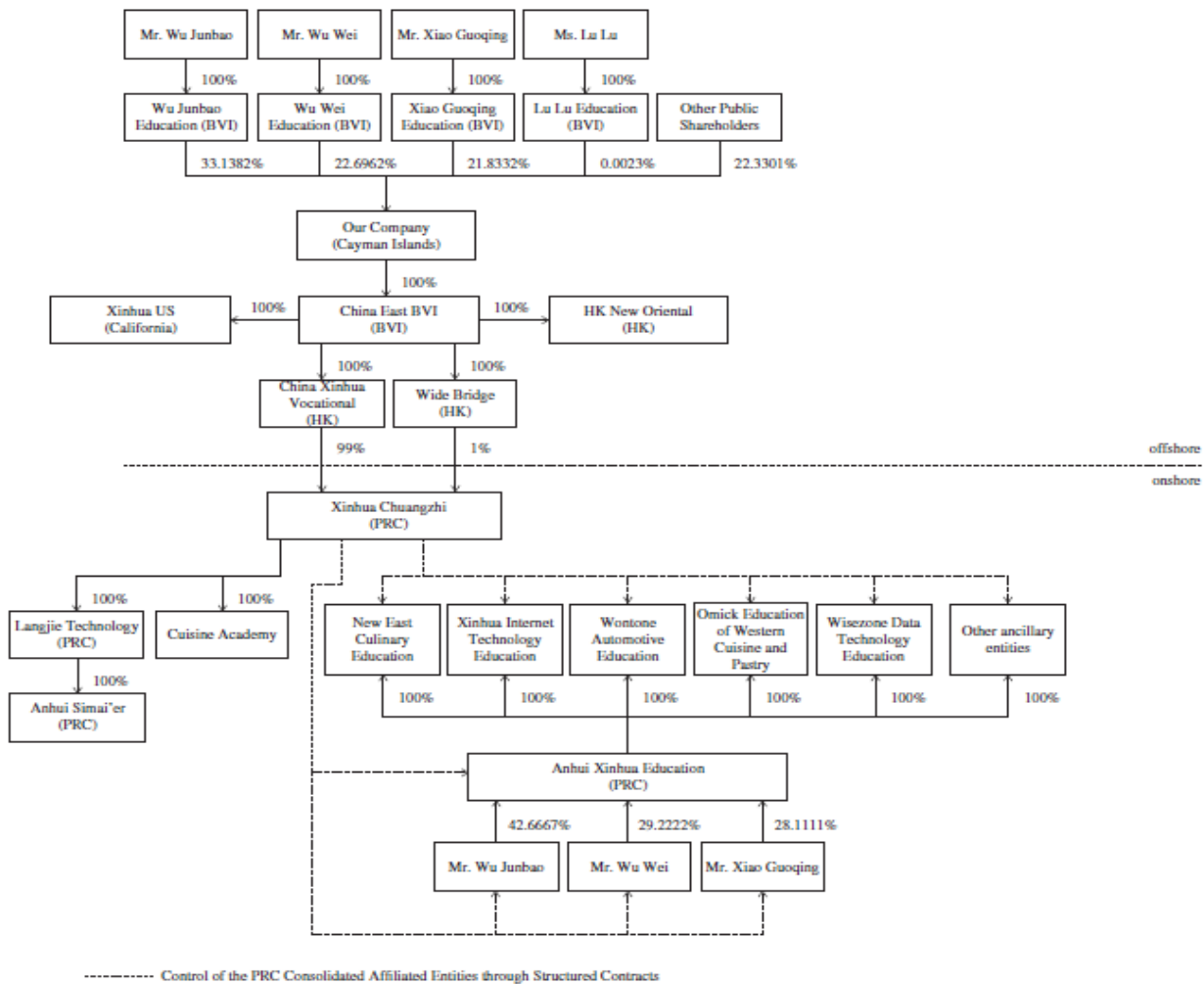
Source: Company data, CMBIS estimates

Key ratios

Year-end 31 Dec	FY16	FY17	FY18	FY19E	FY20E	FY21E
Sales mix (%)						
New East	61.2	61.0	58.2	52.3	49.3	47.6
Omick	0.0	2.6	6.5	10.1	12.9	14.5
Xinhua Internet	20.6	19.0	18.5	20.3	20.1	19.9
Wisezone	2.3	2.3	2.2	1.9	1.7	1.6
Wontone	15.2	14.7	13.6	14.1	14.5	14.8
Cuisine Academy	0.0	0.0	0.6	0.9	1.0	1.1
Other Miscellaneous services	0.6	0.4	0.4	0.4	0.4	0.5
Growth (%)						
Revenue	na	22.0	14.6	24.9	20.3	17.6
Gross profit	na	18.7	8.7	30.7	22.3	19.5
EBIT	na	14.7	(15.7)	41.0	30.8	24.3
Net profit	na	12.6	(22.1)	48.4	41.8	23.5
Adj. net profit	na	12.6	(17.2)	67.4	27.1	20.1
Margins & ratios (%)						
Gross profit margin	56.6	55.0	52.2	54.6	55.5	56.4
EBIT margin	30.4	28.6	21.0	23.7	25.8	27.3
Effective tax rate	18.4	20.5	25.0	23.8	20.5	20.2
Net margin	25.1	23.2	15.8	18.7	22.1	23.2
Adj. net margin	25.1	23.2	16.8	22.5	23.7	24.2
Payout ratio	na	na	na	30.0	30.0	30.0
Balance sheet ratios						
Current ratio (x)	1.2	1.2	0.7	2.6	2.6	2.7
Average inventory turnover days	na	8.1	7.8	8.0	8.0	8.1
Asset turnover (x)	0.9	0.8	1.2	0.5	0.5	0.5
Total asset/total equity (x)	2.5	2.2	3.2	1.4	1.4	1.4
Net cash (RMB mn)	1,530	1,826	986	5,972	7,003	8,290
Returns (%)						
Adj. ROAE	na	49.5	44.1	27.2	18.6	19.4
Adj. ROAA	na	21.4	17.3	16.5	13.0	13.6

Source: Company data, CMBIS estimates

Appendix 1: Corporate Structure



Source: Company data, CMBIS

Notes:

(1) Mr. Wu Junbao, Mr. Wu Wei and Mr. Xiao Guoqing are cousins.

(2) As advised by the Company's PRC Legal Advisors, the articles of association of Nanjing School, one of the Schools under New East Culinary Education, currently provides that its school sponsors are Mr. Xiao Guoqing (肖国庆) and Mr. Ge Xiaoliang (葛孝良), a headmaster of one of the Company's PRC Consolidated Affiliated Entities. Nanjing School has applied to the relevant local branches of the human resources and social security authorities and civil affairs authorities to change its school sponsors but has yet to obtain the relevant approvals. In this circumstance, Xinhua Chuangzhi will enter into various agreements that constitute Structured Contracts II (as disclosed in the section headed "Structured Contracts") with Mr. Xiao Guoqing and Mr. Ge Xiaoliang under which all economic benefits arising from the business of Nanjing School will be transferred to Xinhua Chuangzhi by means of services fees payable by Nanjing School to Xinhua Chuangzhi.

