China's Private Schools

Initiate coverage: Best in class

Equities
Discovery Research

China

- We initiate on eight private school leaders (6 Buys, 2 Holds) in a fast-growing sector with substantial opportunities ahead
- In higher education, CEG (Buy) ranks as the top player on its leading scale, financial position, and M&A track record
- In the K-12 space, Maple Leaf (Buy) ranks highest on its better profitability, M&A history, and stronger governance

Time to swot up. We initiate coverage on eight private school operators in this report. Private education is a relatively new and fast-growing sector for investors so we've also published today an accompanying thematic detailing everything you need to know: *Time for school: A look at private schools in China*. The focus of this report is on the companies, how they've performed, and why we like them.

Prefer higher education vs. K-12. Recent headlines around potential policy changes have shaken the share prices of school operators, especially kindergarten to Grade 12 (K-12) players. However, we continue to see ample growth opportunities ahead. We particularly like higher educational players as they benefit from better policy certainty, more demand for higher vocational education, and the need to upgrade students' skills amid the soft economy. For K-12 school operators, their prospects aren't as rosy but there are also some positives especially as they have already taken steps to address policy uncertainties. We also expect the M&A spree to continue though we believe this warrants closer, more bottom-up analysis from investors, and which we provide in this report.

A proprietary scorecard: We forecast our eight covered private school operators to maintain their current pace of growth – up by a CAGR of 30% in FY17-19 in both revenue and core profit – on organic expansion and acquisitions. But given the complexity of the sector, in addition to our fundamental business analysis and financial analysis, we also introduce a proprietary scorecard. This ranks 14 measures, from the concentration of shareholdings to their M&A track record. In this report we also provide dedicated sections regarding key risks, policy issues, ESG matters, and share price drivers. Importantly, we also examine the connected transactions that many private school operators engage in, and outline where the potential risks are.

Higher education: Our preferred player is **China Educational Group (CEG)**, China's largest listed company in this space. We see its leading scale, experience, and more M&A driving growth. We also initiate on **Hope**, **Kepei,** and **Yuhua** with Buy ratings.

K-12: Our preferred pick is **Maple Leaf**, a leading international school operator, in part because of its aggressive targets and likelihood of more M&A. We also initiate on **Wisdom** with a Buy rating, and **Virscend** and **Tianli** with Hold ratings.

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Our stock picks

Stock	Rating rationale	Upside risks	Downside risks	Valuation
K-12				
Maple Leaf	**Initiate at Buy with a TP of HKD3.20.** Maple Leaf competes in a relatively niche market by operating around 100 international schools in both mainland China and overseas within the K-12 stage. We believe it will be less affected by potential policy changes, with c30% revenue expected to come from overseas. The aggressive targets set out by Maple Leaf suggests more M&A to come; yet it will take time to see if there are material synergies with its newly acquired schools in Singapore and Malaysia, which use different education curriculums. Overall, while there's greater execution risks for Maple Leaf, if it carries out its plans successfully it can generate higher returns than its peers.	◆ N/A	◆ Unfavourable overseas policies and operating environment ◆ Slower student enrolment growth and tuition fee hikes ◆ Failure to maintain good education quality ◆ Failure to integrate acquisition targets and potential goodwill impairments ◆ Higher tax rates	Our TP for Maple Leaf is HKD3.20, with an implied PE of 11x FY21e and 2.6x FY21e PEG (or 0.5x FY22e PEG), is derived from a DCF model (with 11% WACC, 6% mid-term growth, and 2.0% terminal growth assumptions).
Tianli	**Initiate at Hold with a TP of HKD8.00.** One of the largest K-12 operators in western China, Tianli has a proven track record in expansion. Nevertheless, its large reliance on government subsidies – which helps to preserve margins and a low gearing ratio – is a potential concern. The relatively large amount of connected transactions is also a concern.	◆ Faster-than-expected opening and ramping up of new schools ◆ Quicker pace of student enrolment or tuition fee hikes	◆ Failure to maintain and replicate the quality of education in new schools ◆ Slower student enrolment growth and tuition fee hikes ◆ Lower government grants ◆ A higher-than-expected tax rate	Our TP for Tianli is HKD8.00, with an implied PE of 26x and PEG of 0.6x for FY21e, is derived from a DCF model (with 12% WACC, 21% mid-term growth, and 2% terminal growth assumptions).
Virscend	**Initiate at Hold with a TP of HKD2.50.** Being a leading K-12 operator in western China, Virscend has a high-quality school portfolio and we believe its near-term growth is driven by potential fee hikes and capacity expansion. Nevertheless, its rapid expansion plan (mainly through an asset-light model) and connected transactions are potential concerns.	◆ Faster-than-expected expansion and new school ramp-up ◆ Faster-than-expected or higher-than-expected tuition fee hike	◆ Failure to maintain the high quality of education ◆ Lower margins from slower tuition fee hikes or significant operating deleveraging ◆ A higher-than-expected tax rate ◆ Potential capital-raising	Our TP for Virscend is HKD2.50, with an implied PE of 13x FY21e PE and 1.2x FY21e PEG (or 0.5x FY22e PEG), is derived from a DCF model (with 11% WACC, 6% mid-term growth and 2% terminal growth assumptions).
Wisdom	**Initiate at Buy with a TP of HKD4.00.** As the largest listed K-12 operator in mainland China, Wisdom has a strong school portfolio in Guangdong and has delivered a solid track record. We believe its expansion into the higher education stage could bring new growth opportunities but may also stretch its financial leverage.	◆ N/A	◆ Delays in school network expansion, lower utilisation or slower tuition fee hikes ◆ A higher-than-expected tax rate ◆ Unsuccessful roll-out of its higher education business ◆ More capital raising	Our TP for Wisdom is HKD4.00, with an implied PE of 12x and PEG of 0.6x for FY21e, is derived from a DCF model (with 10% WACC, 10% mid-term growth, and 2% terminal growth assumptions).
Higher Education				
CEG	**Initiate at Buy with a TP of HKD22.00.** As the largest listed higher education school operator in mainland China, China Education Group (CEG) has a proven track record in increasing its size through M&A and has registered solid organic growth in some of its schools. With its leading scale and experience, we expect more M&A to drive growth while independent college conversions are likely to be margin-accretive.	◆ N/A	◆ Pace of M&A is slower than expectations ◆ Large costs for independent college conversions ◆ Tuition fee hikes are slow or student enrolment growth is slower than expected ◆ Failure to smoothly integrate newly acquired schools	Our TP for CEG is HKD22.00, with an implied PE of 29x and PEG of 0.9x for FY21e, is derived from a DCF model (with 8.0% WACC, 12% mid-term growth, and 2% terminal growth assumptions).
Hope	**Initiate at Buy with a TP of HKD3.50.** A leading higher education school operator focused on the western regions where the enrolment ratio is relatively low and there is more policy support. With half of its school portfolio comprising junior colleges, we believe Hope will benefit from policies aimed at bolstering vocational education.	◆ N/A	◆ Pace of M&A slower than expected ◆ Large costs for independent college conversions ◆ Failure to smoothly integrate newly acquired schools, especially those in Malaysia	Our TP for Hope is HKD3.50, with an implied PE of 24x and PEG of 0.7x for FY21e, is derived from a DCF model (with 8.3% WACC, 12% mid-term growth, and 2% terminal growth assumptions).
Kepei	**Initiate at Buy with a TP of HKD8.50.** Leveraging on the upgrades to its key school, the Guangdong Polytechnic College, Kepei has registered strong growth in recent years with industry-leading margins. Its growth outlook seems secured with the acquisition of Harbin School and the expansion in the adult student programme; but its margin may be diluted and it is yet to deliver on potential synergies.	◆ N/A	◆ Capacity expansion slower than expected ◆ Failure to smoothly integrate newly acquired Harbin School ◆ Failure to sustain its M&A expansion spree ◆ Potential operating uncertainty over its Huaibei School JV	Our TP for Kepei is HKD8.50, with an implied PE of 20x and PEG of 0.7x for FY21e, is derived from a DCF model (with 8.9% WACC, 8% mid-term growth, and 2% terminal growth assumptions).
Yuhua	**Initiate at Buy with a TP of HKD8.50.** As a leading private school operator with a diversified portfolio, Yuahua has increased its focus on higher education in recent years. Despite a high-quality school portfolio, we believe Yuhua needs to look for more M&A to drive its future growth in view of limited room to further expand its existing universities.	◆ N/A	◆ Failure to turnaround its Thailand school ◆ Slower-than-expected M&A pace ◆ Failure to sustain tuition fee hikes or student enrolment growth	Our TP for Yuhua is HKD8.50, with an implied PE of 20x and PEG of 0.9x for FY21e, is derived from a DCF model (with 8.7% WACC, 8% mid-term growth, and 2% terminal growth assumptions).

Note: Priced as of 17 September 2020. We use our FX team's house forecast of 1.17 (RMB:HKD) for FY21e, in deriving the HKD-based target prices.
Source: Bloomberg, HSBC estimates

What is Discovery Research?

The Discovery Research team conducts fundamental, bottom-up research on the lesser-known but high-quality companies in Asia. With an initial focus on Hong Kong, mainland China, and the ASEAN region, we cover around 40 companies across Asia, including consumer (catering services, food and beverage, maternity and baby care products, and sportswear), fashion and apparel, healthcare (Traditional Chinese Medicine and aesthetic medical services), technology (data centres), industrials (smart meters, infrastructure, and learning toys), and educational service providers.

We continue to ramp up coverage with a view to becoming a long-term partner for our readers in this space. Discovery Research's aim is to target companies that are benefitting from secular growth trends, such as changes in demographic patterns, upgrades to human capital, the rise of the female consumer, shifts in consumer preferences, and transformations in the technological landscape.

Recommended reading...

- *Discovery Research, Sharing a Hong Kong family's success*, 10 May 2019
- *Discovery Research, Malaysia small- and mid-caps: Best ideas for 2020*, 13 December 2019
- *Asia Discovery Research, Broad-based impact from the coronavirus*, 12 February 2020
- *Discovery Research, Tapping into China's female consumers*, 26 February 2020
- *Asia Discovery Research, A long and rocky road to recovery*, 22 April 2020
- *Discovery Research, The Philippine consumer post COVID-19*, 23 June 2020

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Exhibit 1. Discovery Research team coverage summary (part 1: Hong Kong and mainland China markets)

Company	BBG ticker	Fiscal year end	Price (HKD)	Mkt cap (USDm)	3M ADT (USDm)	HSBC rating	TP (HKD)	PE (x) FY19a	PE (x) FY20e	PE (x) FY21e	PB (x) FY19a	PB (x) FY20e	PB (x) FY21e	Dividend yield (%) FY19a	Dividend yield (%) FY20e	Dividend yield (%) FY21e
Consumer – fast food																
CDC	341 HK Equity	March	16.70	1,276	4.8	Buy	18.00	17.0	131.9	46.3	3.1	3.7	3.5	5.0	1.1	1.1
Fairwood	52 HK Equity	March	18.68	320	0.6	Hold	18.00	13.4	39.8	40.9	3.1	3.4	3.5	6.3	3.9	1.7
Consumer – food and beverage																
Vitasoy	345 HK Equity	March	30.30	4,093	9.6	Hold	25.00	46.7	60.8	59.7	10.2	10.3	9.7	1.4	1.1	1.3
Consumer – Maternity and baby care																
VTech	303 HK Equity	March	46.75	1,526	5.5	Hold	59.00	8.9	8.0	18.4	2.5	2.5	2.8	11.1	8.8	4.6
Dream	1126 HK Equity	December	2.92	255	0.1	Buy	4.00	4.1	5.0	3.5	0.8	0.7	0.6	4.5	3.7	5.3
Goodbaby	1086 HK Equity	December	1.09	243	0.7	Buy	1.80	9.0	14.0	6.0	0.4	0.4	0.3	-	-	4.6
Consumer – Others																
Sa Sa	178 HK Equity	March	1.40	565	0.9	Reduce	1.00	9.1	NA	NA	1.7	2.6	2.9	11.4	-	-
Data centre																
SUNeVision	1686 HK Equity	June	5.94	1,777	4.3	Hold	5.60	27.8	30.7	32.7	5.8	5.6	5.5	2.8	2.9	1.5
Healthcare																
TRTCM	3613 HK Equity	December	8.88	994	2.4	Buy	14.00	13.4	16.4	12.7	2.8	2.5	2.2	10.7	2.2	3.0
UMH	2138 HK Equity	March	4.82	626	0.4	Buy	5.50	13.2	16.6	17.5	4.6	4.7	4.5	7.3	4.8	4.6
School operators																
CEG	839 HK Equity	August	14.24	3,950	15.5	Buy	22.00	34.2	28.0	19.6	3.8	3.1	2.8	0.9	1.7	2.6
Yuhua	6169 HK Equity	August	6.70	2,887	11.1	Buy	8.50	24.8	20.0	16.4	5.4	5.0	4.3	2.1	2.6	3.1
Hope	1765 HK Equity	August	2.40	2,238	14.0	Buy	3.50	28.5	22.3	17.1	3.1	2.6	2.4	1.3	1.7	2.3
Tianli	1773 HK Equity	December	8.07	2,161	8.0	Hold	8.00	55.4	38.9	27.3	6.0	5.4	4.6	0.5	0.7	1.0
Kepei	1890 HK Equity	December	6.30	1,638	3.0	Buy	8.50	24.3	17.8	15.0	4.0	3.4	3.0	1.6	2.2	2.6
Virscend	1565 HK Equity	December	2.40	956	3.0	Hold	2.50	16.3	15.8	13.1	2.4	2.3	2.1	3.4	3.4	3.4
Maple Leaf	1317 HK Equity	August	2.42	935	6.4	Buy	3.20	9.0	10.7	8.3	1.5	1.4	1.2	4.3	3.5	4.5
Wisdom	6068 HK Equity	August	3.14	882	4.2	Buy	4.00	13.4	11.4	9.3	2.5	2.0	1.8	3.1	3.6	4.8
Textile and apparels																
Yue Yuen	551 HK Equity	December	12.62	2,621	7.1	Hold	13.50	9.3	NA	14.8	0.6	0.7	0.7	8.7	3.1	5.4
EEKA	3709 HK Equity	December	12.10	1,128	1.6	Hold	8.00	15.3	22.9	13.8	2.3	2.1	2.0	1.4	1.1	3.6
Crystal	2232 HK Equity	December	2.06	791	0.2	Buy	2.20	4.6	9.4	5.5	0.7	0.7	0.6	6.0	5.1	5.4
Xtep	1368 HK Equity	December	2.37	767	1.6	Buy	3.60	6.9	9.8	7.8	0.8	0.7	0.7	8.9	6.1	7.7
Stella	1836 HK Equity	December	7.37	751	1.0	Buy	10.00	6.5	19.2	10.0	0.8	0.8	0.8	11.5	-	7.5
JNBY	3306 HK Equity	June	7.49	508	0.7	Buy	9.40	7.0	9.7	8.1	2.4	2.3	2.1	10.7	7.4	9.2
Regina Miracle	2199 HK Equity	March	2.15	348	0.2	Hold	2.30	9.3	9.1	41.1	0.9	0.9	0.9	3.5	3.6	0.8
Best Pacific	2111 HK Equity	December	1.25	168	0.0	Hold	1.35	4.3	5.2	3.8	0.5	0.5	0.4	4.6	3.8	6.6
Utility – Electric equipment																
Wasion	3393 HK Equity	December	2.19	281	0.3	Buy	3.80	6.7	7.2	6.1	0.4	0.4	0.4	12.3	10.4	13.2

Note: Priced as of 17 September 2020.
Source: Bloomberg, Refinitiv Datastream, HSBC estimates

Exhibit 2. Discovery Research team coverage summary (part 2: ASEAN markets)

Malaysia Company	BBG ticker	Fiscal year end	Price (MYR)	Mkt cap (USDm)	3M ADT (USDm)	HSBC rating	TP (MYR)	PE (x) FY19a	PE (x) FY20e	PE (x) FY21e	PB (x) FY19a	PB (x) FY20e	PB (x) FY21e	Dividend yield (%) FY19a	Dividend yield (%) FY20e	Dividend yield (%) FY21e
Consumer																
Carlsberg Malaysia	CAB MK	December	21.60	1,595	1.5	Reduce	22.00	22.7	27.2	23.2	44.5	44.5	44.5	4.9	3.7	4.3
Heineken Malaysia	HEIM MK	December	20.84	1,521	0.7	Hold	21.90	20.1	23.7	20.0	16.0	20.4	26.7	4.6	5.6	6.1
Mynews Holdings	MNHB MK	December	0.61	101	0.1	Hold	0.74	15.5	22.8	18.2	1.5	1.4	1.3	1.6	1.1	1.4
Rubber Gloves																
Top Glove Malaysia	TOPG MK	August	7.79	15,405	143.6	Hold	8.33	164.1	32.0	7.5	23.6	9.5	7.4	0.4	0.6	8.1
Hartalega Malaysia	HART MK	March	14.10	11,675	46.7	Hold	17.00	104.6	108.1	39.8	21.1	18.5	16.1	0.6	0.5	1.8
Kossan Rubber	KRI MK	December	12.00	3,707	34.6	Hold	14.00	68.3	26.3	21.7	10.3	8.1	6.6	0.3	1.1	1.8
Energy																
Bumi Armada	BAB MK	December	0.27	377	4.4	Hold	0.20	26.8	NA	NA	0.5	0.5	0.5	-	-	-

Indonesia Company	BBG ticker		Price (IDR)	Mkt cap (USDm)	3M ADT (USDm)	HSBC Rating	TP (IDR)	PE (x) FY19a	PE (x) FY20e	PE (x) FY21e	PB (x) FY19a	PB (x) FY20e	PB (x) FY21e	Dividend yield (%) FY19a	Dividend yield (%) FY20e	Dividend yield (%) FY21e
Consumer																
Mayora Indah	MYOR IJ	December	2,370	3,573	0.6	Buy	2,400	26.7	24.8	22.5	5.5	4.8	4.2	1.3	1.3	1.6
Ace Hardware	ACES IJ	December	1,525	1,757	1.6	Hold	1,750	25.3	30.1	21.8	5.5	4.0	4.0	1.9	1.3	1.8
Sido Muncul	SIDO IJ	December	755	1,516	1.1	Buy	780	27.8	23.2	21.2	7.3	6.9	6.5	2.8	3.5	3.8

Philippines Company	BBG ticker		Price (PHP)	Mkt cap (USDm)	3M ADT (USDm)	HSBC rating	TP (PHP)	PE (x) FY19a	PE (x) FY20e	PE (x) FY21e	PB (x) FY19a	PB (x) FY20e	PB (x) FY21e	Dividend yield (%) FY19a	Dividend yield (%) FY20e	Dividend yield (%) FY21e
Puregold Price Club Inc	PGOLD PM	December	49.15	2,945	0.5	Buy	60.00	20.8	18.0	15.9	2.3	2.2	2.0	0.8	0.9	1.1
Century Pacific Group	CNPF PM	December	17.48	1,324	0.5	Buy	22.00	19.7	15.8	14.0	3.2	2.8	2.4	1.0	1.3	1.4
Wilcon Depot	WLCON PM	December	15.60	1,319	1.5	Buy	19.00	30.1	44.8	23.0	4.4	4.1	3.6	1.0	0.7	1.3

Singapore Company	BBG ticker		Price (HKD)	Mkt cap (USDm)	3M ADT (USDm)	HSBC rating	TP (HKD)	PE (x) FY19a	PE (x) FY20e	PE (x) FY21e	PB (x) FY19a	PB (x) FY20e	PB (x) FY21e	Dividend yield (%) FY19a	Dividend yield (%) FY20e	Dividend yield (%) FY21e
Razer Inc	1337 HK	December	1.69	1,945	1.2	Buy	1.92	NA	NA	2.7	0.0	0.0	0.0	0.0	-	-

Note: Priced as of 17 September 2020.
Source: Bloomberg, Refinitiv Datastream, HSBC estimates

Executive summary

- We initiate coverage on eight listed school operators which have emerged as an important part of China's education system
- Despite near-term jitters, we believe some of them may grow quickly and emerge as long-term winners
- Recent policy moves are a reminder about the key risks; governance is also a key ESG issue

It is difficult to play down the importance of school education in China: in 2019, the government set aside RMB3.5trn (nearly USD500bn), or c15% of its entire fiscal budget, for education. This explains why public schools achieve strong academic results and beat the private schools in most cases. That being said, private education has grown rapidly over the past three decades, especially outside the compulsory education stages. It provides unique offerings like international curriculums, a greater emphasis on extra-curriculum activities, and education for the children of migrant workers who may be unable to send their children to public-funded local schools.

We believe private school operators are well positioned to capture further growth, especially given that one of China's biggest objectives is to bolster the quality of its education and labour force. Over the short term, the worst of COVID-19 appears to be over with schools mostly reopening. Plus, many students are remaining in education for longer than initially planned given the current economic struggles. The fragmented industry also provides ample room for consolidation, especially in higher education.

For the eight listed school operators we cover, they have registered over 30% average CAGR in both revenue and core profit over the past three fiscal years. We see more of the same ahead driven by both organic growth and M&A. In this report, we provide a deep-dive into their business dynamics, key drivers, policy developments, peer comparisons as well as company-specific profiles, and business and financial analysis. Overall, we believe some of them can sustain rapid growth and have the potential to become long-term winners in the industry.

Exhibit 3: Coverage valuation summary

Company	Code	CMP HKD	Mkt cap USDm	Rating	TP HKD	Upside/ (Downside)	EPS CAGR	PE (x) FY19	PE (x) FY20e	PE (x) FY21e	PEG (x) FY19a	PEG (x) FY20e	PEG (x) FY21e
K-12													
Maple Leaf	1317.HK	2.42	935	Buy	3.20	32%	4%	9.0	10.7	8.3	2.2	2.6	2.0
Tianli	1773.HK	8.07	2,161	Hold	8.00	-1%	42%	55.4	38.9	27.3	1.3	0.9	0.6
Virscend	1565.HK	2.40	956	Hold	2.50	4%	11%	16.3	15.8	13.1	1.4	1.4	1.1
Wisdom	6068.HK	3.14	882	Buy	4.00	27%	20%	13.4	11.4	9.3	0.7	0.6	0.5
Higher education													
CEG	0839.HK	14.24	3,950	Buy	22.00	54%	32%	34.2	28.0	19.6	1.1	0.9	0.6
Hope	1765.HK	2.40	2,238	Buy	3.50	46%	29%	28.5	22.3	17.1	1.0	0.8	0.6
Kepei	1890.HK	6.30	1,638	Buy	8.50	35%	27%	24.3	17.8	15.0	0.9	0.7	0.6
Yuhua	6169.HK	6.70	2,887	Buy	8.50	27%	23%	24.8	20.0	16.4	1.1	0.9	0.7

Note: Prices as at 17 September 2020. PEG are calculated by PE of the year divided by EPS CAGR of FY19-21e.
Source: Bloomberg, Company data, HSBC estimates.

Exhibit 4: Forecast summary for the private school operators

	Forecasts				Change		
	FY19a	FY20e	FY21e	FY22e	FY20e	FY21e	FY22e
Revenue (RMBm)							
K-12							
Maple	1,570	1,608	2,431	2,809	2%	51%	16%
Tianli	917	1,230	1,823	2,501	34%	48%	37%
Virscend	1,493	1,841	2,304	2,902	23%	25%	26%
Widsom	1,682	1,800	2,384	2,869	7%	32%	20%
Higher education							
CEG	1,955	2,610	4,178	5,409	34%	60%	29%
Hope	1,331	1,721	2,828	3,638	29%	64%	29%
Kepei	714	959	1,276	1,465	34%	33%	15%
Yuhua	1,714	2,473	2,939	3,433	44%	19%	17%
Core EPS (RMB)							
K-12							
Maple	0.23	0.20	0.25	0.30	-15%	28%	17%
Tianli	0.13	0.18	0.26	0.36	42%	42%	40%
Virscend	0.13	0.13	0.16	0.22	3%	20%	38%
Widsom	0.20	0.24	0.29	0.35	17%	22%	20%
Higher education							
CEG	0.37	0.45	0.64	0.84	22%	43%	32%
Hope	0.07	0.10	0.12	0.16	28%	30%	31%
Kepei	0.23	0.31	0.37	0.44	36%	19%	20%
Yuhua	0.24	0.30	0.36	0.43	24%	22%	20%
Student enrolment ('000 persons)							
K-12							
Maple	41	47	52	58	14%	12%	11%
Tianli	40	57	77	97	42%	35%	26%
Virscend	49	59	67	76	19%	14%	13%
Widsom	54	60	71	80	10%	19%	13%
Higher education							
CEG	170	182	261	314	7%	43%	20%
Hope	86	140	195	239	63%	39%	22%
Kepei	58	88	102	115	52%	16%	13%
Yuhua	99	138	157	177	40%	14%	13%
GPM							
K-12							
Maple	47%	47%	45%	45%	0ppt	-2ppt	0ppt
Tianli	41%	43%	41%	42%	2ppt	-1ppt	0ppt
Virscend	39%	36%	36%	37%	-2ppt	0ppt	0ppt
Widsom	44%	45%	45%	44%	1ppt	0ppt	-1ppt
Higher education							
CEG	57%	57%	56%	56%	0ppt	-1ppt	0ppt
Hope	51%	53%	52%	52%	2ppt	-1ppt	1ppt
Kepei	67%	70%	68%	69%	3ppt	-2ppt	1ppt
Yuhua	58%	58%	59%	59%	0ppt	1ppt	1ppt
Gross gearing							
K-12							
Maple	8%	23%	21%	18%	15ppt	-2ppt	-2ppt
Tianli	18%	36%	28%	11%	17ppt	-8ppt	-18ppt
Virscend	71%	96%	80%	64%	25ppt	-15ppt	-16ppt
Widsom	118%	80%	73%	65%	-37ppt	-7ppt	-8ppt
Higher education							
CEG	61%	46%	61%	66%	-15ppt	15ppt	5ppt
Hope	57%	53%	53%	52%	-3ppt	0ppt	-1ppt
Kepei	4%	19%	24%	18%	15ppt	5ppt	-6ppt
Yuhua	69%	50%	61%	70%	-19ppt	11ppt	9ppt

	Forecasts				Change		
	FY19a	FY20e	FY21e	FY22e	FY20e	FY21e	FY22e
Core net profit (RMB)							
K-12							
Maple	693	586	751	882	-15%	28%	17%
Tianli	260	370	528	741	42%	42%	40%
Virscend	397	410	494	681	3%	20%	38%
Widsom	434	500	650	779	15%	30%	20%
Higher education							
CEG	747	911	1,384	1,825	22%	52%	32%
Hope	501	642	893	1,168	28%	39%	31%
Kepei	450	618	736	885	37%	19%	20%
Yuhua	793	1,014	1,236	1,480	28%	22%	20%
DPS (RMB)							
K-12							
Maple	0.09	0.07	0.09	0.11	-19%	28%	18%
Tianli	0.04	0.05	0.07	0.10	38%	42%	40%
Virscend	0.07	0.07	0.07	0.07	-1%	0%	0%
Widsom	0.08	0.10	0.13	0.16	17%	35%	22%
Higher education							
CEG	0.11	0.21	0.32	0.42	90%	52%	32%
Hope	0.03	0.04	0.05	0.06	27%	39%	31%
Kepei	0.09	0.12	0.15	0.18	37%	19%	20%
Yuhua	0.12	0.15	0.19	0.22	25%	22%	20%
Average pricing ('000 RMB)*							
K-12							
Maple	32.0	33.2	41.0	41.3	4%	24%	1%
Tianli	22.3	23.7	25.1	26.6	6%	6%	6%
Virscend	28.3	30.0	32.3	35.9	6%	7%	11%
Widsom	21.0	22.3	23.1	24.4	6%	4%	6%
Higher education							
CEG	12.4	14.4	16.4	18.2	16%	14%	10%
Hope	12.2	11.3	14.0	14.6	-7%	23%	5%
Kepei	13.1	12.6	12.9	13.1	-3%	2%	1%
Yuhua	17.9	18.6	19.4	20.0	4%	4%	3%
Core NPM							
K-12							
Maple	44%	36%	31%	31%	-8ppt	-6ppt	1ppt
Tianli	28%	30%	29%	30%	2ppt	-1ppt	1ppt
Virscend	27%	22%	21%	23%	-4ppt	-1ppt	2ppt
Widsom	26%	28%	27%	27%	2ppt	-1ppt	0ppt
Higher education							
CEG	38%	35%	33%	34%	-3ppt	-2ppt	1ppt
Hope	38%	37%	32%	32%	0ppt	-6ppt	1ppt
Kepei	63%	64%	58%	60%	1ppt	-7ppt	3ppt
Yuhua	46%	41%	42%	43%	-5ppt	1ppt	1ppt
Net gearing							
K-12							
Maple	-58%	15%	7%	2%	74ppt	-9ppt	-5ppt
Tianli	-7%	-7%	-7%	-7%	0ppt	0ppt	0ppt
Virscend	56%	49%	40%	31%	-7ppt	-9ppt	-10ppt
Widsom	66%	43%	39%	36%	-23ppt	-4ppt	-3ppt
Higher education							
CEG	10%	12%	29%	25%	2ppt	17ppt	-4ppt
Hope	-6%	-7%	-1%	0%	-2ppt	6ppt	1ppt
Kepei	-36%	3%	-4%	-11%	39ppt	-6ppt	-8ppt
Yuhua	2%	-10%	-15%	-21%	-13ppt	-4ppt	-6ppt

Note: (*Average pricing is calculated as "total tuition and boarding fee divided by weighted average number of student"; the student numbers were adjusted to consider the impact of acquisitions during the period; for Yuhua, the figure is calculated as "total revenue divided by weighted average number of student adjusted to consider the impact of acquisition", due to the information availability).
Source: Company data, HSBC estimates

Key risks

- **Reputation:** Private schools generally lag behind public schools in access to fiscal funding. This is especially the case for private schools in the higher education space who frequently opt to become application-based schools (应用型高校) where there's less emphasis on the academic performance as the focus is on helping train up skilled workers in areas like automation and robotics. Nevertheless, they are considered a second choice for students. Meanwhile, in view of the large price gap with public schools, private schools need to leverage their reputation and track record (especially academic results for K-12 and employment prospects for higher education) to attract and retain students. As a result, any damage to their reputation could significantly affect their operations and prospects, and may even result in disciplinary action from regulators. For instance, recent news about identity theft in Shandong's college entrance exams – though not directly hitting our coverage – could have a negative impact on the schools involved.
- **VIE structures and connected transactions:** The variable interest entity (VIE) structure is a common practice adopted by Chinese school operators listed overseas. They are complex and sometimes controversial structures as they operate in a legal grey area. Investors get access to profits but without direct equity in the company generating them. Therefore, this also raises potential concern over the alignment of interests between school operators and shareholders. This may be even more material for school operators that more actively engage in M&A – in some cases, prior to the completion of the transactions, they may already exert control of the acquisition targets through jointly-controlled entities or contractual arrangements – these however are not being properly tracked by secondary investors (as connected transaction within the listed group are not required to be disclosed). It is also not uncommon to find continued, connected transactions for the listed schools in routine operations (like leases and construction), which may also raise questions about shareholders' interest.
- **Policy and regulations:** Schools are highly regulated in China and need to fulfill a large number of requirements like ensuring security controls, the student-to-teacher ratio is appropriate, and profit distribution. Failing to meet these regulatory requirements may result in material and unfavorable consequences. In particular, while we believe higher educational school operators enjoy policy support (such as quota expansion to absorb excess labor amid the macro challenges), this could change. Tighter regulations – such as the requirement to raise teaching quality and lower the student-to-teacher ratio – could lead to an unfavorable business and financial impact. In particular, the Implementation Regulations of Private Education Promotion Law is another key uncertainty as this may significantly affect the profitability (our hypothetical analysis shows c17% profit impact). For details, please refer to page 28 of our thematic report.
- **Overseas expansion:** Some school operators in mainland China have expanded in the overseas market, mainly through M&A. In fact, half of our coverage has a significant overseas presence, led by Maple Leaf. The overseas business can divert management attention and resources and lead to business and cultural challenges, though this may also help to mitigate policy risks in the domestic market. Meanwhile, potential synergies between domestic schools and overseas schools might be difficult to realise.
- **Extended lockdowns and fee returns**: There is a possibility that private schools may be required to return part of their fees charged to students during the period they were closed due to COVID-19 lockdowns. Kepei and Tianli, for instance, both refunded part of the boarding fees in 1H20 (for the half-year ended June 2020). While these are likely to pose only a temporary impact, a resurgence of the pandemic may lead to longer lockdowns and extended school closures, and hence impact fees and cash flow.

The threat of policy changes is never far away

The share prices of school operators plummeted on 2 September 2020 after China stated its intention to prohibit the sponsors of private schools from transferring income out of the "not-for-profit" schools through connected transactions. We believe it was a timely reminder that policies are a major risk for the sector.

The background to this saga is complex. On 17 August 2020, the Ministry of Education and four other ministries jointly published the *Opinions on further strengthening and regulating education fee charge management* (关于进一步加强和规范教育收费管理意见). This was made public in a speech by President Xi Jinping on 1 September 2020. It mainly aims to regulate the schools' pricing practices, like:

- The fees of "not-for-profit" school will be governed by provincial-level governments, while those for "for-profit" schools can be decided by themselves.
- Ancillary services like canteens, camps, and after-school services should be provided on a "not-for-profit" basis. The schools are also not allowed to charge a mark-up on the service being provided by third-parties.

We believe this clearly reminded investors about the "8-10" incident in August 2018 when the Implementation Regulations were first released and the share prices of the private school operators tumbled. Thus far, policy uncertainties remain – although these are sometimes overlooked by investors. While the general policy direction is clear with China seeking to control schools in the compulsory educational stages (which must be "not-for-profit" schools) and prohibit any excess profits, it remains unclear to us:

- Whether the K-12 school operators, which currently rely on management contracts to repatriate profit from domestic "not-for-profit" schools (normally in the form of royalty fees or brand-use rights), can still follow the existing practices.
- Whether the school operators can continue to choose their related parties to provide ancillary services.

Nevertheless, it is worth reminding that:

- In Clause 45 of the Implementation Regulations, connected transactions are allowed between private schools and related parties under the principles of justice, fairness, and openness.
- The Implementation Regulations are being executed by the provincial governments, which could have different levels of flexibility on the back of their different education and financial resources.
- Some K-12 players have diversified their businesses such as moving into the overseas market and higher education to reduce their exposure to policy risks. Amongst our K-12 coverage universe, we estimate that Maple Leaf will derive nearly 30% of its revenue from overseas in FY21e; Virscend has a notable higher education presence, while Wisdom has a plan to expand in this area.

For more detailed discussions on policy, comparisons between "not-for-profit" and "for-profit" schools and connected transactions under VIEs, please refer to *Time for school: A look at private schools in China*, published today.

Exhibit 5: K-12 players – revenue by type and region for FY21e

	Tuition & boarding (domestic K-12)	Ancillary services (domestic K-12)	Overseas/higher education
Maple Leaf	63%	8%	29%
Tianli	58%	16%	0%
Virscend	68%	11%	13%
Wisdom	66%	29%	0%

Source: Company data, HSBC estimates

Environmental, social, and governance (ESG) issues

Generally speaking, we found that teaching quality, campus safety, and the development of educational systems are the top issues for private school operators. This is followed by issues like supply management and anti-corruption. Environmental concerns are usually identified as the least important. We also noticed a relatively small emphasis on governance issues.

Environmental issues

Environmental issues are usually not a major issue for school operators given the nature of their business. For instance, unlike large production facilities like a factory, schools generally aren't responsible for significant carbon emissions or environmental damage. The large use of paper is probably one of the biggest issues and based on the ESG reports published by the schools, they are working to recycle paper; moreover, the increased adoption of digitalization in the schools also helps to reduce this. Waste management and water usage that stem from school canteens, however, may present another challenge. But generally speaking, environmental issues are a lesser concern: we note that Maple Leaf – the K-12 operator which has nearly 100 schools – emitted 35,830 tonnes CO_2 in FY19, which was 30% less than SUNeVision (1686 HK, HKD5.94; Hold), a leading data centre operator in Hong Kong in FY19.

Social issues

This is where schools shine. They nurture and grow the next generation. For private school operators, they are sometimes considered too business-oriented compared to their public peers, though we believe they have made significant contributions to society and to the development of China's education system. We illustrate this with examples:

- Some private schools were established with the aim of enrolling students from non-local families (外来务工人员), which otherwise would have difficulty enrolling in public schools due to the restrictions on *hukou* or social insurance. For one thing, over c85% of primary schools in Dongguan, according to the local education bureau, are targeting the children of non-local workers as students.
- Application-oriented schools in higher education – normally run by private school operators and which help to train workers for modern industries like automation and robotics – are traditionally considered as less popular "blue-collar" jobs in mainland China. But these schools, and the skilled workers they produce, help to support employment and the development of the country.
- Some private schools, especially international-oriented ones, satisfy demand for those looking for alternative educational services and they help broaden the horizons of their students. Maple Leaf, for instance, has seen over 16,000 high school graduates further their education overseas since its establishment (by using the academic results achieved at Maple Leaf schools to support their overseas school enrolment).
- Private kindergartens have provided much needed resources to meet the demand for pre-school education, which was traditionally under-invested in by the government: prior to 2010, pre-school education accounted for just 1% of China's total social educational budget.

Given the importance of schools to society, it is worth bearing in mind that improper management can lead to a negative impact; the recent scandal of using false identities in Shandong Province to enroll into higher educational institutions is a clear example.

Governance issues

While school operations are tightly regulated in China, governance standards can vary significantly amongst the listed companies and hence investors should proceed with caution. We also note that amongst the Hong Kong listed companies, one school operator in higher education has been the target of a "short-seller" report regarding connected transactions and potentially inappropriate marketing (in student recruitment); we also note at least two other companies have changed their auditors due to disagreements in certain aspects.

While the governance issue is generally more difficult to predict and monitor, we believe there are three areas investors should pay close attention to:

- **Concentration of shareholdings:** The more concentrated the shareholdings are – at least in theory – the greater the possibility for major shareholders to dominate the business; whether stocks are pledged for loans is also an issue as this normally provides an indication about the funding needs of major shareholders.
- **Connected transactions:** More connected transactions usually indicate a higher chance for the misappropriation and/or transfer of interests from listed companies to major shareholders, in our view.
- **Board composition:** A higher percentage of independent shareholders on the board, in our view, implies better monitoring and protection for the interests of minority shareholders.

It is also worth bearing in mind that all eight covered school operators are companies that are mainly held by private, individual owners, who exert significant influence over management. While we believe this is a common issue facing private-listed companies, this can be a particular issue for Chinese school operators given their relatively short track record in the capital market.

Key share price drivers

- Policy changes, unsurprisingly, are the largest swing factor for shares; reactions are mixed after M&A and capacity expansion plans
- The regular release of operating data – such as enrolments and tuition fees – are generally meaningful…
- …while COVID-19 is seen as a temporary event with the worst likely over

A new industry for China's capital markets

Private school operators are a relatively new industry for China's capital markets, with the first (Maple Leaf) only listed in Hong Kong six years ago. Since then, there's been many more listed and this has raised both interest and awareness for the industry. Statistically speaking, this is not a group of high-beta stocks: the eight stocks we cover have an average, historical 1-year beta of around 1x. That being said, we note that large share price movements are concentrated around a short time period, indicating that the stocks are more event-driven.

In this section, we look at different key share price drivers and provide examples, including:

- Policy changes
- M&A events
- Capacity expansion by either creating new or expanding existing schools
- Release of corporate results
- Voluntary release of key operating data like student enrolments and tuition fees
- The impact of COVID-19

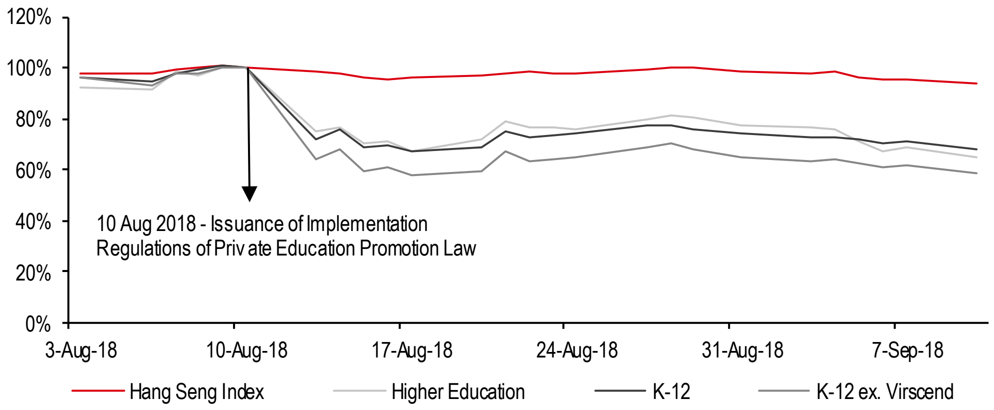
Policy changes cause the largest impact on share prices, as reflected from the dramatic share price reaction toward the "8-10" incident in 2018 or the recent tumble in early September this year (both detailed earlier). Conversely, share price reactions are mixed toward M&A announcements, expansion plans, and the release of corporate results.

Share prices are typically sensitive to the release of operating data such as student enrolments and tuition fee adjustments. Nevertheless, COVID-19 seems to have had little impact on school operators, perhaps reflecting the view that the pandemic is a temporary event and doesn't affect the long-term fundamentals of the school operators. Overall, we believe this indicates that investors in school operators should focus more on long-term developments, rather than short-term changes.

Policy movements can be a game changer

Policy changes, in our view, are the biggest share price driver to school operators, as they can change the outlook significantly. One example is the issuance of the Draft Revision of the Implementation Regulation on the Private Education Promotion Law (民促法实施条例意见征求稿) on 10 August 2018 (i.e., the "8-10" incident) which stirred investors' concerns about tighter regulations relating to various aspects such as capital allocation through connected transactions (see the *Policy, policy, policy* section in our spotlight report *Time for school: A look at private schools in China*, published today for more details). This drove the share prices of the eight school operators down 25% on the following trading day (while the Hang Seng Index was merely flat). Excluding Virscend, the average share price would have fallen over 30%, led by the K-12 operators.

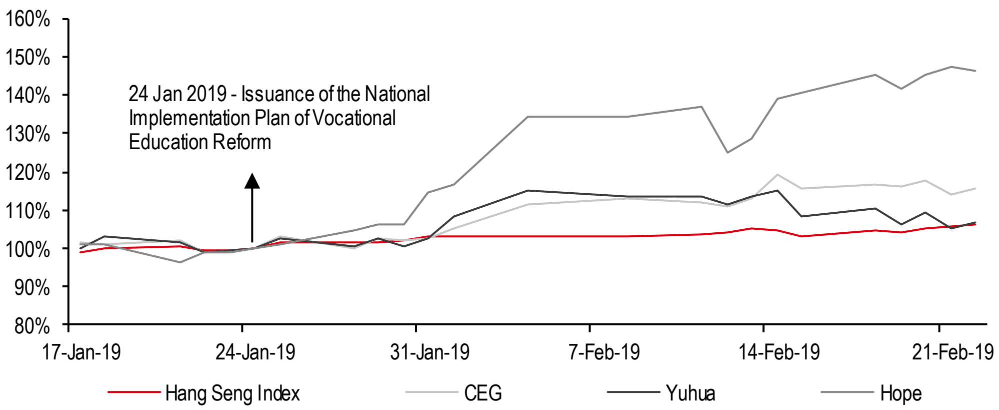
Exhibit 6: Share prices of the school operators collapsed after the "8-10" incident



Note: The share prices and market data were rebased to 100% at 10 August 2018 to better evaluate their performance before and after the event.
Source: Bloomberg, HSBC

In the "Policy, policy, policy" section of our spotlight report, we discuss the negative share price reaction of private early-education service provider RYB toward policy changes on kindergartens. However, we note that favourable policy changes have also led to substantial and positive share price reactions: on 24 January 2019, the State Council announced reforms to vocational education by outlining certain goals and emphasising the role of private education in reforms; following that, the share price of the three higher educational players (excluding Kepei which has just listed) rallied – led by CEG and Hope Education, which have a greater participation in vocational schools.

Exhibit 7: Share price performance of higher education schools after positive news



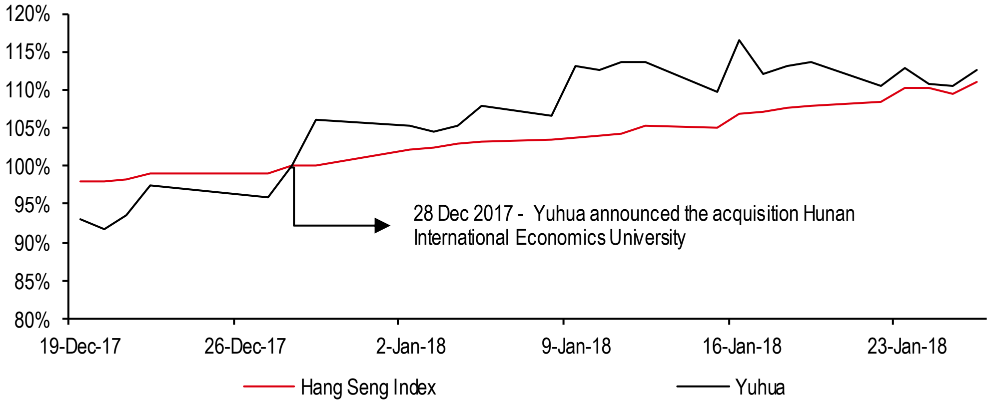
Note: The share prices and market data were rebased to 100% at 24 January 2019 to better evaluate their performance before and after the event.
Source: Bloomberg, HSBC

M&A: Different share price reactions

We believe M&A is generally being seen by many investors as a positive event for the stocks of school operators, as it helps to better use financial resources and achieve greater scale and returns. Nevertheless, our analysis suggests that share price reactions can be very different in reality, depending on the details. Two interesting cases stand out:

On one hand, following Yuhua's announcement to acquire Hunan International Economic University on 28 December 2017, the share price rose 6% the following trading day (while the Hang Seng Index was flat) and continued to move up in the following month. While positive market sentiment could have played a role, we believe the market also took a positive view about its expansion in the higher education area.