(3) As advised by the Company's PRC Legal Advisors, the articles of association of Shanghai Fengxian District East Delicacy Vocational Training School* (上海奉贤区东方美食职业培训学校), one of the Schools under New East Culinary Education, currently provides that its school sponsors are Mr. Yang Bing (杨兵), a headmaster of one of the Company's PRC Consolidated Affiliated Entities, and Mr. Liang Yong (梁勇), an Independent Third Party. Shanghai Fengxian District East Delicacy Vocational Training School has applied for and the relevant local branch of the human resources and social security authorities have approved the change of school sponsors. However, the relevant local branch of the civil affairs authorities has not yet approved its amended articles of association. In this circumstance, each of Mr. Yang Bing and Mr. Liang Yong has signed a written confirmation dated November 20, 2018 confirming that Anhui New East Culinary Institute legally owns the entire school sponsor's interest, that each of them agrees to give up all of the school sponsor's interest and will not claim any rights thereunder in the future, and that each of them will unconditionally cooperate with any formalities for registration changes in the future. On November 20, 2018, with the assistance of the Company's PRC Legal Advisors, the Company consulted with Shanghai Fengxian Communities Management Bureau* (上海市奉贤区社区管理局) on the change of school sponsor, and it has been confirmed that (i) it does not process the application for changing of school sponsors, (ii) the actual school sponsor of Shanghai Fengxian District East Delicacy Vocational Training School shall be Anhui New East Culinary Institute, and (iii) there shall be no material impediment if, subject to the approval of human resources and social security authorities, Shanghai Fengxian

District East Delicacy Vocational Training School chooses to become a for-profit private school and register as a limited liability company whose shareholder is Anhui New East Culinary Institution.