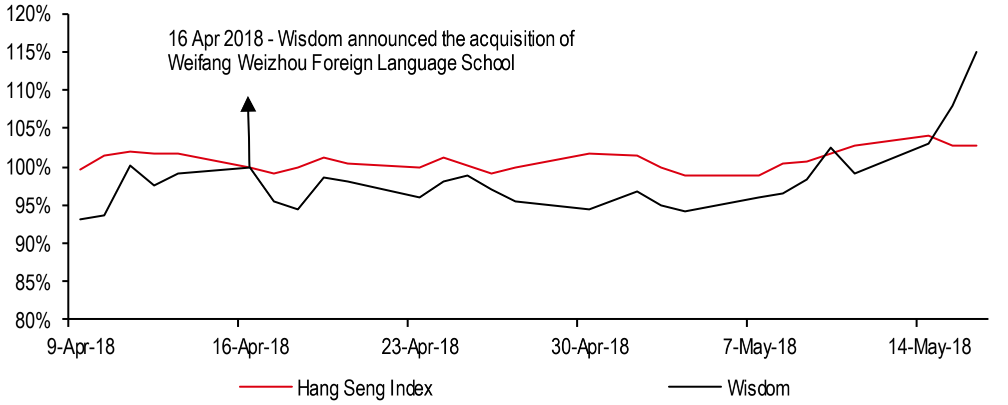
Exhibit 8: Yuhua's share price rose after its acquisition in late 2017



Note: The share prices and market data were rebased to 100% at 28 December 2020 to better evaluate their performance before and after the event.
Source: Bloomberg, HSBC

On the other hand, the share price of Wisdom fell 5% following its announcement to acquire Weifang Weizhou Foreign Language School. We believe this was a knee-jerk reaction by investors who were concerned about potential synergies – in view of the large geographical distance between the newly acquired school and Wisdom's headquarters – as well as a possible near-term drag on margins.

Exhibit 9: Share price of Wisdom fell after its acquisition in April 2018



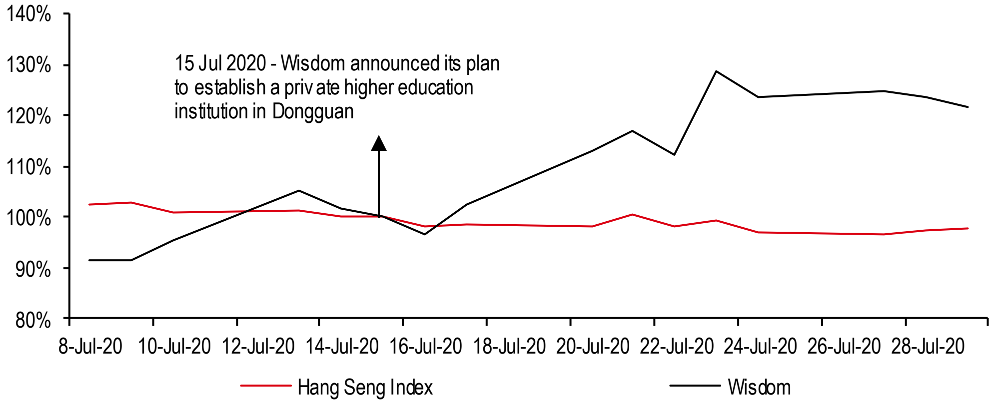
Note: The share prices and market data were rebased to 100% at 16 April 2020 to better evaluate their performance before and after the event.
Source: Bloomberg, HSBC

Mixed reactions to capacity expansion

Similar to M&A, expanding existing schools and creating new schools are, at least in theory, positive for school operators as they help to create additional returns by better using existing financial resources or balance sheet strength. Nevertheless, share prices can move in different directions in reality, depending on the details. We again illustrate this with two examples.

On one hand, following Wisdom's plan to establish a new, higher education school in Dongguan on 15 July 2020, its share price fell 3% the following day (the Hang Seng Index was down 2%), but quickly reversed afterwards; it was then further fuelled by the announcement of tuition fee raises (see the later section for more discussions).

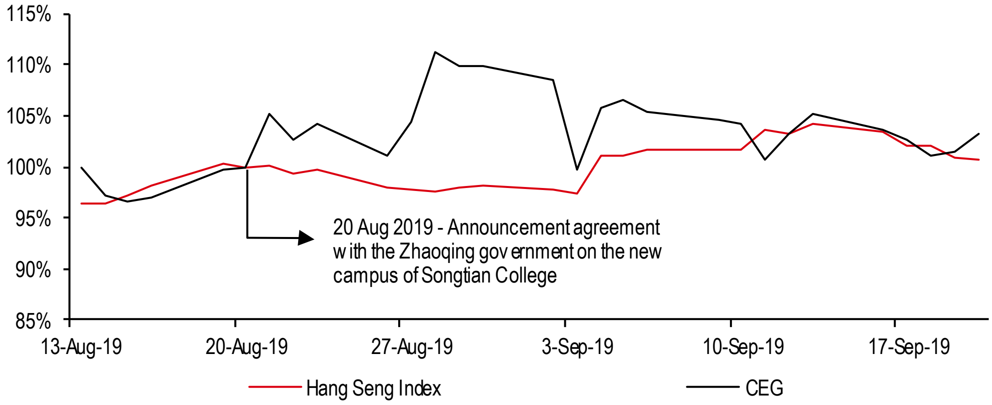
Exhibit 10: Wisdom's share price jumped after announcing its plan to expand into higher education



Note: The share prices and market data were rebased to 100% at 15 July 2020 to better evaluate their performance before and after the event.
Source: Bloomberg, HSBC

On the other hand, the share price reaction went the other way when China Education Group (CEG) announced on 20 August 2019 it would expand Guangzhou University Songtian College through a land supply agreement with the local government in Zhaoqing: the share price rallied immediately following the news but then quickly reversed. The share price was muted after another announcement regarding the first purchase of land under this agreement.

Exhibit 11: CEG's share price flat-lined, after an initial rally, post a land purchase announcement



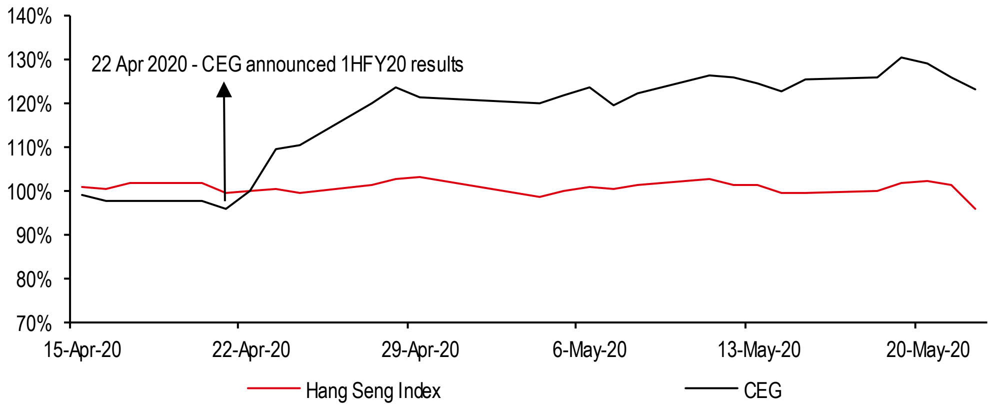
Note: The share prices and market data were rebased to 100% at 20 Aug 2020 to better evaluate their performance before and after the event.
Source: Bloomberg, HSBC

Results announcements: Better or worse…

We also looked at price reactions after result announcements by the eight school operators we cover and found they were generally material. But their share price reactions differed. Whilst this shows that results matter, it is probably no different to any other stock in the market. We highlight two cases below.

On one hand, we note the share price of China Education (CEG) jumped 10% following its 1HFY20 results announcement on 22 April 2020 (the Hang Seng Index was flat), when the school operator announced more than 50% y-o-y EPS increase and raised the dividend payout ratio; its share price remained strong in the following weeks.

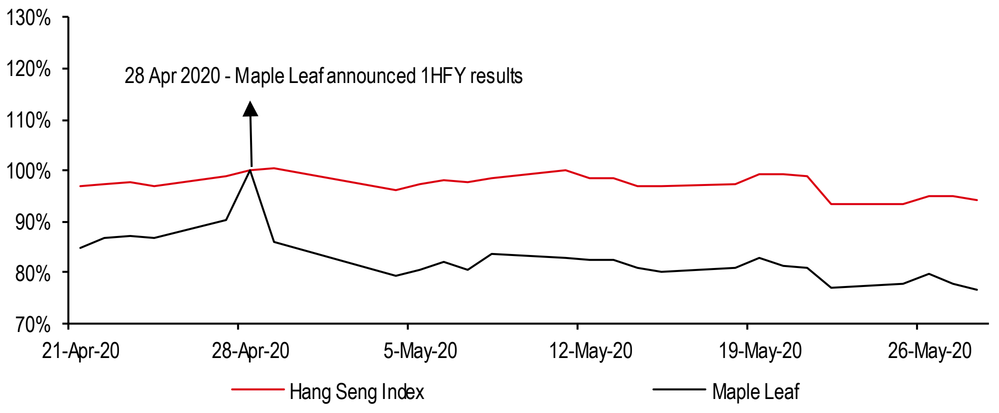
Exhibit 12: CEG's share price reacted positively after the latest interim results



Note: The share prices and market data were rebased to 100% at 22 April 2020 to better evaluate their performance before and after the event.
Source: Bloomberg, HSBC

On the other hand, the share price of Maple Leaf quickly reversed after 28 April 2020 when the K-12 school operator announced a relatively weak set of 1HFY20 results and declared zero interim dividend: its share price fell 14% the following day (the Hang Seng Index was flat) and remained weak over the next month.

Exhibit 13: Maple Leaf's share price dropped after its latest results announcement



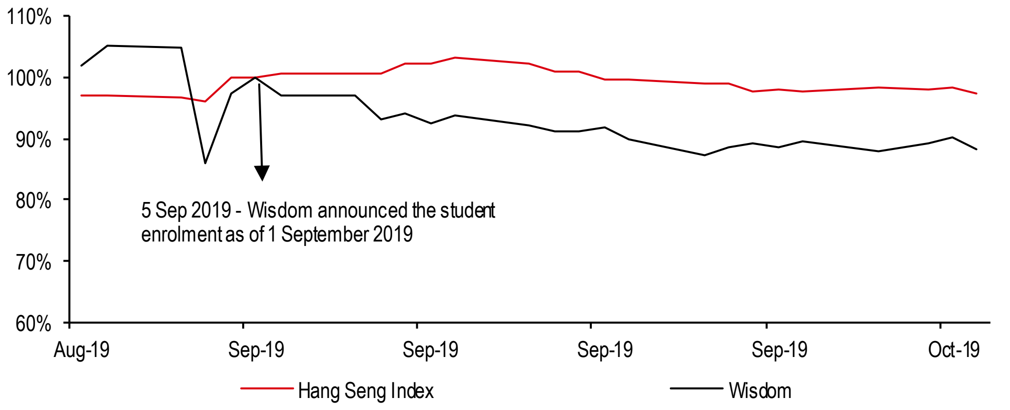
Note: The share prices and market data were rebased to 100% at 28 April 2020 to better evaluate their performance before and after the event.
Source: Bloomberg, HSBC

Operating data: Meaningful response from the market

School operators disclose some operating data on a voluntary basis. This mainly includes student enrolments, fee adjustments as well as new admission quotas, and their plans to establish new schools. This data provides a good look at how schools are operating, although it only represents part of the picture. Nevertheless, this data can lead to material share price reactions – we use two examples from the same company, Wisdom Education, to better illustrate this.

On 5 September 2019, Wisdom announced its student enrolment numbers for school year 2019/20, with a 17% y-o-y increase; however, this set of numbers missed market expectations and sent the share price 3% lower in the following days (the Hang Seng Index rose 1%).

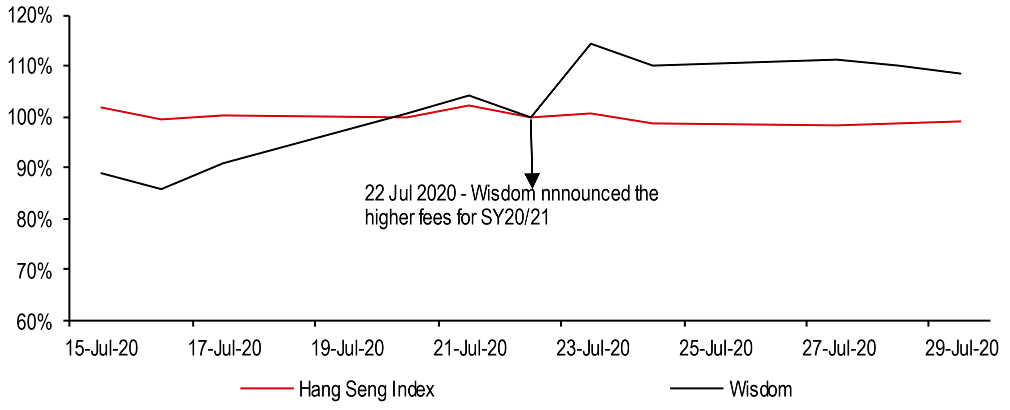
Exhibit 14: Wisdom's share price dropped after soft student enrolment data in Sept. 2019



Note: The share prices and market data were rebased to 100% at 5 September 2019 to better evaluate their performance before and after the event.
Source: Bloomberg, HSBC

On 22 July 2020, Wisdom announced fee adjustments for the new school year, which showed a 9-38% increase in tuition and boarding fees for new students. This resulted in the share price increasing by 15% the following day (the Hang Seng Index rose 1%).

Exhibit 15: Wisdom's share price rose following the latest fee adjustment



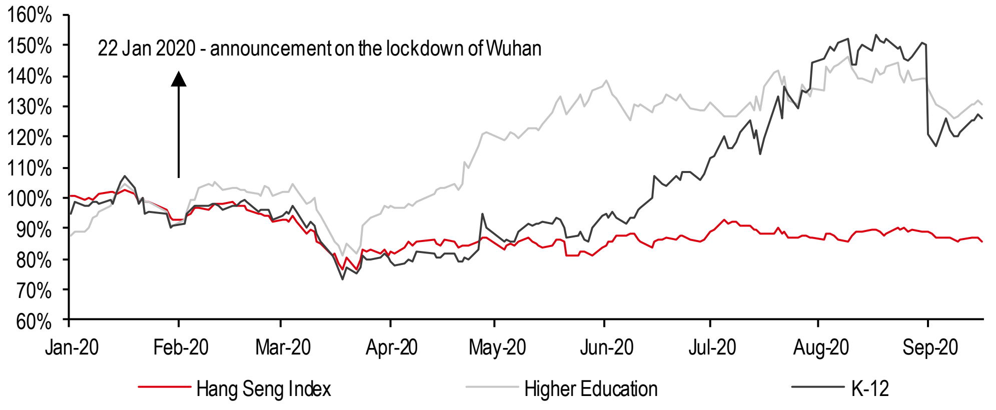
Note: The share prices and market data were rebased to 100% at 22 July 2020 to better evaluate their performance before and after the event.
Source: Bloomberg, HSBC

COVID-19: Largely settled

COVID-19 dealt a significant blow to China with the operation of schools also affected by the lockdowns and social distancing. This was reflected in the stock market performance: following the announcement of Wuhan's lockdown on 22 January 2020, the Hang Seng Index fell 7% over the next five trading days and the school operators were not spared: their share prices were all down nearly 10% over the same period.

Nevertheless, since the beginning of April 2020, the share prices of school operators have quickly rebounded, led by the higher education school operators. They not only beat the market but also surpassed their levels prior to the outbreak of COVID-19. This can appear puzzling because at the time many schools still remained closed, school openings were delayed, and there were some discussions about the fee rebate. In our view, the share price rebound was due to the view that amidst economic weakness and difficult employment conditions, higher education school operators could see their admission quotas enlarged plus the market saw that the pandemic was under control in mainland China.

Exhibit 16: Share prices of school operators have started to outperform from April 2020



Note: The share prices and market data were rebased to 100% at 22 January 2020 to better evaluate their performance before and after the event.
Source: Bloomberg, HSBC

The share price performance also shows that the market was looking beyond near-term operating uncertainties as well as the negative financial impact, and probably reflected the belief that:

- COVID-19 is only a temporary event.
- School operators are well positioned given their business models and long-term prospects are intact.
- Private higher education schools may play a more active role in helping to mitigate employment pressures amidst macro uncertainties.

We note that most schools in mainland China have now resumed operations following the start of the new school year. This seems to support the market's belief that schools were only temporarily affected in mainland China. That being said, any return of the pandemic remains a key downside risk.

Peer comparison

- Higher education school operators generally have faster growth and stronger profitability than K-12 school operators
- In K-12, Maple Leaf ranks highest among the four school operators on its better profitability, M&A history, and stronger governance
- In higher education, CEG ranks as the top player on its leading scale, financial position, and M&A track record

Higher education players have delivered better results

By comparing key business and financial performance of the eight school operators in our coverage universe, we find three important takeaways:

- **Higher education school operators are more profitable than K-12 school operators** on average given higher gross and net profit margins. We believe this reflects scale benefits in higher education schools (i.e., more students are in each higher education school plus a lower student-to-teacher ratio) that offsets lower average pricing per student.
- **Higher education school operators have registered stronger revenue growth** (around 40% average growth in 1H20) compared to their K-12 peers (16% average growth). This probably reflects less policy uncertainty and more M&A opportunities facing higher education players.
- Business scale has a positive correlation with gearing suggesting **financial leverage is a commonly adopted way to drive business growth.** It is also worth noting that although Maple Leaf and Kepei seem to have lower gearing ratios, their ratios will increase after their latest acquisitions are complete.

Two caveats to our peer comparison, which could distort the data are:

- Information disclosures vary significantly such as on student enrolment, capacity utilisation, and employment ratio, limiting our ability to compare them fairly and effectively.
- Their financial period ends can be different, and hence the financial data may not be directly comparable.

Overall though, this peer comparison shows that higher education players are generally in a better position than K-12 school operators. Of course, analysis of individual companies is also important; in the later sections we compare them using our proprietary scorecard analysis.

Exhibit 17: K-12 education players: Summary of peer comparison

	Maple Leaf Education	Tianli Education	Virscend Education	Wisdom Education
Business performance	1H20 (ended Feb)	1H20 (ended Jun)	1H20 (ended Jun)	1H20 (ended Feb)
No. of schools	100	24	27	12
Key operating regions	National + Overseas	Sichuan	Sichuan	Guangdong
Enrolment by programme type	41,076	36,480	49,159	60,116
-Kindergarten	*4,620*	*NA*	*517*	-
-Primary school	*19,565*	*NA*	*8,312*	*20,875*
-Middle school	*9,131*	*NA*	*13,126*	*25,376*
-High school	*7,360*	*NA*	*10,134*	*13,534*
-Others (Note 1)	*400*	*NA*	*482*	*331*
Student % from top 3 schools	NA	34%	NA	70%
Capacity utilisation ratio	64%	70%	70%	86%
Average pricing per student*	17,324	12,251	15,906	11,159
Student-to-teacher ratio#	12	14	15	16
Financial performance*	1H20	1H20	1H20	1H20
Revenue	792	571	886	932
Gross profit	351	275	379	436
Operating profit/EBIT	281	218	302	373
Reported net profit	262	208	244	267
Total assets	6,060	5,880	6,530	6,556
Total equity	4,365	2,617	2,884	2,419
Revenue growth (y-o-y)	6%	30%	17%	12%
Staff costs as a % of revenue (Note 2)	46%	37%	34%	33%
GPM	44%	48%	43%	47%
OPM	35%	38%	34%	40%
Core NPM	35%	36%	28%	31%
ROE	13%	16%	17%	26%
Debt to assets	5%	17%	40%	40%
Debt to equity	7%	39%	92%	108%

Note: (1) Others represent foreign national school for Maple Leaf and International programme for Virscend and Wisdom;
(2) staff cost for Tianli is employee benefit expenses excluding directors' and executives' remuneration;
(3) *Average pricing per student in RMB; Financial performance in RMBm;
(4) # calculated by using the number of total students to divide by number of teachers);
(5) Tianli's No. of students and average pricing are only for its K-12 students in self-owned schools;
(6) Student % from top 3 schools for Tianli are estimated per data as of December 2019.
Source: Company data, HSBC

Exhibit 18: Higher education players: Summary of peer comparison

	China Education Group	Hope Education	Kepei Education	Yuhua Education
Business performance	1H20 (ended Feb)	1H20 (ended Feb)	1H20 (ended Jun)	1H20 (ended Feb)
No. of schools by type	10	14	2	29
-University	*6*	*5*	*1*	*4*
-Junior College	*1*	*7*	*-*	*-*
-K-12/Secondary vocational school	*3*	*2*	*1*	*25*
Key operating provinces	Guangdong, Jiangxi	Sichuan	Guangdong	Henan
Enrolment by school type	181,826	140,125	71,925	138,234
-University	*NA*	*71,259*	*64,316*	*106,000*
-Junior College	*NA*	*60,631*	*-*	*-*
-K-12/Secondary vocational school	*NA*	*8,235*	*7,609*	*32,234*
Enrolment by programme	181,826	140,125	71,925	138,234
-Undergraduate programme	*NA*	*NA*	*23,823*	*68,100*
-Junior College programme	*NA*	*NA*	*6,833*	*35,900*
-Adult College programme	*NA*	*NA*	*33,660*	*2,000*
-K-12 programme	*NA*	*NA*	*7,609*	*32,234*
% from top 3 schools	NA	NA	NA	74%
Capacity utilisation ratio	NA	82%	82%	83%
Average pricing per student*	7,117	5,592	6,059	9,118
Student-to-teacher ratio#	NA	NA	NA	NA
Financial performance*	1H20	1H20	1H20	1H20
Revenue	1,315	871	419	1,260
Gross profit	757	457	309	732
Operating profit/EBIT	563	472	327	130
Reported net profit	498	334	321	17
Total assets	15,460	10,534	3,702	9,056
Total equity	7,117	4,571	2,925	4,199
Revenue growth (y-o-y)	42%	46%	17%	57%
Staff costs as % of revenue	28%	28%	14%	27%
GPM	58%	53%	74%	58%
OPM	43%	54%	78%	10%
Core NPM	37%	44%	74%	39%
ROE	14%	17%	23%	24%
Debt-to-assets	28%	24%	10%	26%
Debt-to-equity	60%	55%	13%	56%

Note: *Average pricing per student in RMB; for Financial performance, unit is RMBm;
our self-calculated by using the number of total students to divide by number of teachers.
Source: Company data, HSBC

Our scorecard analysis

We developed a proprietary scorecard analysis to better compare and evaluate the eight school operators. We separate the companies into two groups – K-12 and higher education schools – given the different dynamics facing each group.

Our analysis includes the following areas of consideration:

Business scale: Larger schools generally create stronger cash-flow and enjoy benefits from scale; we look at each operator's scale by: (1) total assets; and (2) number of student enrolments.

Financial strength: We look at each operator's: (1) cash on hand; (2) operating cash flow (for the last fiscal year); and (3) net gearing ratio – as a way to evaluate their financial robustness and underlying strength for further expansion.

Profitability: We look at the profitability by referring to four different measures, including: (1) revenue CAGR in the last three fiscal years (which has to be adjusted in some cases, due to changes in reporting periods); (2) gross profit margins; (3) net profit margins; and (4) ROE.

M&A track record: We look at the operator's capability to: (1) execute deals, as reflected from the number of deals it has done over the past three years; and (2) ability to integrate newly acquired schools and generate synergies.

We have also looked at three separate indicators related to their organisational structures, including:

- **Concentration of shareholding –** as represented by the percentage share of the single largest shareholder – we believe the smaller it is, the more power lies with other shareholders. Hence a more concentrated shareholding leads to a lower score.
- **Level of connected transactions** – this includes some judgment, as these transactions can involve different types; overall, the lower the magnitude, the better the governance in our consideration. In this regard, the greater the level of connected transactions, the lower the score we assign.
- **Board diversity** – as represented by the percentage of independent non-executive directors (INED) on the board; we believe the greater it is, the more likely the company is being better monitored. Hence, the lower the percentage of INED on the board, the lower the score we assign.

For each measure, we rank the school operators and assign a score of 2-5 for each, with 5 the best performer (or highest ranking), and vice versa. For players that have a similar performance in a specific measure, we assign the same score.

In some areas, like total assets and revenue growth, the scorings are straight forward; however, we use qualitative judgment in some other areas like ESG aspects and integration success. It is worth bearing in mind that this analysis could include qualitative and judgment-based outcomes.

Scores are on a relative basis as the absolute values are not meaningful on a standalone basis

It is also worth noting that given we use financial data from the last fiscal year (i.e., FY19) for the scorecard analysis, the data could have changed in recent months; still, we believe adopting a cut-off time is necessary for a consistent comparison.

It is also worth bearing in mind that:

- Our scores are relative measures as absolute values are not meaningful on a standalone basis; these are also not scaled for comparison.
- The scores between K-12 and the higher education groups are not directly comparable, due to different sample groups.

Scoring for the K-12 school operators

Exhibit 19: Scorecard of the K-12 school operators

	Business scale		Profitability				M&A track record	
	Total assets	No. of students	Revenue growth	GPM	NPM	ROE	No of deals	Integration impact
Maple Leaf	5	3	2	5	5	5	5	5
Tianli	2	2	5	3	4	2	3	3
Virscend	4	4	3	2	3	3	3	3
Wisdom	3	5	4	4	2	5	4	4

	Financial strength						Total score
	Cash on hand	Operating cash-flow	Gearing ratio	Shareholding structure	Connected transaction	Board diversity	
Maple Leaf	5	3	5	4	5	5	**62**
Tianli	3	5	4	5	3	4	**48**
Virscend	2	4	3	4	3	4	**45**
Wisdom	4	2	2	2	4	4	**49**

Source: HSBC

Within the four K-12 school operators in our coverage universe, Maple Leaf has the highest total score and is well ahead of its peers reflecting:

- Its leading asset scale and profitability (as measured by GPM and NPM).
- Greater experience in M&A, both onshore and offshore.
- Financial strength – our analysis was premised on data from the last fiscal year end (i.e., FY19) and hence this could change following its acquisition of CIS, although this could also result in greater business scale.
- Better corporate organisation structure: in particular, Maple Leaf is the only player within the K-12 stage that doesn't have significant connected transactions. It also has a diversified shareholding structure with a higher percentage of INED on its board

Our analysis is based on quantitative measures as of FY19, but the situation could have changed since then. In particular, we note the financial strength and profit margins of Maple Leaf could change after CIS is consolidated: for instance, we estimate its cash level to decline and gearing ratio to climb on the back of this acquisition. Nevertheless, we believe our scorecard analysis is still indicative of school operators, especially from an overall perspective.

Scoring for the higher education school operators

Exhibit 20: Scorecard of the higher education school operators

	Business scale		Profitability				M&A track record	
	Total assets	No. of students	Revenue growth	GPM	NPM	ROE	No of deals	Integration impact
CEG	5	5	5	4	3	3	5	4
Hope	4	4	3	2	3	3	4	4
Kepei	2	2	2	5	5	5	2	2
Yuhua	4	4	5	4	4	5	3	5

	Financial strength						Total score
	Cash on hand	Operating cash-flow	Gearing ratio	Shareholding structure	Connected transaction	Board diversity	
CEG	5	5	2	4	5	4	59
Hope	4	3	4	5	2	3	48
Kepei	3	3	5	2	4	3	45
Yuhua	4	5	3	3	3	5	57

Source: HSBC

Within the four higher education school operators in our coverage universe, CEG has the highest total score, followed by Yuhua Education:

- CEG has an industry leading business scale, which was closely followed by Hope Education, and Yuhua Education.
- Despite the lower GPM and NPM (in part due to the dilution effect from the new acquisitions), both CEG and Yuhua registered rapid revenue growth (of over 40% CAGR in FY17-19).
- Both school operators lead in the M&A scoreboard, with CEG a leader in the number of transactions while Yuhua, in our view, has demonstrated stronger and faster integration success – particularly on the acquisition of Hunan International Economics University, which has posted strong student growth and solid fee hikes, post the acquisition.
- CEG also has the strongest financial position in the higher education segment, despite having the highest gearing ratio amongst its peers.
- Lastly, better performance in the corporate organisation structure: CEG has the least number of connected transactions with a delicate balance between the two major shareholders, in our view

Valuation considerations

- Valuing school operators can be challenging in view of frequent policy changes and corporate activities like M&A
- To better capture their cash-generating abilities and growth outlook we use DCF as the core valuation method
- We also summarise the key assumptions, including beta and medium-term growth rates, of each player

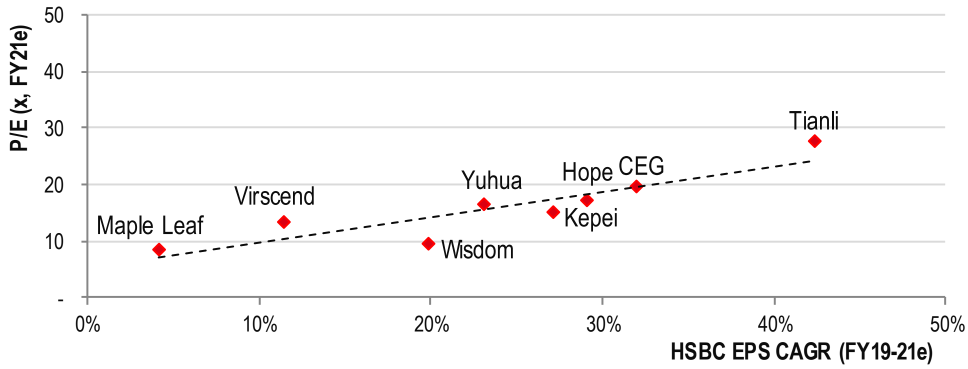
Using DCF as a core approach, with reference to PE and PEG

Valuing private school operators can be a challenging task given the frequent changes in policy and corporate activity, which can significantly affect their operations and growth prospects. We believe most investors generally look at school operators from a growth perspective – as shown by the positive correlation between their PE multiple and EPS growth (Exhibit 21).

Nevertheless, we believe the cash generating capability of school operators should also be taken into consideration, as this better indicates operating health and whether they achieve the right balance between prudent operations and expansion to support long-term growth.

In this regard, we adopt a discounted cash-flow (DCF) approach to value school operators, as we believe this will better capture their cash generating capabilities and growth prospects. We also use PE and PEG as a cross-reference to our core DCF valuation methodology.

Exhibit 21: PE vs. EPS growth



Note: Priced at close of 17 September 2020
Source: Company data, HSBC estimates

Key assumptions

Beta assumptions

Exhibit 22: Summary of the beta assumptions of private school operators

K-12	
Maple Leaf	1.9
Tianli	1.9
Virscend	2.0
Wisdom	1.9
Higher education	
CEG	1.5
Hope	1.6
Kepei	1.6
Yuhua	1.7

Source: HSBC estimates

When setting the beta assumptions, we have taken into account the historical beta value of the stock operator, as well as operating risks (such as overseas exposure, educational stages, and connected transactions), financial risks (such as gearing ratios and the dependence on government grants), and growth prospects. Overall, we have assumed a higher beta for the K-12 operators (than the higher education players) given the greater level of policy uncertainty.

Medium-term growth rates

Exhibit 23: Summary of the medium-term growth rate assumptions of private school operators

K-12	
Maple Leaf	6%
Tianli	21%
Virscend	6%
Wisdom	10%
Higher education	
CEG	12%
Hope	12%
Kepei	8%
Yuhua	8%

Source: HSBC estimates

Growth rates are another key assumption in the DCF valuation methodology, which helps to drive cash flow forecasts over the medium term. When setting the level for each school operator, we have not only taken reference from their historical growth rate as well as the future forecasts (i.e., in FY20-22e) but also taken into account other considerations, such as:

- The industry could enter into a more mature stage over the medium term, implying a lower organic growth rate and reduced M&A opportunities.
- Operating scale and the M&A track record of each operator, which may allow them to become an industry consolidator (and hence deliver a faster growth rate even over the medium term).
- School classifications (i.e., “for-profit” schools) may distort their profitability (especially due to higher taxes and land use costs), as well as long-term growth rates.

In a nutshell, we have assumed a general deceleration in growth rates for the industry and companies over the medium term when compared with their recent history.

Please refer to each individual company section for more discussion and justification on our medium-term growth rate assumptions.

Valuation: A global perspective

Exhibit 24: Valuation summary of global school operators

Company	Code	CMP	Mkt cap	EPS	PE (x)			Yield (%)			PEG (x)		
			USDm	CAGR	FY19a	FY20e	FY21e	FY19a	FY20e	FY21e	FY19a	FY20e	FY21e
US													
Laureate Education	LAUR.US	13.16	2,764	0%	13.3	11.3	13.3	0.0	0.0	0.0	NA	NA	NA
Strategic Education	STRA.US	93.80	2,289	6%	14.1	13.5	12.5	2.2	2.6	2.7	2.4	2.3	2.1
Adtalem Global Edu	ATGE.US	26.29	1,364	-2%	9.3	11.5	9.6	0.0	0.0	0.0	NA	NA	NA
Brazil													
Cogna Educacao	COGN3.BZ	5.77	2,062	-28%	15.6	NA	30.4	1.6	0.2	0.7	NA	NA	NA
Yduqs Participacoes	YDUQ3.BZ	29.82	1,755	-4%	13.9	19.0	15.1	1.7	2.7	2.5	NA	NA	NA
Weighted average					**13.5**	**13.6**	**16.4**	**1.1**	**1.3**	**1.2**	**2.4**	**2.3**	**2.1**
Mainland China													
CEG	839.HK	14.24	3,950	32%	34.2	28.0	19.6	0.9	1.7	2.6	1.1	0.9	0.6
Yuhua	6169.HK	6.70	2,887	23%	24.8	20.0	16.4	2.1	2.6	3.1	1.1	0.9	0.7
Hope	1765.HK	2.40	2,238	29%	28.5	22.3	17.1	1.3	1.7	2.3	1.0	0.8	0.6
Tianli	1773.HK	8.07	2,161	44%	55.4	38.9	27.3	0.5	0.7	1.0	1.3	0.9	0.6
Kepei	1890.HK	6.30	1,638	30%	24.3	17.8	15.0	1.6	2.2	2.6	0.9	0.7	0.6
Virscend	1565.HK	2.40	956	9%	16.3	15.8	13.1	3.4	3.4	3.4	1.4	1.4	1.1
Maple Leaf	1317.HK	2.42	935	6%	9.0	10.7	8.3	4.3	3.5	4.5	2.2	2.6	2.0
Wisdom	6068.HK	3.14	882	23%	13.4	11.4	9.3	3.1	3.6	4.8	0.7	0.6	0.5
Weighted average					**29.8**	**23.4**	**17.6**	**1.7**	**2.1**	**2.7**	**1.1**	**1.0**	**0.7**

Note: Priced at the close of 17 September 2020. EPS CAGR refers to annualized growth rate over FY19-21e.
Source: HSBC estimates for Chinese school operators, Bloomberg consensus for all other stocks

We have constructed a peer valuation summary table for the global school operators above, in order to understand more about their valuations, from a global perspective. Overall, however, we do not find many peers with meaningful consensus forecasts: we have only found three listed companies in the US and two other listed companies in Brazil, which are conducting business similar to that of Chinese school operators and that have reasonable consensus forecasts.

Meanwhile, we haven't included the listed after-school tuition players in this comparison table as we believe these companies, which conduct their business both through online and offline channels, have greater room to scale up their business operations and are less regulated, hence they are not directly comparable with school operators.

Generally speaking, we found that Chinese school operators are trading at a premium, by measuring both the PE and PEG, over their global peers. This, in our view, probably reflects the steadier financial performance of Chinese players, as well as their strong earnings growth prospects.

Company sections

- China Education (839 HK)
- Hope Education (1765 HK)
- Kepei Education (1890 HK)
- Maple Leaf Education (1317 HK)
- Tianli Education (1773 HK)
- Virscend Education (1565 HK)
- Wisdom Education (6068 HK)
- Yuhua Education (6169 HK)

China Education Group (839 HK)

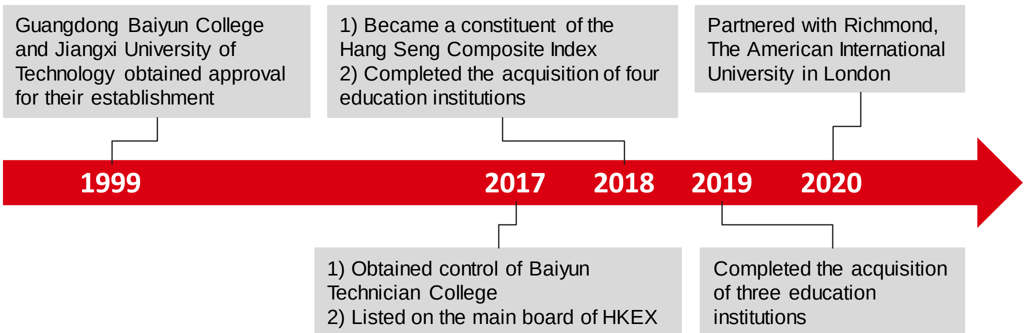
- CEG is the largest listed higher education school operator in China with a proven track record in M&A
- We expect more M&A to drive its growth; expansion to existing schools and independent college conversions can lift its margins
- Initiate at Buy with a target price of HKD22.00, implying a 29x FY21e PE and 0.9x FY21e PEG

A leader in a fast-growing pack

China Education Group (CEG) is a leading private school operator in mainland China, with over 180,000 student enrolled in nine schools spread across six provinces. As of February 2020, its domestic school portfolio consisted of six higher education institutions and three secondary vocational schools. In addition, CEG has also established its footprint in overseas markets with the ownership of a university in Australia (King's Own Institute) and a partnership with a university in the UK (Richmond, The American International University in London). By student enrolment, it is the largest private school operator listed in Hong Kong.

CEG started in 1999 when the co-founders obtained approval for the establishment of two schools, the Guangdong Baiyun University (GBU) and the Jiangxi University of Technology (JUT). In 2017, the company obtained control of Baiyun Technician College and listed in Hong Kong. Following its listing, CEG made seven further acquisitions to strengthen its scale, including six in the domestic market and one overseas.

Exhibit 25: CEG: Key milestones of corporate development



Source: Company data, HSBC

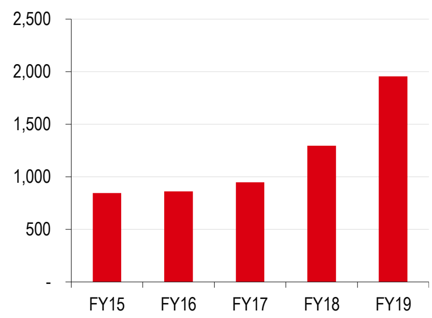
Snapshot of China Education Group (839 HK)

China Education Group is a leading private school operator in China, with a key focus on higher education. The group operates seven higher education institutions and three vocational education institutions in Guangdong, Jiangxi, Henan, Chongqing, Shandong, and Shaanxi provinces in China, and also Australia, with an overall school area of more than 6m square meters. In 1HFY20, total student enrolment exceeded 180,000. Jiangxi University of Technology, the largest contributor to student enrolment (24% in FY19), with key majors in engineering, management, and arts, was ranked No. 19 among private universities in China in 2020 by China University Alumni Association (CUAA). China Education Group was listed on the main board of HKEX on 15 December 2017. Mr. Yuguo and Mr. Xie Ketao, the company's co-founders, jointly own c74% of total outstanding shares (37% each), as of February 2020.

Key senior management team includes:

- Mr. Yu Guo, Co-Chairman & Executive Director
- Mr. Xie Ketao, Co-Chairman & Executive Director
- Dr. Yu Kai, CEO & Executive Director
- Ms. Xie Shaohua, Executive Director
- Mr. Mok Kwai Pul Bill, CFO & Company Secretary

Revenue by segment (RMBm)



Note: The group had changed its fiscal period end from 31 December to 31 August since FY18, figure for FY18 is on a pro-forma basis; tuition fee is the major component of revenue and contributed over 90% in FY19.
Source: Company data, HSBC

Forecasts and valuation

(RMBm)	FY19a	FY20e	FY21e	FY22e
Revenue	1,955	2,610	4,178	5,409
EBITDA	1,008	1,439	2,090	2,749
Core net profit	747	911	1,384	1,825
Core EPS (RMB)	0.37	0.45	0.64	0.84
DPS (RMB)	0.11	0.21	0.32	0.42

- Our target price of HKD22.00 for CEG is derived from a DCF approach and implies a 29x PE for FY21e

Source: Company data, HSBC estimates

Peer comparison

Company	BBG ticker	PE (x) FY19a	PE (x) FY20e	PE (x) FY21e
Yuhua Education	6169.HK	24.8	20.0	16.4
Hope Education	1765.HK	28.5	22.3	17.1
Kepei Education	1890.HK	24.3	17.8	15.0
New Higher Education	2001.HK	18.2	13.5	11.1
Edvantage Group	382.HK	19.7	18.0	14.0
Minsheng Education	1569.HK	11.9	9.4	8.0
China Education	839.HK	34.2	28.0	19.6
Weighted avg		**26.7**	**21.4**	**16.3**

Note: Priced as of 17 September 2020
Source: HSBC estimates for CEG, Hope, Kepei, and Yuhua, Bloomberg consensus for other stocks

Do you know?

- The company's educational philosophy is "to prepare students for success through excellence and innovation in education" ("以卓越和创新教育引领学生走向成功").
- Yu Guo, one of the company's co-founders (also the father of Yu Kai, the CEO), was selected as a deputy of the ninth National People's Congress in 1998, the sole representative of private education in mainland China at that time.
- Guangdong Baiyun University, previously known as Private Baiyun Vocational and Technical College and founded in 1999 by CEG, was the first private vocational and technology institution in mainland China.
- Jiangxi University of Technology, initially known as Jiangxi Secondary Vocational School, was founded in 1999 by CEG as the first secondary vocational school that cooperated with foreign investment in mainland China.

Key risks and challenges

- Slower-than-expected pace of M&A may fail to meet the high market expectations and affect the company's reputation.
- Poor integration of newly-acquired schools may affect student enrolment growth and margin expansion.
- Large expenditures (mainly "break-up" fees paid to partner public universities) on independent college conversions may affect profit.
- The conversion of independent colleges may affect their appeal given they are required to terminate brand sharing with their partner public universities.

Financials & valuation: China Education

Buy

Financial statements

Year to	08/2019a	08/2020e	08/2021e	08/2022e
Profit & loss summary (RMBm)				
Revenue	1,955	2,610	4,178	5,409
Gross profit	1,121	1,488	2,340	3,046
Other income and gains	56	122	131	158
Operating expenses	-406	-470	-731	-925
EBITDA	1,008	1,439	2,090	2,749
Depreciation & amortization	-236	-298	-350	-470
Operating profit	796	1,099	1,700	2,230
Finance costs, net	-104	-191	-313	-379
PBT	668	949	1,427	1,899
Taxation	19	0	0	0
Reported net profit	593	850	1,323	1,764
Core net profit	747	911	1,384	1,825
Cash flow summary (RMBm)				
Cash flow from operations	1,141	1,902	2,104	2,651
Capex	-1,685	-3,582	-1,646	-1,366
Cash flow from investment	-2,268	-3,540	-1,606	-1,318
Dividend paid	-190	-402	-583	-811
Cash flow from financing	2,810	1,237	-453	26
Balance sheet summary (RMBm)				
PP&E	5,851	6,492	10,668	11,516
Intangible fixed assets	3,274	4,101	5,698	6,898
Cash & cash equivalents	3,597	3,196	3,240	4,600
Total assets	15,339	18,308	22,985	26,512
Contract liabilities	1,617	2,054	3,862	4,939
Interest-bearing debt	4,267	4,308	6,199	7,416
Net debt	670	1,112	2,959	2,816
Shareholders' fund	6,595	8,831	9,570	10,523

Ratio, growth and per share analysis

Year to	08/2019a	08/2020e	08/2021e	08/2022e
Y-o-y % change				
Revenue	50.9	33.5	60.1	29.5
Gross profit	42.7	32.7	57.3	30.2
EBITDA	36.1	42.7	45.2	31.5
Operating profit	28.0	38.0	54.8	31.2
Reported net profit	46.4	43.4	55.6	33.3
Core net profit	17.4	22.1	51.9	31.9
Core EPS	17.3	22.1	42.7	31.9
Ratios (%)				
ROE	11.7	11.8	15.0	18.2
ROA	6.2	5.4	6.7	7.4
Gross profit margin	57.4	57.0	56.0	56.3
EBITDA margin	51.6	55.1	50.0	50.8
Operating profit margin	40.7	42.1	40.7	41.2
Core net profit margin	38.2	34.9	33.1	33.7
Gross gearing	60.9	46.1	60.9	65.8
Per share data (RMB)				
EPS	0.29	0.42	0.61	0.82
Core EPS	0.37	0.45	0.64	0.84
DPS	0.11	0.21	0.32	0.42
Book value	3.26	4.11	4.45	4.89

Key forecast drivers

Year to	08/2019a	08/2020e	08/2021e	08/2022e
No. of student enrolled	170,098	181,867	260,950	314,153
Average pricing*	12,450	14,443	16,442	18,161

*Represents average tuition and boarding fees per student

Valuation data

Year to	08/2019a	08/2020e	08/2021e	08/2022e
EV/EBITDA	27.8	19.9	14.6	11.1
PE*	34.2	28.0	19.6	14.9
PEG	1.1	0.9	0.6	0.4
Dividend yield (%)	0.9	1.7	2.6	3.4

* Based on HSBC EPS (diluted)

ESG metrics

Environmental Indicators	08/2019a
GHG emission intensity*	273
Energy intensity*	515
CO_2 reduction policy	Yes
Social Indicators	**08/2019a**
Employee costs as % of revenues	32
Employee turnover (%)	9
Diversity policy	Yes

Governance Indicators	08/2020a
No. of board members	7
Average board tenure (years)	4
Female board members (%)	29
Board members independence (%)	43

Source: Company data, HSBC

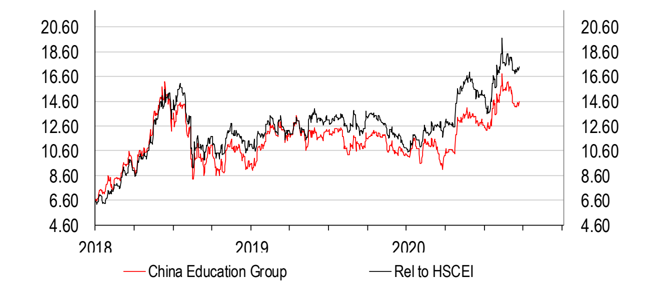
* GHG intensity and energy intensity are measured in kg and kWh respectively against revenue in USD '000s

Issuer information

Share price (HKD)	14.24
Target price (HKD)	22.00
RIC (Equity)	839.HK
Bloomberg (Equity)	839 HK
Market cap (USDm)	3,950

Free float	26%
Sector	Discovery Research
Country	China
Analyst	York Pun, CFA
Contact	+852 2822 4396

Price relative



Source: HSBC

Note: Priced at close of 17 Sep 2020

Business analysis

CEG operates nine schools in China with a land area of more than 6m square meters across six provinces including Guangdong, Jiangxi, Shaanxi, Henan, Chongqing, and Shandong. Prior to its listing, the co-founders had been operating three educational institutions for around 18 years, and these remain the most important revenue contributors to the group:

- **Guangdong Baiyun University:** Established in 1999 by Xie Ketao, the school was upgraded from a junior college to a university in 2005. It focuses on undergraduate education programmes and provides around 50 majors (for bachelor's degrees), including big data application and an innovation centre. Student enrolments exceeded 26,000 in FY19 and contributed c16% of the company's overall enrolment.
- **Jiangxi University of Technology:** Founded by Yu Guo in 1999, the school was upgraded from a junior college to a university in 2005. Currently, it offers 39 majors for bachelor's degrees and 35 majors for junior college degrees, with a focus on engineering, management, and arts. The school has worked with enterprises to enhance the practical skills of its students – for instance, students from the automotive engineering major are offered off-campus practical opportunities in partner companies. With c41,000 student enrolled in FY19, it accounted for c24% of CEG's total enrolment, and is CEG's largest school in the portfolio.
- **Baiyun Technician College:** Established by Xie Ketao in 1996 as a vocational education institution, the school currently offers diploma programmes across nine majors; according to data from Frost & Sullivan in CEG's IPO prospectus, it was one of the largest private technician colleges in mainland China with over 13,500 students enrolled in 2017.