(4) As advised by the Company's PRC Legal Advisors, the articles of association of Jiangsu New East Culinary Training School* (江苏新东方烹饪技术学校), one of the Schools under New East Culinary Education, currently provides that its school sponsor is the Chinese Zhigong Party Jiangsu Provincial Committee (中国致公党江苏省委员会), an Independent Third Party. It has applied for and the relevant local branch of the human resources and social security authorities have approved the change of school sponsor. However, the relevant local branch of the civil affairs authorities have not yet approved its amended articles of association. In this circumstance, the Chinese Zhigong Party Jiangsu Provincial Committee has signed a written confirmation dated November 21, 2007 confirming that the school sponsor of Jiangsu New East Culinary Training School has been changed to Anhui Xinhua Education Development Co., Ltd. On November 26, 2018, with the assistance of the Company's PRC Legal Advisors, the Company consulted with Jiangsu Civil Affairs Department (江苏省民政厅) on the change of school sponsor, and it has been confirmed that (i) it does not process the application for changing of school sponsors, (ii) the actual school sponsor of Jiangsu New East Culinary School shall be Anhui Xinhua Education Development Co., Ltd., and (iii) there shall be no material impediment if, subject to the approval of human resources and social security authorities, Jiangsu New East Culinary School chooses to become a for-profit private school and register as a limited liability company with the administration of industry and commerce authorities, and apply for the change of the shareholder into Anhui Xinhua Education Development Co., Ltd.

(5) Nanjing Xinhua Computer Institute has applied for and the relevant local branch of the human resources and social security authorities have approved the change of school sponsor from Mr. Zhou Baoyin (周宝银), an Independent Third Party to Anhui Xinhua Education Development Co., Ltd. However, the relevant local branch of the civil affairs authorities has not yet approved its amended articles of association. In this circumstance, Mr. Zhou Baoyin has signed a written confirmation dated November 22, 2018 confirming that Anhui Xinhua Education legally owns the entire school sponsor's interest, that he agrees to give up all of his school sponsor's interest and will not claim any rights thereunder in the future, and that he will unconditionally cooperate with any formalities for registration changes in the future. On November 26, 2018, with the assistance of the Company's PRC Legal Advisors, the Company consulted with Nanjing Civil Affairs Bureau (南京市民政局) on the change of school sponsor, and it has been confirmed that (i) it does not process the application for changing of school sponsors, (ii) the actual school sponsor of Nanjing Xinhua Computer Institute shall be Anhui Xinhua Education Development Co., Ltd., and (iii) there shall be no material impediment if, subject to the approval of human resources and social security authorities, Nanjing Xinhua Computer Institute chooses to become a for-profit private school and register as a limited liability company with the administration of industry and commerce authorities, and apply for the change of the shareholder into Anhui Xinhua Education Development Co., Ltd.

(6) Other ancillary entities include five entities which provide administrative functions.

Appendix 2: Milestones

Year	Events
1988	CEE's founders, Mr. Wu Junbao and Mr. Wu Wei, started to provide specialized vocational trainings in the PRC.
2004	In view of future expansion and regularization of its current businesses, the Company established Anhui Xinhua Education in order to consolidate all its Schools under a single entity.
2005	Recognizing the extensive future growth of automotive services market in PRC, the Company started to offer automobile repair and maintenance training programs under its newly established Wontone Automotive Education brand.
2006	Recognizing the extensive future growth in the use of computers and technology in PRC, the Company acquired Wisezone Data Technology Education to provide short-term practical information technology and internet technology programs for college students and people at work.
2007	Anhui Xinhua Computer Institute obtained the ISO9001:2000 quality management system certification. Langjie Technology was recognized as a high-tech enterprise by the Beijing Municipal Science & Technology Commission (北京市科学技术委员会) for a period of two years. Sichuan Xinhua Computer Institute* (四川新华计算机学院) was recognized as the National Demonstrative Base of National Information Technology (国家信息化全国示范基地) by the Ministry of Information Industry of the PRC.
2010	Wontone Automotive Education was awarded "National Model Vocational Training Group in Automobile Industry" (全国汽车行业示范职教集团) by China Association of Automobile Culture* (中国汽车文化促进会) and China Auto Talents Training Project Committee* (中国汽车人才培养工程委员会). Langjie Technology obtained the ISO9001: 2008 quality management system certification for design, development and operation of schools for computer education.
2012	Anhui Xinhua Computer Institute was appointed by the MHRSS to organize the "Developing Talent with New Skills for China New Project" ("国家新技能人才培养新项目") and "Four New Talent Development Plan" ("四新人才培养计划").
2013	New East Culinary Institute* (新东方烹饪专修学院) of Anhui Xinhua Education Development Co., Ltd. was elected as a standing council member of the China Hospitality Association* (中国饭店协会) in the first election of the fourth council meeting of the China Hospitality Association.
2015	Anhui Xinhua Education Development Co., Ltd. was elected as a council member of the sixth council meeting of the World China Culinary Joint Conference* (世界中国烹饪联合会) by its sixth members' representatives meeting for five years.

- 2016 Founded Omick Education of Western Cuisine and Pastry to offer high-quality western-style catering education.
- Shijiazhuang Xinhua Computer School* (石家庄新华计算机学校) was recognized as the “National Information Technology Talent Development Demonstration Training Unit” (“国家信息化人才培养示范培训单位”) by the Computer Education Authorization and Certification Office* (信息化培训认证管理办公室).
- Beijing Wisezone Education Technology Co., Ltd.* (北京华信智原教育科技有限公司) was recognized as a high-tech enterprise jointly by Beijing Municipal Science & Technology Commission (北京市科学技术委员会), Beijing Finance Bureau* (北京市财政局), Beijing Municipal Tax Service of the State Administration of Taxation* (北京市国家税务局) and Beijing Local Taxation Bureau* (北京市地方税务局) for a period of three years.
- 2017 Founded Cuisine Academy in 2017 with a view to providing customized catering experience to customers who are interested in cooking or plan to establish their own businesses in the catering industry.
- Auhui Xinhua Education was recognized as a “National Demonstrative Training Base of National Catering Industry Talent” (“全国饭店业人才培养示范基地”) by the China Hospitality Association* (中国饭店协会).
- New East Culinary Education entered into a cooperation agreement with Johnson & Wales University in the US for academic exchange and program collaboration.
- Beijing Wisezone Education Technology Co., Ltd.* (北京华信智原教育科技有限公司) was recognized as the “China Big Data Talent Development Demonstration Base” (“中国大数据人才培养示范基地”) by the Computer Education Authorization and Certification Office* (信息化培训认证管理办公室).
- Langjie Technology was recognized as a high-tech enterprise jointly by the Beijing Municipal Science & Technology Commission, Beijing Finance Bureau, Beijing Municipal Tax Service of the State Administration of Taxation and Beijing Local Taxation Bureau for a period of three years.
- Anhui Xinhua Education Development Co., Ltd. was named “Specially Invited Vice President” for 16 months in the sixth council meeting of the China Hospitality Association.
- 2018 Anhui Xinhua Education was named “Outstanding Contributor for Talent Development for the Culinary Industry in China for 40 Years of Reform and Opening Up” (“改革开放 40 年中国餐饮行业培养人才突出贡献单位”) by the China Cuisine Association (中国烹饪协会) and “Merit Enterprise for the Culinary Industry in China for 40 Years of Reform and Opening Up” (“改革开放 40 周年全国餐饮业功勋企业”) by the China Hospitality Association (中国饭店协会).

Source: Company data, CMBIS

Appendix 3: Directors and Senior Mgmt.

Directors

Name	Position	Responsibilities
Mr. Wu Wei (吴伟)	Chairman and executive Director	In charge of overall management and strategic planning
Mr. Xiao Guoqing (肖国庆)	Executive Director	Business management and providing opinion and judgement to the Board
Mr. Wu Junbao (吴俊保)	Non-executive Director	Providing opinion and judgment to the Board
Mr. Lu Zhen (陆真)	Non-executive Director	Providing opinion and judgment to the Board
Mr. Hung Ka Hai, Clement (洪嘉禧)	Independent non-executive Director	Providing independent opinion and judgment to the Board
Mr. Cheung Tsun Yung, Thomas (张俊勇)	Independent non-executive Director	Providing independent opinion and judgment to the Board
Dr. Zhu Guobin (朱国斌)	Independent non-executive Director	Providing independent opinion and judgment to the Board

Source: Company, CMBIS

Senior Management

Name	Position	Responsibilities
Mr. Au Yeung Siu Kei (欧阳兆基)	Chief financial officer	In charge of financial management of the Company

Source: Company data, CMBIS

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BUY : Stock with potential return of over 15% over next 12 months
HOLD : Stock with potential return of +15% to -10% over next 12 months
SELL : Stock with potential loss of over 10% over next 12 months
NOT RATED : Stock is not rated by CMBIS

OUTPERFORM : Industry expected to outperform the relevant broad market benchmark over next 12 months
MARKET-PERFORM : Industry expected to perform in-line with the relevant broad market benchmark over next 12 months
UNDERPERFORM : Industry expected to underperform the relevant broad market benchmark over next 12 months

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