Since its listing in 2017, CEG has fuelled its growth via M&A, including acquiring three independent colleges, three secondary vocational schools (including two technician colleges) plus one university in Australia. Amongst these institutions, the Xi'an Railway College and Zhenzhou Transit School are the largest, with over 27,000 students enrolled in each of them in FY19.

Exhibit 26: CEG: Overview of the school portfolio

Type	Name	Region	Student enrolment*	% of student
Private university	Jiangxi University of Technology	Jiangxi, China	41,360	
	Guangdong Baiyun University	Guangdong, China	26,911	
	King's Own Institute	Australia	2,800	
Sub total			**68,271**	**40%**
Independent college	Chongqing Nanfang Translators College of SISU	Chongqing, China	13,238	
	Guangzhou University Songtian College	Guangdong, China	9,256	
	University of Jinan Quancheng College	Shandong, China	8,488	
Sub total			**30,982**	**18%**
Junior college	Guangzhou Songtian Polytechnic College	Guangdong, China	3,453	
Sub total			**3,453**	**2%**
Technician college	Xi'an Railway College	Shaanxi, China	27,221	
	Baiyun Technician College	Guangdong, China	13,125	
Sub total			**40,346**	**24%**
Secondary vocational school	Zhengzhou Transit School	Henan, China	27,046	
Sub total			**27,046**	**16%**
Total			**170,098**	**100%**

Note: *As of FY19, excludes the student enrolment of King's Own Institute acquired in 1HFY20.
Source: Company data, HSBC

Exhibit 27: CEG: Summary of school portfolio

Name	Jiangxi University of Technology	Xi'an Railway College	Zhengzhou Transit School	Guangdong Baiyun University	Baiyun Technician College	Chongqing Nanfang Translators College of SISU	Guangzhou University Songtian College	University of Jinan Quancheng College	Guangzhou Songtian Polytechnic College	King's Own Institute
Region	Jiangxi, China	Shaanxi, China	Henan, China	Guangdong, China	Guangdong, China	Chongqing, China	Guangdong, China	Shandong, China	Guangdong, China	Australia
Type	Private University	Technician College	Vocational Secondary School	Private University	Technician College	Independent College	Independent College	Independent College	Junior College	Private University
Student enrolment (FY19)	41,360	27,221	27,046	26,911	13,125	13,238	9,256	8,488	3,453	2,800
Land area (square meter)	>1.3m	>330k	>420k	>900k	NA	>1m	>940k	>1.2m	NA	NA
Year of start with the group	Established in 1999	Acquired in 2018	Acquired in 2018	Established in 1999	Established in 1996 (Consolidated in 2017)	Acquired in 2019	Acquired in 2018	Acquired in 2019	Acquired in 2018	Acquired in 2019
Equity interests	100%	62%	100%	100%	100%	100%	100%	100%	100%	100%
Tuition fees (SY19/20)	Bachelor's degree: RMB19,000-26,000 Junior college diploma: RMB14,500-17,000 Continuing education: RMB2,500-6,000	Technician diploma: RMB9,800-10,800	Secondary vocational diploma: RMB7,900-8,600	Bachelor's degree: RMB20,000-30,000 Junior college diploma: RMB30,000 Continuing education: RMB2,500-6,000	Post-secondary vocational diploma: RMB12,500-15,000 Secondary vocational diploma: RMB12,000-14,500 Technician diploma: RMB13,500-15,500	Bachelor's degree: RMB12,000-18,000	Bachelor's degree: RMB26,000-28,000	Bachelor's degree: RMB11,000-17,000 Junior college diploma: RMB8,000-12,000	Junior college diploma: RMB13,500-16,500	Master's degree: AUD7,500-8,500 Graduate certificate: AUD7,500-8,500 Graduate diploma: AUD7,500-8,500 Bachelor's degree: AUD6,500-7,250 Undergraduate diploma: AUD6,500-6,750
Boarding fees (SY19/20)	Bachelor's degree: RMB1,800-2,500 Junior college diploma: RMB1,800-2,500 Continuing education: N/A	Technician diploma: RMB1,500	Secondary vocational diploma: RMB1,200	Bachelor's degree: RMB1,500-3,000 Junior college diploma: RMB1,500-3,000 Continuing education: N/A	Post-secondary vocational diploma: RMB1,500 Secondary vocational diploma: RMB1,500 Technician diploma: RMB1,500	Bachelor's degree: RMB900-1,300	Bachelor's degree: RMB1,500	Bachelor's degree: RMB800-1,200 Junior college diploma: RMB800-1,200	Junior college diploma: RMB1,500	N/A
Ranking in CUAA (2020)	19	N/A	N/A	66	N/A	87	85	226	N/A	N/A
Employment ratio	88.1% (in 2016)	N/A	N/A	96.1% (in 2016)	99.4% (in 2016)	N/A	95.6% (in 2017)	N/A	97.4% (in 2019)	N/A
Capacity	38,555 (in 2017)	N/A	N/A	18,115 (in 2017)	56,670 (in 2017)	N/A	N/A	N/A	N/A	N/A
Utilisation ratio	90.0% (in 2017)	N/A	N/A	94.9% (in 2017)	93.3% (in 2017)	N/A	N/A	N/A	N/A	N/A
Remark	N/A	Consideration RMB577m	Consideration RMB1,093m	N/A	N/A	Consideration RMB1,010m	Consideration RMB538m	Consideration RMB455m	N/A	Consideration RMB645m

Note: SY=School year. Employment ratio refers to the percentage of graduates who entered into full-time employment contracts, self-employed, accepted an offer for higher degree or equivalent programmes, or accepted an offer to pursue overseas study or employment, before graduation.
Source: Company data, HSBC

The M&A expert

Since listing in 2017, the number of CEG's schools has increased from three to ten; in the meantime, student enrolments have increased over 180% from around 63,000 as of FY16 to over 180,000 as of 1HFY20. With seven acquisitions made following its IPO for a total consideration of cRMB5bn, CEG was ranked first for both measures amongst the listed higher educational school operators in Hong Kong. We believe the flurry of M&A activity is supported by its large operating scale, strong cash-flow, healthy financial position, and strong industry understanding – management has studied over 400 M&A projects, according to a recent presentation by the company. Moreover, we believe this has also demonstrated CEG's solid execution capability, which alongside its large operating scale, positions it well for future M&A opportunities.

Zhengzhou Transit School and Xi'an Railway College, which were both acquired in FY18, recorded 11% and 32% y-o-y growth in student enrolment, respectively in the following fiscal year. We believe this was mainly driven by the company's efficient operations (e.g. through central procurement and marketing) and strong industry resources (i.e. the cooperation programmes with enterprises), and offers evidence for its execution capability.

We also estimate that the new school acquisitions in FY18 contributed to c98% of growth in student enrolment numbers during that fiscal year, and that the number was estimated to be c71% in FY19. Nevertheless, with CEG's overall capacity utilisation at 81% in FY19 plus the substantial room for campus expansion (especially in Chongqing and Shandong, where student numbers are still relatively low compared to the school area), we expect growth to be sustained from further business integration, which could lead to efficiency gains.

Well positioned in the Greater Bay Area (GBA)

The four schools in Guangdong Province contributed over 40% of CEG's school portfolio (by school number) and over 30% of its student enrolment in FY19. We expect demand in this region to remain strong – apart from the favourable policies, the province has a favourable demographic factor with the largest resident population in the country, plus a relatively low penetration ratio in higher education: the province had a c46% gross enrolment ratio in higher education in 2019, below the national average of 52%. We note that Guangdong has pledged to raise this ratio to over 50% by 2020e. CEG is also accelerating its expansion to accommodate this, including the expansion in the Guangdong Baiyun University and the Guangzhou University Songtian College which, combined, could increase capacity by more than 50,000 students by 2023e.

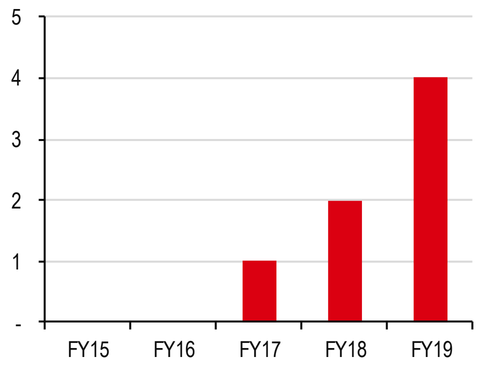
Opportunities from the conversion of independent colleges

CEG currently has three independent colleges in its school portfolio, which pay part of their revenue to associated public universities, while two of them (Guangzhou University Songtian College and Chongqing Nanfang Translators College of SISU) have been approved by the MOE to covert to private universities. We believe conversion is under way and, once completed, CEG could boost its profit margins (even though this may come at the expense of a one-off "break-up" fee). In the meantime, its experience in acquiring these independent colleges could help it to capture M&A opportunities from the accelerated conversion of independent colleges.

An explorer in the overseas education business

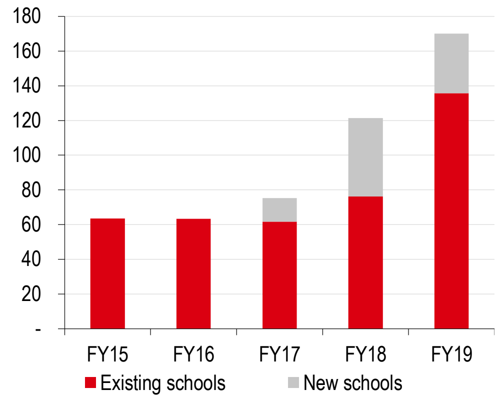
CEG has also established an overseas presence by acquiring Australian-based King's Own Institute in 2019. In 2020, the company also entered into a partnership agreement with Richmond, the American International University in London; under the latter's agreement, we understand CEG will help to recruit the students – particularly Chinese students – to enter into Richmond and share part of the revenue through this practice. We believe this practice in London – the first of its kind per our knowledge – represents an innovative model for the Chinese school operators to expand overseas and could help to limit operating and financial risks.

Exhibit 28: CEG: No. of new schools over FY15-19



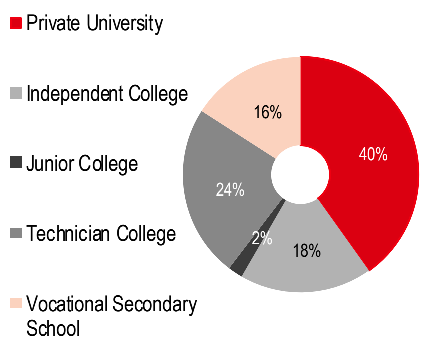
Note: CEG obtained the controlling power of Baiyun Technician College in FY17.
Source: Company data, HSBC

Exhibit 29: CEG: Student enrolment over FY15-19 ('000 persons)



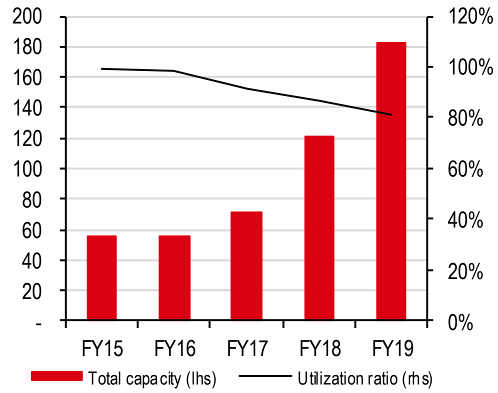
Source: Company data, HSBC

Exhibit 30: CEG: Student enrolment by school type in FY19



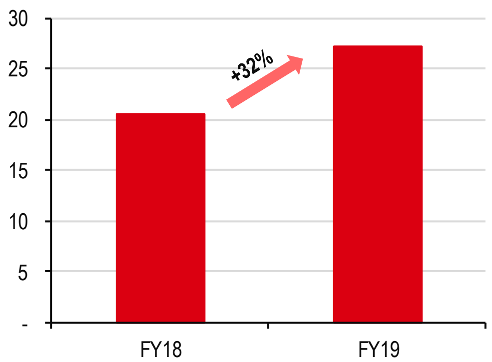
Note: Including 20,008 adult programmes in the private university segment.
Source: Company data, HSBC

Exhibit 31: CEG: Total capacity ('000 persons) and utilisation ratio*



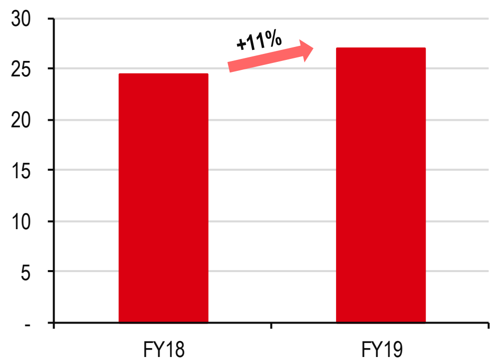
Note: *The calculation of utilisation ratio excludes the no. of students for continuing education programmes, the figure is derived as total student enrolment for regular education programmes to the sum of no. of beds in dormitories and no. of graduating students.
Source: Company data, HSBC

Exhibit 32: CEG: Growth in student enrolment of XRC* ('000 persons)



Note: *XRC=Xi'an Railway College, acquired in 2018.
Source: Company data, HSBC

Exhibit 33: CEG: Growth in student enrolment of ZTC* ('000 persons)



Note: *ZTC=Zhengzhou Transit School, acquired in 2018.
Source: Company data, HSBC

Hainan School is the largest private university in the province

Hainan School – another example on CEG's strong execution

CEG said in August that it plans to acquire a 60% equity interest in Haikou University of Economics and its affiliated Art School (known together as the "Hainan School"), for a total consideration of nearly RMB1.4bn. We estimate the valuation at 15x EV/EBITDA for FY19, which will decline further, after taking into account the growth prospects of Hainan Schools plus the agreements for CEG to receive 100% of the schools' profit until February 2023. According to management, CEG expects the transaction to be completed within two months of the announcement.

A well-structured transaction with solid growth prospects and room to lift profitability

We believe the acquisition gives CEG a high-quality asset, which provides substantial growth prospects and room for profit improvement: established in 1974, Hainan School is a leading private university that provides nearly 70 academic programmes (including undergraduate and junior colleges). The school had around 44,000 student enrolments as of school year 2019/20, with nearly half coming from undergraduate and junior college programmes, while the rest mostly comes from adult programmes. We also note that:

- Hainan School has higher pricing than CEG's existing average, with particularly high fees for its undergraduate programmes where tuition fees are as high as RMB100,000 per school year for some of the programmes on offer (such as majors in the Film College).
- Hainan school registered a 17% CAGR in admission quotas (for undergraduate plus junior college programmes) between school year 2017/18 and school year 2020/21.
- That being said, Hainan School has a high funding cost, which has eroded its profitability and left it with net profit margins much lower than CEG. We believe CEG's acquisition may help to improve its funding structure and thus improve its overall level of profitability.

This helps CEG secure a strong position in Hainan, which should attract talent

Moreover, we believe the acquisition also helps CEG to secure a strong position in Hainan Province, which is facing several policy tailwinds. This includes the Free Trade Port developments, which may help to attract new talent and capital to the region, bolstering the long-term prospects of Hainan School.

We see this as value-accretive long-term, but causing near-term pressure

That being said, the acquisition could exert some downward pressure on CEG's near-term financials: our pro-forma analysis below suggests that CEG's net profit margin would have declined by 5 percentage points (ppt) while its gearing ratio would be up – the latter explains its recent share placement on 11 August 2020 (issuing 130m new shares, or 6% of enlarged share capital). Nevertheless, we believe the transaction has strong potential to be value-enhancing over the long term, especially in view of CEG's solid track record in integrating acquired schools.

Exhibit 34: CEG: Summary of Hainan School transaction and the pro-forma analysis

Major items (RMBm for FY19, unless otherwise specified)			
Total equity consideration (RMBm)			1,356
Percentage of equity interests acquired			60%
Land area (square meters)			>950k
Total student enrolment (school year 19/20)			43,500
Revenue			578
EBITDA			242
Reported net profit			45
Pro-forma analysis on CEG	**Before acquisition**	**After acquisition**	**% change**
Key operating ratios			
Student enrolment	170,098	213,598	26%
Revenue per student (RMB)	11,493	11,859	3%
Key financial data			
Revenue	1,955	2,533	30%
Reported net profit	593	637	8%
Net profit margin	30%	25%	-5ppt
Gross gearing	61%	82%	21ppt

Note: We assumed in the pro-forma analysis that the transaction is wholly funded by CEG's cash; gross gearing ratio is derived as total debts to total equity.
Source: Company data, HSBC estimates

Financial analysis

Revenue and core earnings: CEG registered a revenue CAGR of 44% in FY17-19, driven by acquisitions and organic growth. However, we calculate its core net profit (excluding one-off items and share-based expenses) has increased at a slower rate of 24% in FY17-19, due to a faster increase in costs.

Operating costs and margins: Cost of sales (COS) recorded a CAGR of around 46% in FY17-19. Teaching staff expenses are the main component and contributed around 42% of total COS in FY16; this was followed by the expenses for education maintenance as well as depreciation and amortisation (D&A) that, respectively, contributed 29% and 21% of total COS in FY16. We note that COS increased over 60% y-o-y in FY19 and included partnership fees in the three newly-acquired independent colleges. The gross profit margin (GPM) declined from 59% in FY17 to 57% in FY19.

Selling and administrative expenses, which respectively equalled 2% and 16% of revenue in FY17-19, registered more than 130% and 60% CAGR over FY17-19, respectively. We note the faster growth in these costs are partly related to the lower profitability in the newly acquired schools. As a result, the EBITDA margin has declined from 61% to 52% in FY17-19. We also calculate that CEG's core net profit margin has declined from 51% in FY17 to 38% in FY19.

Balance sheet: Around 70% of the group's assets is comprised of properties, leases, and cash; it also has a small accounts receivables and inventory. Owing to the large M&A activity, CEG also has significant goodwill and intangible assets (c20% of assets in FY19).

Meanwhile. interest-bearing debt accounted for over 50% of total liabilities in FY19, followed by contract liabilities, which accounted for c20% (of total liabilities); contract liabilities are the tuition fees and boarding fees received from students prior to the beginning of school year and would be recognised in the coming fiscal year. We regard it as a good indicator for near-term revenue and note that CEG registered 56% y-o-y growth in contract liabilities in FY19.

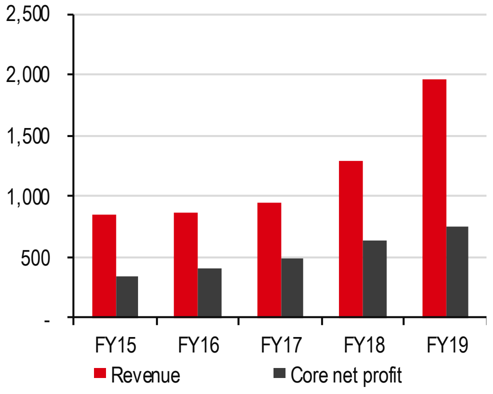
Debts and gearing ratio: Interest-bearing debt has increased sharply from cRMB200m in FY18 to over RMB4bn in FY19, driven by the surge in bank borrowings and issuance of convertible bonds. The gearing ratio, calculated as total debt to total equity, has increased to over 60% in FY19 – which was the highest amongst the listed higher education players in our coverage universe.

In terms of **convertible bonds (CBs)**, CEG issued a tranche in March 2019, with a principal amount of cHKD2.4bn; the CBs are due in 2024, with an interest cost of 2% per annum with an initial conversion price of HKD14.69 per share. Upon full conversion, we estimate the new shares issuance would be over 164m shares, or equal to c7.5% of the enlarged share capital.

Cash flow: CEG maintained positive operating cash flow over the past five fiscal years, with growth of more than 180% y-o-y in FY19. It is, however, noteworthy that its acquisitions and capacity expansion have also led to a significant cash investment outflow in FY18 and FY19 (of over RMB3.3bn in total) and hence CEG still needs to employ financial leverage to fund its expansion.

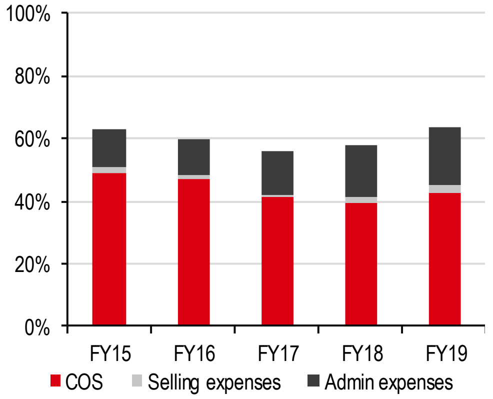
Dividends: CEG maintained a stable dividend payout ratio (30% of its core earnings) in FY18 and FY19, with that ratio increasing to c50% in 1HFY20.

Exhibit 35: CEG: Revenue and core net profit (RMBm), FY15-19



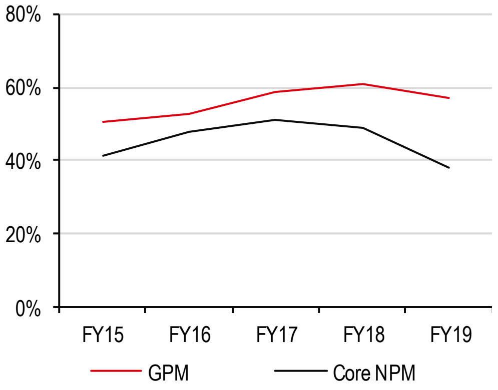
Note: Figures for FY18 are on a pro-forma basis.
Source: Company data, HSBC

Exhibit 36: CEG: Costs as a % of revenue, FY15-19



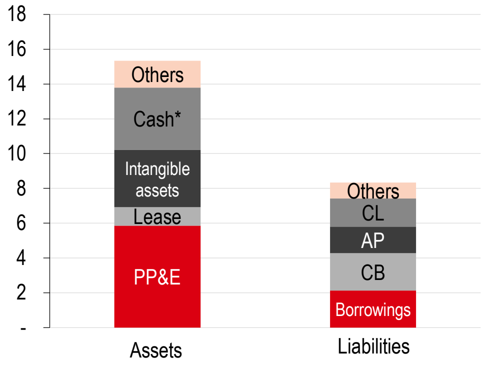
Note: Figures for FY18 are on a pro-forma basis.
Source: Company data, HSBC

Exhibit 37: CEG: Margins, FY15-19



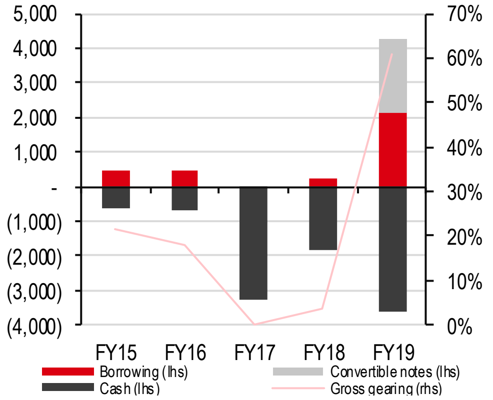
Note: Figures for FY18 are on a pro-forma basis.
Source: Company data, HSBC

Exhibit 38: CEG: Balance sheet structure (RMBm), FY19



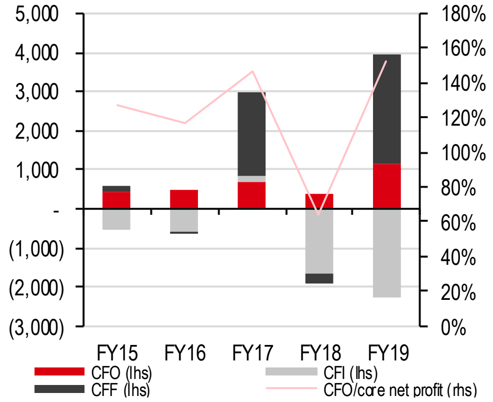
Note: *Include structured deposits. CL=Contracted liabilities, AP=Account payables, CB=Convertible bonds.
Source: Company data, HSBC

Exhibit 39: CEG: Debt-structure (RMBm) and gearing ratio, FY15-19



Note: Gross gearing ratio is calculated as total interest-bearing debt to total equity.
Source: Company data, HSBC

Exhibit 40: CEG: Cash flow breakdown (RMBm), FY15-19



Source: Company data, HSBC

1HFY20 results

CEG registered 42% y-o-y revenue growth in 1HFY20, driven by organic growth and the consolidation of new schools. Student enrolment exceeded 180,000 as of February 2020 (up c7% h-o-h). The company maintained a stable GPM in 1HFY20 and – if the impact of new acquisitions is excluded – the GPM was up 2ppt y-o-y to 60% (according to CEG's 1HFY20 interim report). This is partly being offset by the sharp rise in selling expenses (up 146% y-o-y), due mainly to the inclusion of King's Own Institute, which had a relatively high selling cost. Still, its operating expenses (including selling, general & administrative combined expenses) to revenue ratio declined 3.2ppt y-o-y to around 18% in 1HFY20. Core net profit was up 32% y-o-y and CEG has raised its dividend payout ratio to 50% (from 30% a year ago).

Exhibit 41: CEG: Summary of financial results in 1HFY20 (RMBm, unless otherwise specified)

	1H19	2H19	1H20	y-o-y	h-o-h
Key income statement					
Revenue	927	1,028	1,315	42%	28%
-Tuition fees	849	925	1,197	41%	29%
-Boarding fees	68	85	89	31%	5%
-Ancillary services	10	17	29	180%	71%
COS	(391)	(442)	(558)	43%	26%
Gross profit	536	585	757	41%	29%
Other income	48	32	45	-6%	42%
Selling expenses	(25)	(28)	(61)	146%	118%
Administrative expenses	(175)	(178)	(179)	3%	0%
Operating profit	386	411	563	46%	37%
Investment income	11	22	12	4%	-47%
Other gains and losses	(20)	(38)	27	N/A	N/A
Operating profit	386	411	563	46%	37%
Finance costs	(33)	(71)	(51)	55%	-28%
PBT	344	324	550	60%	70%
Taxation	(0)	19	(9)	5871%	N/A
MI	44	50	44	-2%	-14%
Reported net profit	300	293	498	66%	70%
Core net profit	373	373	491	32%	31%
EBITDA	493	516	761	55%	48%
Core EPS (RMB)	0.18	0.18	0.22	20%	20%
DPS (HKD)	0.04	0.09	0.13	283%	49%
Key balance sheet					
PP&E	3,985	5,851	6,544	64%	12%
Cash and cash equivalents	1,779	3,597	1,423	-20%	-60%
Interest-bearing debts	720	4,267	4,271	493%	0%
Contract liabilities	977	1,617	1,326	36%	-18%
Total liabilities	8,806	8,331	8,343	-5%	0%
Total equity	6,704	7,008	7,117	6%	2%
Key ratios and business drivers					
GPM	57.8%	56.9%	57.6%	-0.3ppt	0.6ppt
Operating expenses to revenue	21.5%	20.1%	18.3%	-3.2ppt	-1.8ppt
OPM	41.6%	40.0%	42.8%	1.2ppt	2.8ppt
Gross gearing	10.7%	60.9%	60.0%	49.3ppt	-0.9ppt
Net gearing	-15.8%	9.6%	40.0%	55.8ppt	46.3ppt
Student enrolment	147,414	170,098	181,826	23%	7%
Average pricing (RMB)	6,220	6,304	7,117	14%	13%
No. of schools	7	9	10	43%	11%

Source: Company data, HSBC

Forecasts and valuation

Forecasts

We forecast the future financial performance of CEG based on the following considerations:

- **Revenue:** We forecast 40% revenue CAGR for CEG in FY19-22e, driven by:
  - **23% CAGR in student enrolments**, driven by organic growth in its existing schools (c30% of the increment), contribution from Hainan School, which we estimate to consolidate from FY21e (c38% of the increment) plus the impact of other newly acquired schools (c33% of the increment). For the latter, we assume one acquisition with 15,000 students in FY21e (in addition to Hainan School), followed by two acquisitions with a combined total of 30,000 students in FY22e. These new acquisition assumptions have taken into account CEG's M&A track record, scale, focus, and funding capability.
  - **13% CAGR in average pricing**, driven mainly by the potential fee hike plus the positive impact of Hainan School (which charges higher fees).
  - **46% CAGR in ancillary services income**.
- **Margins:** We expect gross profit margins (GPM) to slide modestly by c1ppt over FY19-22e, after taking into account the lower margins in both Hainan School and other newly-acquired schools. We also expect core net profit margin (NPM) to decline by c4ppt during this time period, mainly on the lower NPM of the Hainan School.

Overall, we forecast CEG's core net profit to rise by a CAGR of 35% during this time period. Note we haven't assumed any impact from the potential conversion of independent colleges as well as the potential conversion of its schools into "for-profit" ones.

Exhibit 42: CEG: Summary of financial forecasts (RMBm, unless otherwise specified)

	FY19	FY20e	FY21e	FY22e	CAGR (FY19-22e)
Key income statement					
Revenue	1,955	2,610	4,178	5,409	40%
COS	(833)	(1,122)	(1,838)	(2,364)	42%
Gross profit	1,121	1,488	2,340	3,046	40%
Operating expenses	(406)	(470)	(731)	(925)	32%
Operating profit	796	1,099	1,700	2,230	41%
Finance costs, net	(104)	(191)	(313)	(379)	54%
Taxation	19	-	-	-	N/A
PBT	668	949	1,427	1,899	42%
EBITDA	1,008	1,439	2,090	2,749	40%
Core net profit	747	911	1,384	1,825	35%
Core EPS (RMB)	0.37	0.45	0.64	0.84	32%
DPS (RMB)	0.11	0.21	0.32	0.42	56%
Key ratios and items					
GPM	57.4%	57.0%	56.0%	56.3%	-1.1ppt
Operating expenses to revenue	20.8%	18.0%	17.5%	17.1%	-3.7ppt
OPM	40.7%	42.1%	40.7%	41.2%	0.5ppt
EBITDA margin	51.6%	55.1%	50.0%	50.8%	-0.8ppt
Core NPM	38.2%	34.9%	33.1%	33.7%	-4.4ppt
Gross gearing	60.9%	46.1%	60.9%	65.8%	4.9ppt
Student enrolment	170,098	181,867	260,950	314,153	23%
Average pricing per student (RMB)	12,450	14,443	16,442	18,161	13%

Source: Company data, HSBC estimates

Valuation

We use a discounted cash flow (DCF) methodology to value CEG as we believe this better captures its strong cash generating capabilities and long-term growth outlook. The key assumptions in our three-stage DCF model are as follows:

- Stage one – we use our explicit forecasts for FY21-22e.
- Stage two – we assume a FCFF CAGR of 12% over the medium term, lower than the growth in operating cash flow of 32% in FY22e, as we factor in the potential impact of adopting the "for-profit" school classification and the subsequent reduced growth opportunities. Nevertheless, this is above its higher education peers average (at 10%) given benefits from its scale and solid execution track record.
- Stage three – we assume a terminal growth rate of 2%.

Our 10% cost of equity assumption is based on a beta of 1.5x, a risk-free rate of 2.5%, and a market risk premium of 5%. We also assume that interest-bearing debt contributes 30% to the capital structure over the long term, bearing an interest rate of 4%. Together, we derive a WACC of 8.0%. Overall, we derive a target price of HKD22.00, which implies a 29x PE for FY21e. With 54% upside from current levels, we initiate coverage on the stock with a Buy rating.

Exhibit 43: CEG: DCF assumptions

	FY21e	FY22e	CAGR (medium-term)	Terminal growth
FCFF (RMBm)	563	1,476	12%	2%
WACC				8.0%
Enterprise value (RMBm)				44,047
Equity value (RMBm)				40,471
Implied fair value (HKD/share)				**22.0**
TP implied PE (FY21e)				29x
TP implied PEG (FY21e, over FY19-21e)				0.9x
TP implied dividend yield (FY21e)				1.7%
TP implied EV/EBITDA (FY21e)				21x

Source: HSBC estimates

Our target price implied PE is 29x and 0.9x PEG, for FY21e; we cross-check these implied multiples against CEG's historical average and its peers, and found that:

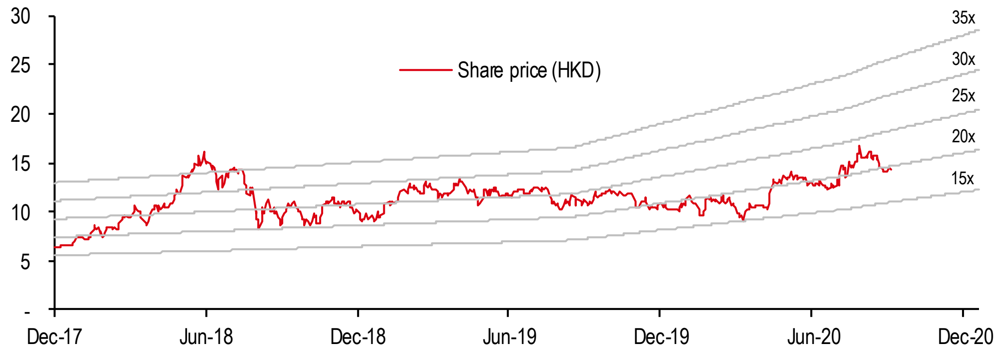
- The implied PE ratio for FY21e is above its historical average (of 24x since listing), as well as the peer average. We believe this is justified given the company's established track record in executing M&A, achieving sustained profit growth, and its leading scale.
- The implied PEG is also higher than its historical average, as well as its peer average. We believe this is justified given our solid and above-average profit growth forecast for the coming three fiscal years, in part driven by acquisitions.

Overall, we believe CEG is a "growth at a reasonable price" (GARP) stock and should continue to re-rate as it delivers on scale expansion and profit growth.

Key downside risks:

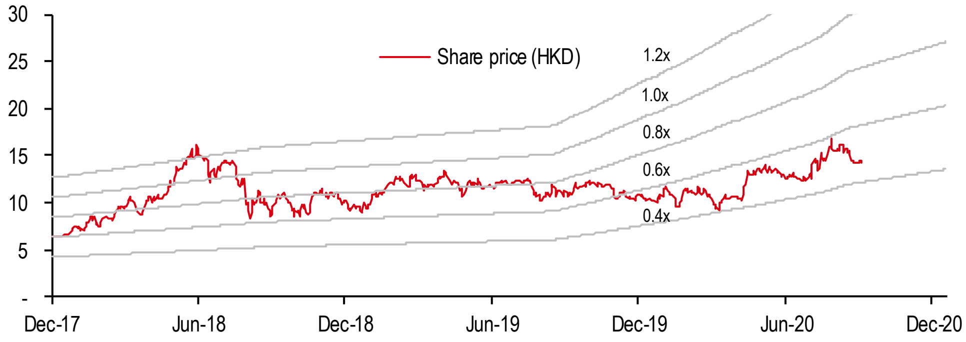
- Slower-than-expected pace of M&A may fail to meet high market expectations and affect the company's reputation.
- Worse-than-expected integration of newly-acquired schools may affect student enrolment growth and margin expansion.
- Larger-than-expected expenditures (mainly "break-up" fees paid to partner public universities) on independent college conversions may probably affect profit.
- The conversion of independent colleges may affect their attractiveness given they are required to terminate their brand sharing with partner public universities.

Exhibit 44: CEG: 1-year forward PE band chart since listing



Source: Bloomberg, HSBC estimates

Exhibit 45: CEG: 1-year forward PEG band chart since listing



Source: Bloomberg, HSBC estimates

Exhibit 46: CEG: Valuation comparison

Company	BBG ticker	Price cur	Mkt cap USDm	PE (x) FY19a	PE (x) FY20e	PE (x) FY21e	PB (x) FY19a	PB (x) FY20e	PB (x) FY21e	Yield (%) FY19a	Yield (%) FY20e	Yield (%) FY21e	PEG (x) FY19a	PEG (x) FY20e	PEG (x) FY21e
Yuhua	6169 HK	HKD	2,887	24.8	20.0	16.4	5.4	5.0	4.3	2.1	2.6	3.1	1.1	0.9	0.7
Hope	1765 HK	HKD	2,238	28.5	22.3	17.1	3.1	2.6	2.4	1.3	1.7	2.3	1.0	0.8	0.6
Kepei	1890 HK	HKD	1,638	24.3	17.8	15.0	4.0	3.4	3.0	1.6	2.2	2.6	0.9	0.7	0.6
NHE	2001 HK	HKD	1,068	18.2	13.5	11.1	3.0	2.4	2.1	1.4	2.1	2.5	0.7	0.5	0.4
Edvantage	382 HK	HKD	791	19.7	18.0	14.0	3.5	2.9	2.4	0.0	1.8	2.3	1.1	1.0	0.8
Minsheng	1569 HK	HKD	626	11.9	9.4	8.0	1.1	1.0	0.9	2.6	3.1	4.0	0.5	0.4	0.4
CEG	839 HK	HKD	3,950	34.2	28.0	19.6	3.8	3.1	2.8	0.9	1.7	2.6	1.1	0.9	0.6
Weighted avg.				**26.7**	**21.4**	**16.3**	**3.9**	**3.3**	**2.9**	**1.4**	**2.1**	**2.7**	**1.0**	**0.8**	**0.6**

Note: HSBC estimates for CEG, Hope, Kepei and Yuhua, Bloomberg consensus for other stocks. Priced as of 17 September 2020.
Source: Bloomberg, HSBC estimates

Hope Education (1765 HK)

- A leading higher education school operator focused on western China where the enrolment ratio is relatively low
- With half of its school portfolio comprising of junior colleges, we believe Hope will benefit from policies to bolster vocational education
- Initiate at Buy with a target price of HKD3.50, implying a 24x FY21e PE and 0.7x FY21e PEG

A leading operator with a focus on vocational education

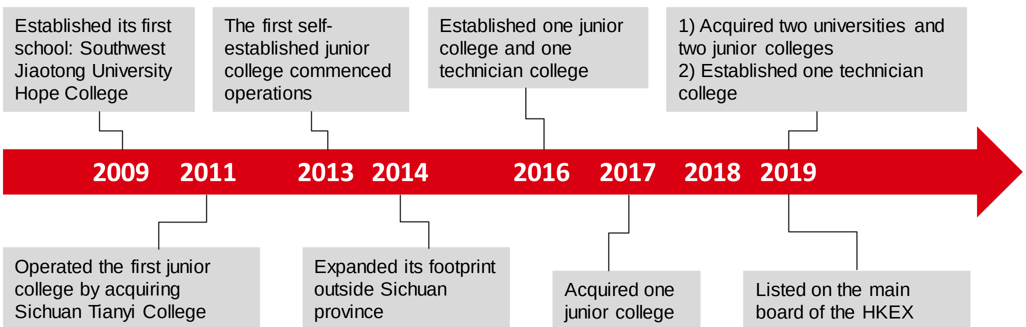
Hope Education is a leading private school operator in mainland China with a focus on higher education and vocational education. The company currently operates 14 schools in mainland China with the number of students enrolled exceeding 140,000 (excluding around 7,000 social students such as veterans) – the second-largest among listed school operators in Hong Kong.

Technician college: Schools that offer occupational qualification certificates to their graduates

The founder, Mr. Wang Huiwu, established the first school – Southwest Jiaotong University Hope College – in Sichuan Province in 2009. In 2011, Hope operated its first junior college. In 2014, Hope acquired its first school outside Sichuan Province. Later in 2016, Hope's first technician college started operations. Overall, Hope's expansion has been a mixture of acquisitions and self-built schools.

Following its listing in 2018, Hope acquired four schools (including one university, one independent college, and two junior colleges) and established its second technician college. Unsurprisingly, this significantly helped to expand the company's scale. In FY17-19, Hope's student enrolment numbers rose from c75,500 to over 140,000, reflecting a CAGR of 36%.

Exhibit 47: Hope: Key milestones of corporate development



Source: Company data, HSBC

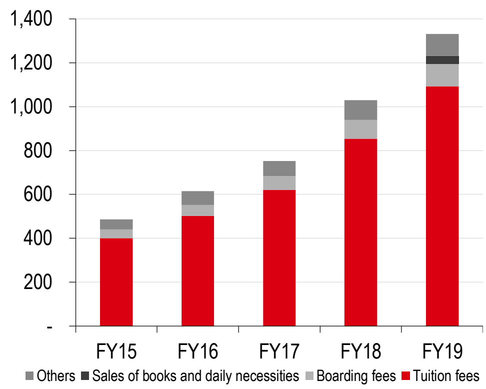
Snapshot of Hope Education (1765 HK)

Started in 2005, Hope Education is a well-established private school operator in mainland China focussing on higher education and vocational education, and is headquartered in Sichuan Province. The company operates five universities, seven junior colleges, and two technician colleges in Sichuan, Guizhou, Shanxi, Jiangsu, Ningxia, and Henan provinces, with a land area of more than 6m square meters. Among these schools, Southwest Jiaotong University Hope College, located in Sichuan Province, is the largest contributor to student enrolment (c15% as of 1HFY20), offering degrees in urban rail transportation operation management, and civil engineering among others. In 1HFY20, the group's total student enrolment exceeded 140,000. The average utilisation rate of school capacity was c82%. Hope Education was listed on the main board of HKEX on 3 August 2018. Mr. Wang Huiwu is the largest shareholder, with c29% shareholding in the group, followed by c28% by West Hope Group.

Key senior management team includes:

- Mr. Xu Changjun, Chairman & Executive Director
- Mr. Wang Huiwu, CEO, President & Executive Director
- Mr. Li Tao, Executive Director & Chief Strategy Officer
- Mr. Jiang Lin, COO & Executive Vice President
- Mr. He Xuan, Chief Financial Officer

Revenue by segment (HKDm)



Source: Company data, HSBC

Forecasts and valuation

(RMBm)	FY19a	FY20e	FY21e	FY22e
Revenue	1,331	1,721	2,828	3,638
EBITDA	939	1,114	1,487	1,877
Core net profit	501	642	893	1,168
Core EPS (RMB)	0.07	0.10	0.12	0.16
DPS (RMB)	0.03	0.04	0.05	0.06

- Our target price of HKD3.50 for Hope is derived from a DCF approach and implies a 24x PE for FY21e

Source: Company data, HSBC estimates

Peer comparison

Company	BBG Ticker	PE (x) FY19a	FY20e	FY21e
CEG	839.HK	34.2	28.0	19.6
Yuhua Education	6169.HK	24.8	20.0	16.4
Kepei Education	1890.HK	24.3	17.8	15.0
New Higher Education	2001.HK	18.2	13.5	11.1
Edvantage Group	382.HK	19.7	18.0	14.0
Minsheng Education	1569.HK	11.9	9.4	8.0
Hope Education	1765.HK	28.5	22.3	17.1
Weighted avg.		**26.7**	**21.4**	**16.3**

Note: Priced as of 17 September 2020
Source: HSBC estimates for CEG, Hope, Kepei, and Yuhua, Bloomberg consensus for other stocks

Do you know?

- The fundamental educational philosophy is "happy learning, happy living and happy working" ("快乐学习，快乐生活，快乐工作").
- The company is a subsidiary of the Hope Group, a large conglomerate with diversified businesses.
- Mr. Xu Changjun, the company's chairman, formerly served as the chief auditor and director of financial supplies of Xihua University and the director of the finance department of East Hope Group, one of the four key business arms of Hope Group.

Key risks and challenges

- Slower-than-expected pace of M&A may fail to meet high market expectations and affect the company's reputation.
- Poor integration of newly-acquired schools may affect student enrolment growth and margin expansion.
- Larger-than-expected expenditure (mainly comprising "break-up" fees paid to partner public universities) on independent college conversions may affect profit.
- Worse-than-expected higher education/vocational education enrolment in the western regions may affect student admission.

Financials & valuation: Hope Education

Buy

Financial statements

Year to	12/2019a	08/2020e	08/2021e	08/2022e
Profit & loss summary (RMBm)				
Revenue	1,331	1,721	2,828	3,638
Gross profit	675	904	1,456	1,892
Other income and gains	281	244	273	307
Operating expenses	-218	-284	-537	-666
EBITDA	939	1,114	1,487	1,877
Depreciation & amortisation	-218	-270	-314	-359
Operating profit	721	843	1,174	1,518
Finance costs, net	-171	-184	-162	-179
PBT	556	668	1,021	1,351
Taxation	-66	-80	-153	-203
Reported net profit	490	587	868	1,148
Core net profit	501	642	893	1,168
Cash flow summary (RMBm)				
Cash flow from operations	697	1,360	1,405	1,749
Capex	-1,023	-1,790	-1,356	-1,150
Cash flow from investment	-1,865	-1,730	-1,306	-1,296
Dividend paid	-105	-298	-257	-357
Cash flow from financing	-65	1,072	-106	-191
Balance sheet summary (RMBm)				
PP&E	4,564	4,919	6,552	7,498
Intangible fixed assets	815	807	1,870	2,462
Cash & cash equivalents	2,852	3,554	3,546	3,809
Total assets	10,857	13,093	14,850	16,680
Contract liabilities	806	1,250	2,075	2,780
Interest-bearing debts	2,597	3,137	3,451	3,796
Net debts	-255	-417	-96	-13
Shareholders' funds	4,562	5,865	6,476	7,267

Ratio, growth and per share analysis

Year to	12/2019a	08/2020e	08/2021e	08/2022e
Y-o-y % change				
Revenue	29.3	29.3	64.3	28.6
Gross profit	44.4	34.0	61.2	29.9
EBITDA	79.4	18.6	33.6	26.2
Operating profit	98.9	16.9	39.1	29.3
Reported net profit	191.7	19.9	47.8	32.3
Core net profit	57.0	28.2	39.0	30.8
Core EPS	33.0	28.2	30.1	30.8
Ratios (%)				
ROE	11.5	12.3	14.5	17.0
ROA	5.2	5.4	6.4	7.4
Gross profit margin	50.7	52.5	51.5	52.0
EBITDA margin	70.5	64.7	52.6	51.6
Operating profit margin	54.2	49.0	41.5	41.7
Core net profit margin	37.6	37.3	31.6	32.1
Gross gearing	56.9	53.5	53.3	52.2
Per share data (RMB)				
EPS	0.07	0.09	0.12	0.16
Core EPS	0.07	0.10	0.12	0.16
DPS	0.03	0.04	0.05	0.06
Book value	0.68	0.81	0.90	1.01

Key forecast drivers

Year to	12/2019a	08/2020e	08/2021e	08/2022e
No. of student enrolled	86,033	140,125	195,153	238,807
Average pricing*	12,190	11,316	13,965	14,631

*Represents average tuition and boarding fees per student

Valuation data

Year to	12/2019a	08/2020e	08/2021e	08/2022e
EV/EBITDA	16.0	13.4	10.2	8.1
PE*	28.5	22.3	17.1	13.1
PEG	1.0	0.8	0.6	0.4
Dividend yield (%)	1.3	1.7	2.3	3.1

* Based on HSBC EPS (diluted)

ESG metrics

Environmental Indicators	12/2019a
GHG emission intensity*	118
Energy intensity*	490
CO_2 reduction policy	Yes
Social Indicators	**12/2019a**
Employee costs as % of revenues	29
Employee turnover (%)	2
Diversity policy	Yes

Governance Indicators	12/2019a
No. of board members	9
Average board tenure (years)	2
Female board members (%)	0
Board members independence (%)	33

Source: Company data, HSBC

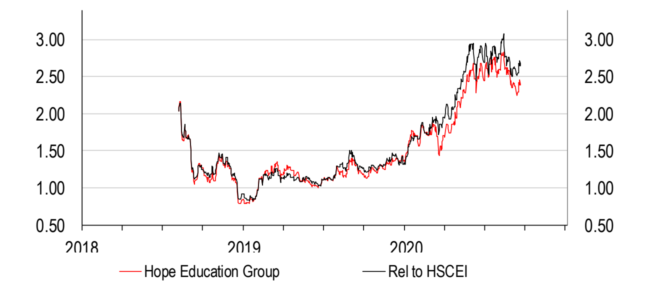
* GHG intensity and energy intensity are measured in kg and kWh respectively against revenue in USD '000s

Issuer information

Share price (HKD)	2.40
Target price (HKD)	3.50
RIC (Equity)	1765.HK
Bloomberg (Equity)	1765 HK
Market cap (USDm)	2,238

Free float	35%
Sector	Discovery Research
Country	China
Analyst	York Pun, CFA
Contact	+852 2822 4396

Price relative



Source: HSBC

Note: Priced at close of 17 Sep 2020

Business analysis

Hope Education operates 14 schools across six provinces in mainland China, and has recently ventured overseas with an acquisition in Malaysia (announced in March 2020). Hope focuses on the western regions in China (including Sichuan, Guizhou, and Ningxia provinces), an area that contributed over 85% of student enrolments in 1HFY20.

Sichuan has been the biggest region for Hope with over half its student enrolments in 1HFY20. Currently, Hope operates six schools in Sichuan Province, of which Southwest Jiaotong University Hope College – its first school – is the largest and contributed c15% of student enrolments; this school also has an independent college and under a cooperation agreement with Southwest Jiaotong University, the school has agreed to pay c15% of its tuition income per annum to Southwest Jiaotong University.

Hope acquired two more independent colleges in 2014. Following that, it added three schools in Guizhou Province during 2016-19; the latter region contributed over 25% of enrolments in 1HFY20.

Well positioned to benefit from the higher education development plan in the western regions

We believe the school operator's regional focus positions it well toward the low but growing enrolment ratio of higher education in the western regions: based on the latest available data, the gross enrolment ratio of higher education was 45% for Sichuan and 36% for Guizhou – and the latter was among the lowest of key provinces in mainland China. Nevertheless, we note there is strong government commitment to change this – in part reflected by the Development Plan of Higher Education in Midwestern Regions (2012-20), which has pledged around RMB10bn in fiscal funding to support 100 higher education institutions in the region. This provides a good growth opportunity for Hope in its home towns.

Exhibit 48: Hope: Overview of school portfolio

Type	Name	Region	Enrolment*	% of student
Private university	Yinchuan University of Energy	Ningxia, China	15,569	
Sub total			**15,569**	**11%**
Independent College	Southwest Jiaotong University Hope College	Sichuan, China	20,454	
	Business College of Guizhou University of Fin & Econ	Guizhou, China	18,128	
	College of Sci & Tech of Guizhou University	Guizhou, China	9,959	
	Shanxi Medical University Jinci College	Shanxi, China	7,149	
Sub total			**55,690**	**40%**
Junior college	Sichuan TOP IT Vocational Institute	Sichuan, China	13,731	
	Tianyi College	Sichuan, China	11,521	
	Sichuan Vocational College of Culture & Com	Sichuan, China	10,349	
	Guizhou Vocational Institute of Tech	Guizhou, China	8,021	
	Sichuan Hope Automotive Vocational College	Sichuan, China	6,563	
	Hebi Automotive Engineering College	Henan, China	5,434	
	Suzhou TOP Institute of Info & Tech	Jiangsu, China	5,012	
Sub total			**60,631**	**43%**
Technician College	Sichuan Hope Automotive Technician College	Sichuan, China	8,235	
	Guizhou Technician College of Tech	Guizhou, China	N/A	
Sub total			**8,235**	**6%**
Total			**140,125**	**100%**

Note: *Student enrolment as of FY19.
Source: Company data, HSBC

Exhibit 49: Hope: Summary of school portfolio

Name	Southwest Jiaotong University Hope College	Business College of Guizhou University of Fin & Econ	Yinchuan University of Energy	Sichuan TOP IT Vocational Institute	Tianyi College	Sichuan Vocational College of Culture & Com	College of Sci & Tech of Guizhou University	Sichuan Hope Automotive Technician College	Guizhou Vocational Institute of Tech	Shanxi Medical University Jinci College	Sichuan Hope Automotive Vocational College	Hebi Automotive Engineering College	Suzhou TOP Institute of Info & Tech	Guizhou Technician College of Tech
Region	Sichuan, China	Guizhou, China	Ningxia, China	Sichuan, China	Sichuan, China	Sichuan, China	Guizhou, China	Sichuan, China	Guizhou, China	Shanxi, China	Sichuan, China	Henan, China	Jiangsu, China	Guizhou, China
Type	Independent College	Independent College	Private university	Junior college	Junior college	Junior college	Independent College	Technician college	Junior college	Independent College	Junior college	Junior college	Junior college	Technician college
Enrolment	20,454	18,128	15,569	13,731	11,521	10,349	9,959	8,235	8,021	7,149	6,563	5,434	5,012	N/A
Area (sqm)	>680k	>550k	>980k	>360k	>820k	>760k	>310k	>250k	>360k	>330k	>250k	>210k	>200k	N/A
Year of start with the group	Built in 2009	Acquired in 2014	Acquired in 2019	Acquired in 2017	Acquired in 2011	Acquired in 2014	Acquired in 2019	Built in 2016	Built in 2016	Acquired in 2014	Built in 2013	Acquired in 2019	Acquired in 2019	Built in 2019
Interests	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	95%	99%	100%
Tuition fees	Undergraduate: RMB13,000-15,000 Junior college: RMB12,000-15,000	Undergraduate: RMB12,000	N/A	Junior college: RMB9,300-12,300	Junior college: RMB8,000-12,000	Junior college: RMB7,000-12,000	N/A	N/A	Junior college: RMB6,800-9,800	Undergraduate: RMB15,120-16,080	Junior college: RMB8,500	N/A	N/A	N/A
Boarding fees	RMB1,000	RMB1,200	N/A	RMB800-1,200	RMB800-1,200	RMB800-1,200	N/A	N/A	RMB1,200	RMB600-1,000	RMB800-1,200	N/A	N/A	N/A
Ranking	78	176	133	N/A	N/A	N/A	97	N/A	N/A	87	N/A	N/A	N/A	N/A
Employment ratio	95.7% (in 2019)	N/A	N/A	Above 98% (in 2019)	N/A	96.45% (in 2019)	N/A	N/A	N/A	N/A	N/A	N/A	97.62% (in 2019)	N/A
Capacity	16,344	11,794	N/A	12,557	17,521	9,152	N/A	N/A	4,720	7,614	11,222	N/A	N/A	N/A
Utilisation ratio	92.1%	85.4%	N/A	97.7%	99.0%	87.0%	N/A	N/A	40.7%	53.4%	59.6%	N/A	N/A	N/A
Remark	Annual fees paid to partner: 15% tuition income + 5% scientific research income	Consideration: RMB100m Annual fees paid to partner: 30% tuition income	Consideration: RMB956m	Consideration RMB1bn	Consideration: RMB110m	Consideration: RMB150m	Consideration: RMB148m	N/A	N/A	Consideration: RMB50m Annual fees paid to partner: 20% tuition income	N/A	Consideration: RMB160m	Consideration: RMB376m	N/A

Note: Student enrolment as of FY19, tuition/boarding fees as of school year 2017/18, ranking based on CUAA (China University Alumni Association) in 2020, employment ratio as of 2019, capacity as of school year 2017/18, utilisation ratio as of school year 2017/18; employment ratio refers to total number of graduates getting employed, divided by the total number of graduates.
Source: Company data, HSBC

Vocational education supported by policy

The development of vocational education had lagged behind general higher education over the past decade. Student enrolment of junior colleges registered a lower CAGR (2%) than universities (4%) in 2010-18, despite a large expansion of junior colleges in 2019. Meanwhile, total student enrolments of secondary vocational schools declined from 22.3m to 15.6m over the same period.

This has started to change. Since 2019, the government has announced a number of policies to stimulate the development of vocational education including improving teaching quality and expanding the number of admissions. Hope Education is well positioned to capture the trend to encourage vocational education, especially the new admission quota expansion in junior colleges and the enlargement of "top-up" programmes (from junior colleges to universities).

Many schools were self-built, and at a fast pace

It takes less than two years for Hope to establish a new school – in our view this is very fast

One thing that differentiates Hope from its peers is its large number of schools, many of which were new and small, and were built by the company itself with a focus on vocational education. Hope has also demonstrated a quick school establishment process: according to its prospectus, it can obtain approvals for new schools in just seven months, and takes another 8-11 months to put the first-phase campus into use. This, in our view, is very fast and may be due to management's solid industrial know-how and efficient implementation. It is also noteworthy that Hope has commenced construction of three more schools, which are expected to start recruiting students in 2021 – this may lay a solid foundation for future development.

Acquisitions have been a key growth driver

Hope has made four acquisitions in the domestic market following its IPO, for a total consideration of over RMB1.6bn. The group's overall capacity utilisation ratio has been maintained at a relatively steady level of around 80%. We calculate that the new acquisitions jointly contributed to around two-thirds of student enrolment growth in FY19.

More recently, the company has signed an agreement in March 2020 to acquire six schools (under the INTI Group) in Malaysia, with total student enrolment of over 16,000; the total consideration was USD140m and this marks the first significant overseas expansion for Hope, which we believe could create synergies if executed well. These overseas schools could offer international progression opportunities for the school's existing students in China, especially for those in the junior colleges. That being said, a relatively low margin in the Malaysian schools could affect its near-term performance. We also expect this to create a large amount of goodwill on its balance sheet.

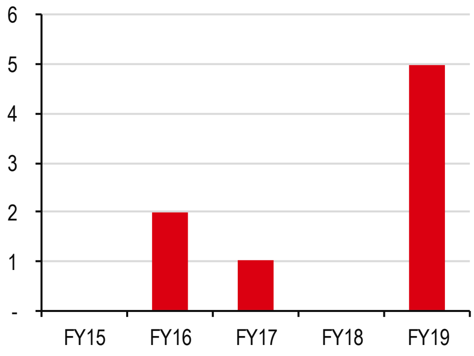
Integration capability to drive higher efficiency and margin

We believe Hope has also demonstrated solid integration capabilities. Sichuan Vocational College of Culture and Communication and the Shanxi Medical University Jinci College – both acquired by the group in 2014 – registered around 20% CAGR in student enrolment in school year 2013/14 to school year 2019/20. We believe this demonstrated its capability in programme offerings, curriculum design, efficient marketing, and increased cooperation with employers to offer internship programmes. For private higher education, we believe employment prospects are the single most important differentiator. Hope achieved an employment ratio of c96% in FY19.

Opportunity from the independent college conversion

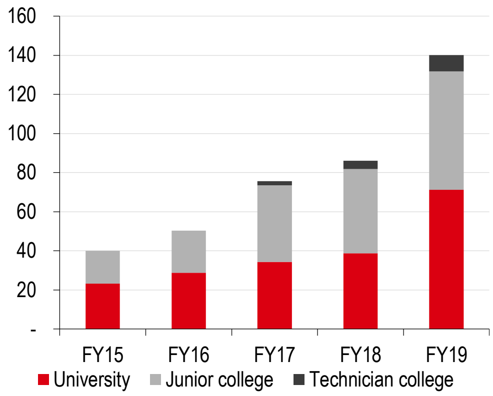
Currently Hope has four independent colleges in its school portfolio – the largest in our coverage universe. The potential conversion of these colleges into private universities requires the termination of the cooperation agreement with their associate public universities. Although this could come with a one-off "break-up" fee, we believe that margins could be enhanced permanently following the conversion. In fact, we estimate the conversion could enhance the group's GPM by around 10%, in a pro-forma basis. Meanwhile, we believe Hope's rich experience in operating these independent colleges and cooperating with public universities could put it at an advantageous position to capture potential opportunities from accelerated conversion requirements.

Exhibit 50: Hope: No. of new schools over FY15-19



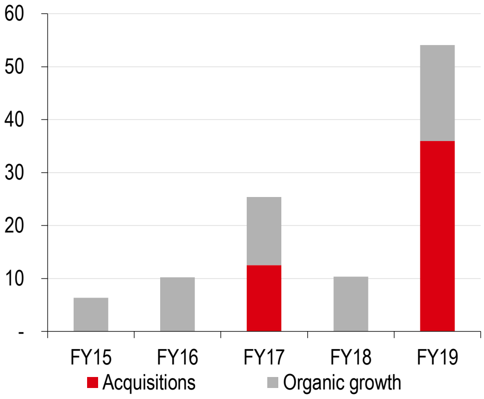
Source: Company data, HSBC

Exhibit 51: Hope: Student enrolment over FY15-19 ('000 persons)



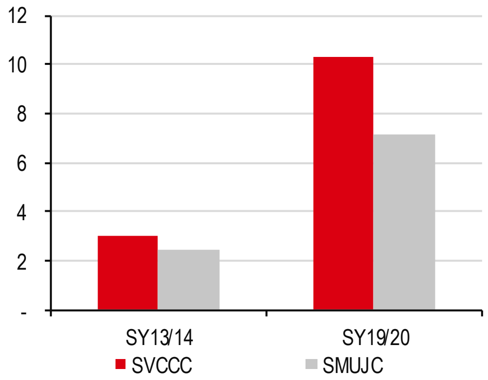
Source: Company data, HSBC

Exhibit 52: Hope: Composition of increased student enrolment ('000 persons)



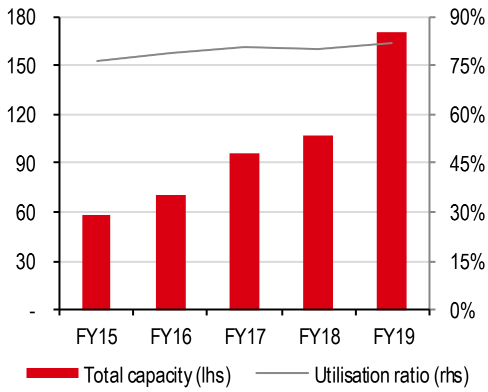
Note: Organic growth includes the enrolment of the new self-established schools and enrolment growth of the existing schools.
Source: Company data, HSBC

Exhibit 53: Hope: Integration capability as reflected from the increased student enrolments in two schools ('000 persons)



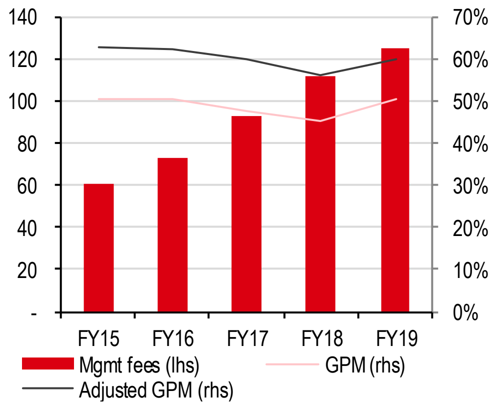
Note: SVCCC=Sichuan Vocational College of Culture & Communication, SMUJC=Shanxi Medical University Jinci College. SY=School year.
Source: Company data

Exhibit 54: Hope: Total capacity ('000 persons) and utilisation ratio



Source: Company data, HSBC

Exhibit 55: Hope: GPM would be higher without the management fee (on the independent colleges)



Source: Company data, HSBC

Financial analysis

Revenue and profit: Hope Education registered a 33% revenue CAGR in FY17-19, driven by both acquisitions and organic growth. We estimate its core net profit, derived after adjusting some non-operational and one-off items, grew faster at a CAGR of 75% over the past three fiscal years.

Costs and margins: Cost of sales (COS) registered a CAGR of 29% in FY17-19. Teaching staff costs are the major component, which contributed over 40% of COS in FY19. Management fees, primarily consisting of annual fees that independent colleges paid to public universities that they cooperated with, was the second-largest component contributing around 20% of COS in FY19. GPM rose to a historical high of 51% in FY19 (from 45% in FY18).

Selling expenses more than doubled in FY19 y-o-y, which was largely attributed to the higher promotion fees for student recruitment. Administrative expenses rose sharply from RMB89m to RMB172m in FY17-19, affected by some non-operational expenses (i.e., listing expenses, equity option expenses). The operating expenses (including selling, general and administrative expenses) to revenue ratio dropped from 28% to 16% in FY18-19, leading the operating profit margin (OPM) to rise from 35% in FY18 to 54% in FY19, and also reflected in a similar rise in the core net profit margin.

Despite a large government subsidy being booked under “deferred income”, the impact to profitability is small

Balance sheet: 80% of Hope's assets comprised of properties, leases, and cash in FY19; debt is the key component of liabilities and contributed over 40% in FY19, followed by payables (24%). The company has significant exposure to government grants booked as liabilities (17% of liabilities in FY19), which were mainly related to building construction and the provision of educational services and were amortised over their asset life times or upon the completion of services. Unlike Tianli Education (see later section for a detailed discussion), we note that Hope Education has adopted a long tenor in amortising deferred income (in relation to assets), and hence this has a small impact on its profitability. Contract liabilities registered a 23% CAGR in FY17-19, echoing the solid growth in tuition and boarding fee income.

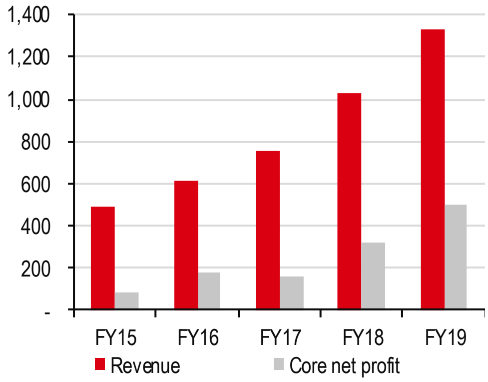
Debts and gearing ratio: Interest-bearing debts of Hope registered an 18% CAGR in FY17-19, whose outstanding balance was cRMB2.6bn in FY19. The company maintained a net cash position after its listing, while its gross gearing ratio, calculated as total debts to total equity, was high at over 50% over the same period (57% in FY19). We estimate after the acquisition of INTI Group – fully funded by additional debt – gross gearing would rise to the highest among the higher educational school operators we cover, at 78%. That being said, the recent share placement would help to alleviate some of the pressure and also position Hope for further acquisition opportunities.

Cash flow: Hope Education has maintained a positive operating cash flow over the past three fiscal years, with an 18% CAGR. Hope also registered a significant cash outflow in investment in FY19 (specifically cRMB950m for capex and M&A, and more than RMB1bn for investment in money market products). This was funded by a surge in financing cash inflows in FY18 (related to the IPO).

Placement: On 6 August 2020, the company said it plans to issue 465m placing shares (6.9% of existing capital or 6.4% of enlarged capital) at a price of HKD2.55 per share, representing an equity fund-raising of cHKD1.2bn, which was primarily for capital structure improvement and potential M&A opportunities.

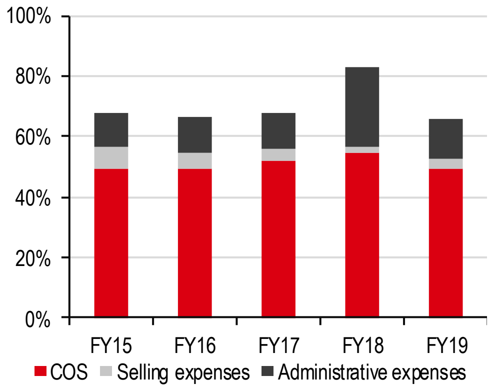
Dividends: We calculate that Hope distributed 30-40% of its core earnings in FY18-19.

Exhibit 56: Hope: Revenue and core net profit (RMBm), FY15-19



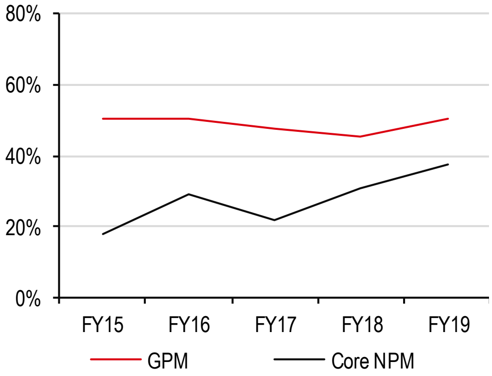
Source: Company data, HSBC

Exhibit 57: Hope: Operating costs as % of revenue, FY15-19



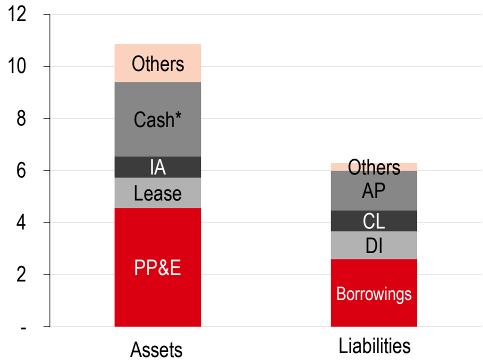
Source: Company data, HSBC

Exhibit 58: Hope: Margins, FY15-19



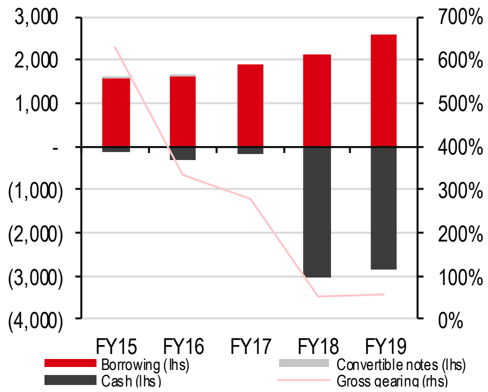
Source: Company data, HSBC

Exhibit 59: Hope: Balance sheet structure (RMBm), FY19



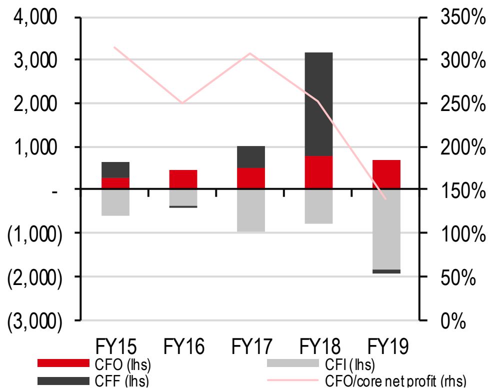
Note: *Include structured deposits. IA=Intangible assets, AP=Account payables, CL=Contracted liabilities, DI=Deferred income.
Source: Company data, HSBC

Exhibit 60: Hope: Debt-structure (RMBm) and gearing ratio, FY15-19



Note: Gross gearing ratio is calculated as total interest-bearing debt to total equity.
Source: Company data, HSBC

Exhibit 61: Hope: Cash flow breakdown (RMBm), FY15-19



Source: Company data, HSBC

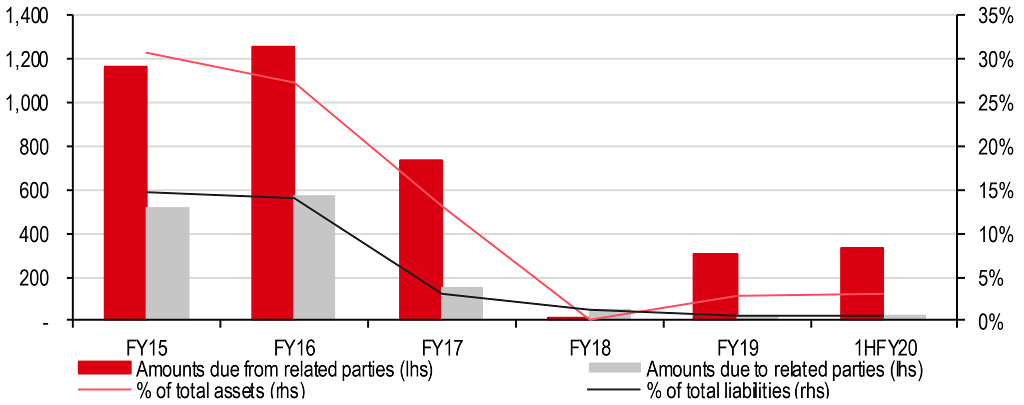
Related-party transactions

Hope is a subsidiary of West Hope Group, a business arm of Hope Group – a conglomerate focussed on agriculture, education, and real estate development.

Prior to Hope Education's IPO, there have been notable related-party transactions between itself and other related companies, which have declined notably after listing:

- Amounts due from related parties and amounts due to related parties came to RMB733m and RMB155m in FY17, respectively, down 42% and 52% y-o-y, respectively. These declined even further after listing.

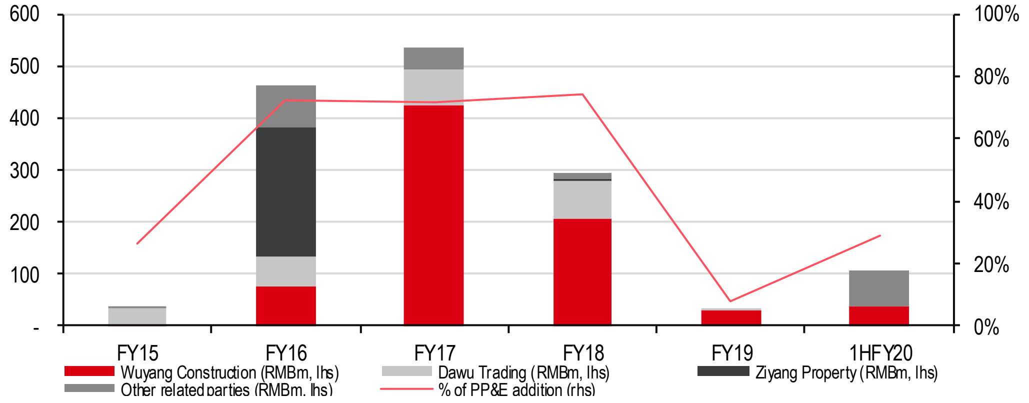
Exhibit 62: Hope: Balance of related-party transactions over FY15-1HFY20 (RMBm)



Source: Company data, HSBC

- Hope had significant procurements from its related parties in FY16-17, which again has declined substantially. Three key parties – namely Wuyang Construction, Dawu Trading, and Ziyang Property – were the key contributors. Note the procurement amount from these related parties, which contributed to the majority of the increase in property, plant and equipment, has fallen in recent years, but still contributes a meaningful part. These were generally for construction purposes (i.e., school campuses) and have helped to speed up its setup time, according to Hope's prospectus.

Exhibit 63: Hope: Procurement of PP&E from related parties over FY15-1HFY20 (RMBm)



Note: Excludes the addition from acquisition of subsidiaries.
Source: Company data, HSBC

1HFY20 results

Hope Education has recently changed its fiscal year end to 31 August (from December) to align with the school year in mainland China. The company registered 46% y-o-y revenue growth in 1HFY20, driven by growth in its existing portfolio and consolidation of new schools. GPM rose 1.7ppt y-o-y to c53% and the operating expenses to revenue ratio declined 4.1ppt y-o-y. We calculate its core net profit rose 67% y-o-y.

Exhibit 64: Hope: Summary of results in 1HFY20 (RMBm, unless otherwise specified)

	1HFY19	1HFY19 (pro-forma)	1HFY20	y-o-y	y-o-y (pro-forma)
Key income statement					
Revenue	595	596	871	46%	46%
-Tuition fees	504		720	43%	
-Boarding fees	44		63	45%	
-Sales of books and daily necessities	-		24	N/A	
-Others	47		63	34%	
COS	(279)	(293)	(413)	48%	41%
Gross profit	316	303	457	45%	51%
Other income	101		172	70%	
Selling expenses	(12)	(10)	(30)	151%	205%
Administrative expenses	(69)	(114)	(116)	68%	1%
Other expenses	(3)		(11)	260%	
Operating profit	332		472	42%	
Finance costs	(74)	(76)	(102)	38%	34%
Share of interests	-		8	N/A	
PBT	258		378	46%	
Taxation	(15)		(44)	199%	
MI	0		0	1%	
Reported net profit	243	151	334	37%	122%
Core net profit	258	229	383	48%	67%
Core EPS (RMB)	0.04	0.03	0.06	46%	
DPS (HKD)	-	-	-	N/A	N/A
Key balance sheet					
PP&E	3,467		4,633	34%	
Cash and cash equivalents	2,613		2,270	-13%	
Debts	2,132		2,496	17%	
Contract liabilities	120		638	433%	
Total liabilities	3,761		5,963	59%	
Total equity	4,314		4,571	6%	
Key ratios and business driver					
GPM	53.1%	50.9%	52.5%	-0.5ppt	1.7ppt
Operating expenses to revenue	13.6%	20.9%	16.7%	3.1ppt	-4.1ppt
OPM	55.9%		54.3%	-1.6ppt	
Core NPM	43.5%	38.4%	44.0%	0.5ppt	5.6ppt
Gross gearing	49.4%		54.6%	5.2ppt	
Net gearing	-11.2%		4.9%	16.1ppt	
Student enrolment	85,998	86,033	140,125	63%	63%
Average pricing (RMB)	6,372	N/A	5,592	-12%	
No. of schools	13		14	8%	
Capacity utilisation	82.1%	80.0%	82.0%	-0.1ppt	2.0ppt

Source: Company data, HSBC

Forecasts and valuation

We forecast the future financial performance of Hope Education based on the following considerations:

- **Revenue:** We forecast 40% revenue CAGR for Hope in FY19-22e, driven by:
  - **41% CAGR in student enrolments**: driven by organic growth in its existing schools (c59% of increment), contribution from the INTI Group, which we estimate will be consolidated from FY21e (c13% of increment) plus the impact of other newly acquired schools (c28% of increment). For the latter, we assume two acquisitions with a combined total of 20,000 students each year, in both FY21e and FY22e. These new acquisitions assumptions have taken into account Hope's track record, funding capability, and business focus.
  - **6% CAGR in average pricing,** driven mainly by the uplift in existing schools.
  - **26% CAGR in other income**.
- **Margins:** We expect gross profit margins (GPM) to increase by around 1.3ppt over FY19-22e, mainly driven by margin expansion from existing schools, but partly offset by lower margins in new acquisitions. Meanwhile, with the lower profitability of INTI Group, we forecast the core NPM to drop by c5.5ppt over this time period.

Overall, we forecast Hope's core net profit to grow 33% during this time period. Note we haven't assumed any potential impact from the potential conversion of independent colleges as well as the potential conversion of its schools into "for-profit" ones.

Exhibit 65: Hope: Summary of financial forecasts (RMBm, unless otherwise specified)

	FY19	FY20e	FY21e	FY22e	CAGR (FY19-22e)
Key income statement					
Revenue	1,331	1,721	2,828	3,638	40%
COS	(657)	(818)	(1,372)	(1,746)	39%
Gross profit	675	904	1,456	1,892	41%
Other income and gains	281	244	273	307	3%
Operating expenses	(218)	(284)	(537)	(666)	45%
Operating profit	721	843	1,174	1,518	28%
EBITDA	939	1,114	1,487	1,877	26%
Finance costs, net	(171)	(184)	(162)	(179)	2%
Taxation	(66)	(80)	(153)	(203)	46%
Reported net profit	490	587	868	1,148	33%
Core net profit	501	642	893	1,168	33%
Core EPS (RMB)	0.07	0.10	0.12	0.16	30%
DPS (RMB)	0.03	0.04	0.05	0.06	32%
Key ratios and items					
GPM	50.7%	52.5%	51.5%	52.0%	1.3ppt
Operating expenses to revenue	16.4%	16.5%	19.0%	18.3%	1.9ppt
OPM	54.2%	49.0%	41.5%	41.7%	-12.5ppt
EBITDA margin	70.5%	64.7%	52.6%	51.6%	-18.9ppt
Core NPM	37.6%	37.3%	31.6%	32.1%	-5.5ppt
Gross gearing	56.9%	53.5%	53.3%	52.2%	-4.7ppt
Student enrolment	86,033	140,125	195,153	238,807	41%
Average pricing per student (RMB)	12,190	11,316	13,965	14,631	6%

Source: Company data, HSBC estimates

Valuation

We use a discounted cash flow (DCF) methodology to value Hope as we believe this better captures its strong cash generating capabilities and long-term growth outlook. The key assumptions in our three-stage DCF model are as follows:

- Stage one – we use our explicit forecasts for FY2021-22e
- Stage two – we assume a FCFF CAGR of 12% over the medium term, lower than the y-o-y growth in operating cash flow of 27% in FY22e, as we factor in the potential impact of adopting the "for-profit" school classification and the subsequent reduced growth opportunities. Nevertheless, this is above its higher education peers average (at 10%), in view of Hope's solid track record in capacity expansion and improving economic returns.
- Stage three – we assume a terminal growth rate of 2%.

Our 10.5% cost of equity assumption is based on a beta of 1.6x, a risk-free rate of 2.5%, and a market risk premium of 5%. We also assume that interest-bearing debt contributes 30% of capital structure over the long term bearing an interest rate of 4%. Together, we derive a WACC of 8.3%. Overall, we derive a target price of HKD3.50 per share, which implies a 24x PE for FY21e. With 46% upside from current levels, we initiate coverage on the stock with a Buy rating.

Exhibit 66: Hope: DCF assumptions

	FY21e	FY22e	CAGR (medium-term)	Terminal
FCFF (RMBm)	187	751	12%	2%
WACC				8.3%
Enterprise value (RMBm)				21,362
Equity value (RMBm)				21,454
Implied fair value (HKD/share)				**3.5**
TP implied PE (FY21e)				24x
TP implied PEG (FY21e, over FY19-21e)				0.7x
TP implied dividend yield (FY21e)				1.7%
TP implied EV/EBITDA (FY21e)				14x

Source: HSBC estimates

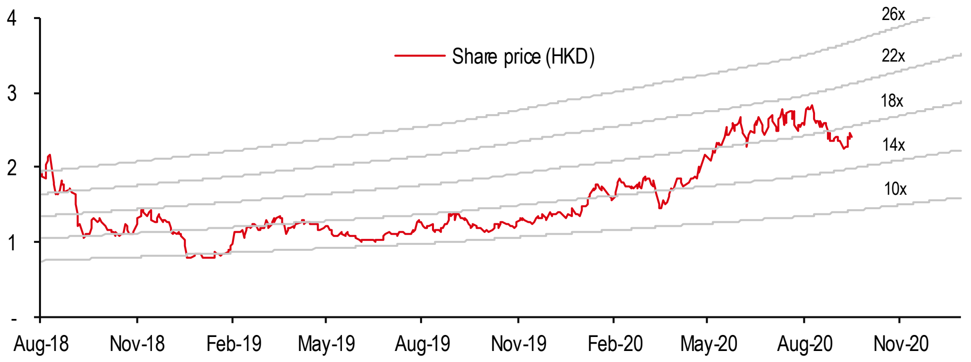
Meanwhile, we cross-check the implied PE against both Hope's historical average and its peers, and found that:

- The implied PE ratio of Hope for FY21e is higher than its historical average and average implied PE of its peers. We think this is justified given Hope's faster profit growth forecast.
- Its implied PEG multiple is in line with its peers. This, in our view, reflects Hope's strong track record, but is partly offset by its smaller scale (especially when compared to CEG and Yuhua). In addition, it probably takes more time to prove Hope's capability in integrating with newly acquired and/or newly established schools.

Key downside risks:

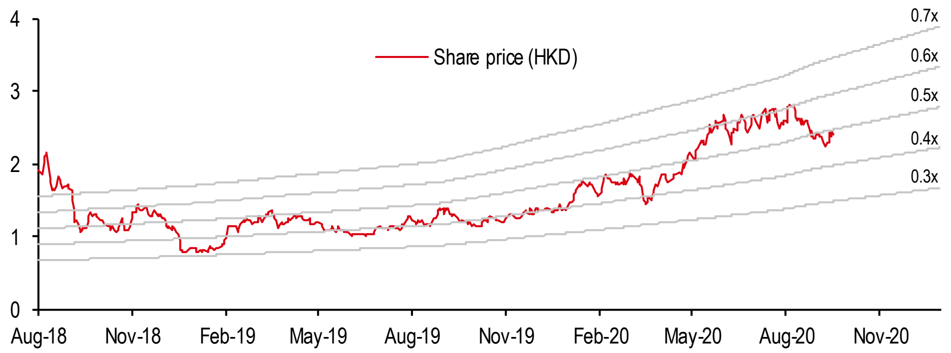
- Slower-than-expected pace of M&A may fail to meet high market expectations and affect the company's reputation.
- Worse-than-expected integration of the newly-acquired schools may affect the student enrolment growth and margin expansion.
- Large expenditure (mainly comprising "break-up" fees paid to partner public universities) on independent college conversions may affect profit.
- Worse-than-expected higher education/vocational education in the western regions may affect student admissions.
- Lower government support may reduce government subsidies in the future.

Exhibit 67: Hope: 1-year forward PE band chart since listing



Source: Bloomberg, HSBC estimates

Exhibit 68: Hope: 1-year forward PEG band chart since listing



Source: Bloomberg, HSBC estimates

Exhibit 69: Hope: Valuation comparison

Company	BBG ticker	Price cur	Mkt cap USDm	PE (x) FY19a	PE (x) FY20e	PE (x) FY21e	PB (x) FY19a	PB (x) FY20e	PB (x) FY21e	Yield (%) FY19a	Yield (%) FY20e	Yield (%) FY21e	PEG (x) FY19a	PEG (x) FY20e	PEG (x) FY21e
CEG	839 HK	HKD	3,950	34.2	28.0	19.6	3.8	3.1	2.8	0.9	1.7	2.6	1.1	0.9	0.6
Yuhua	6169 HK	HKD	2,887	24.8	20.0	16.4	5.4	5.0	4.3	2.1	2.6	3.1	1.1	0.9	0.7
Kepei	1890 HK	HKD	1,638	24.3	17.8	15.0	4.0	3.4	3.0	1.6	2.2	2.6	0.9	0.7	0.6
NHE	2001 HK	HKD	1,068	18.2	13.5	11.1	3.0	2.4	2.1	1.4	2.1	2.5	0.7	0.5	0.4
Edvantage	382 HK	HKD	791	19.7	18.0	14.0	3.5	2.9	2.4	0.0	1.8	2.3	1.1	1.0	0.8
Minsheng	1569 HK	HKD	626	11.9	9.4	8.0	1.1	1.0	0.9	2.6	3.1	4.0	0.5	0.4	0.4
Hope	1765 HK	HKD	2,238	28.5	22.3	17.1	3.1	2.6	2.4	1.3	1.7	2.3	1.0	0.8	0.6
Weighted avg.				**26.7**	**21.4**	**16.3**	**3.9**	**3.3**	**2.9**	**1.4**	**2.1**	**2.7**	**1.0**	**0.8**	**0.6**

Note: HSBC estimates for CEG, Hope, Kepei and Yuhua, Bloomberg consensus for other stocks. Priced as of 17 September 2020.
Source: Bloomberg, HSBC estimates

Kepei Education (1890 HK)

- Leveraging the upgrade to its key school, Kepei has registered strong growth in recent years with an industry-leading profit margin
- We believe its near-term growth is secured by the Harbin School acquisition, capacity expansion and growth in its adult courses
- Initiate at Buy with a target price of HKD8.50, implying a 20x FY21e PE and 0.7x FY21e PEG

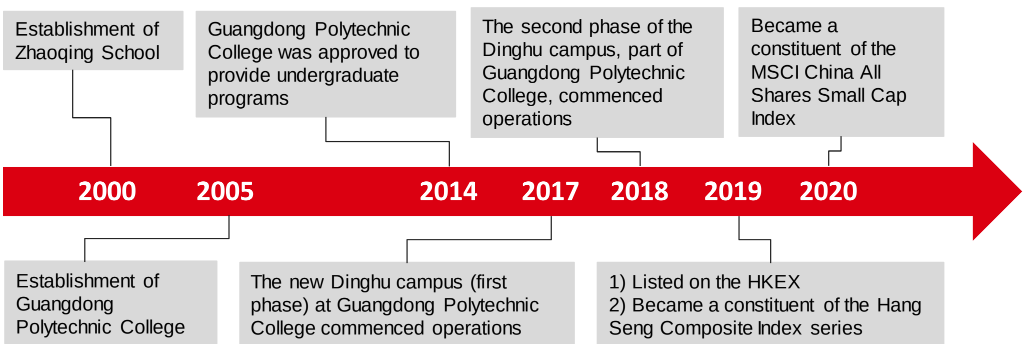
Solid organic growth

Adult programme: part-time degree/diploma programmes that charge much lower fees

Kepei Education is a leading higher education school operator that's based in Guangdong with a simple and concentrated school portfolio. It operates one university and one secondary vocational school, both located in Zhaoqing, Guangdong. In school year 2019/20, student enrolment reached nearly 58,000, including c20,000 students from adult courses.

Kepei Education started in 2000 when the founder Mr. Ye Nianqiao established the first school – Zhaoqing Science and Technology Secondary Vocational School (i.e., the Zhaoqing School) – to provide secondary vocational education services. In 2005, Kepei expanded its business presence through the establishment of Guangdong Polytechnic College, which provides junior college education. In 2014, Guangdong Polytechnic College obtained approval to upgrade from a junior college to a private university and this has driven the expansion in subsequent years. Its student enrolment increased from around 36,000 to nearly 58,000 in school year 2017/18 to school year 2019/20, implying a CAGR of 27%. Note that enrolment growth was mainly spearheaded by Guangdong Polytechnic School, whose enrolment increased from c28,500 to over 50,000 (including adult student courses).

Exhibit 70: Kepei: Key milestones of corporate development



Source: Company data, HSBC

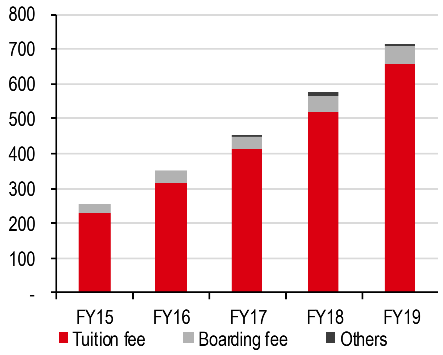
Snapshot of Kepei Education (1890 HK)

Started in 2000, Kepei Education is a private school operator headquartered in Guangdong with a focus on higher education and vocational education. The company currently operates a university and a vocational high school in Guangdong Province, with a school area of over 1.1m square meters. In 2020, student enrolments exceeded 57,000. The average utilisation rate of school capacity was c91%. Guangdong Polytechnic College, with engineering as its key major, is the main contributor to student enrolment (c90% in 2020). Kepei Education was listed on the main board of HKEX on 25 January 2019. Mr. Ye Niaoqiao, the company's founder, and his wife jointly have around a 52% shareholding in the company.

Key senior management team includes:

- Mr. Ye Nianqiao, Chairman, ED & General manager
- Dr. ZhangXiangwei, ED & COO
- Mr. Zha Donghui, ED & Deputy general manager
- Ms. Li Yan, ED, CFO & Deputy general manager
- Mr. Ye Xun, ED & Deputy general manager

Revenue by segment (RMBm)



Source: Company data, HSBC

Forecasts and valuation

(RMBm)	FY19a	FY20e	FY21e	FY22e
Revenue	714	959	1,276	1,465
EBITDA	533	734	894	1,074
Core net profit	450	618	736	885
Core EPS (RMB)	0.23	0.31	0.37	0.44
DPS (RMB)	0.09	0.12	0.15	0.18

- Our target price of HKD8.50 per share for Kepei Education is derived from a DCF approach and implies a 20x PE for FY21e

Source: Company data, HSBC estimates

Peer comparison

Company	BBG Ticker	PE (x) FY19a	FY20e	FY21e
CEG	839.HK	34.2	28.0	19.6
Yuhua Education	6169.HK	24.8	20.0	16.4
Hope Education	1765.HK	28.5	22.3	17.1
New Higher Education	2001.HK	18.2	13.5	11.1
Edvantage Group	382.HK	19.7	18.0	14.0
Minsheng Education	1569.HK	11.9	9.4	8.0
Kepei Education	1890.HK	24.3	17.8	15.0
Weighted avg		**26.7**	**21.4**	**16.3**

Note: Priced as of 17 September 2020
Source: HSBC estimates for CEG, Hope, Kepei, and Yuhua, Bloomberg consensus for other stocks

Do you know?

- The company's educational philosophy is "benevolence, truth-seeking, perseverance and innovation" ("修德、求是、笃行、创新").
- Kepei used to own part of Jiangxi Hongzhou Vocational College – the sole higher vocational college in Jiangxi Province – but sold its stake in 2017 before its IPO.
- Dr. Zhang Xiangwei, the company's COO, has 30 years of experience in the education industry and formerly served as the principal of Shantou University and Guangdong University of Technology (both are public universities in Guangdong Province).
- Mr. Li Yan, the company's CFO, was previously an accounting teacher in Guangdong Polytechnic College.
- The company's share price has more than doubled since its IPO in January 2019 (priced as at 17 September 2020).

Key risks and challenges

- Slower-than-expected expansion of the existing school portfolio may affect the company's revenue growth.
- The high capacity utilisation ratio may hinder the company's expansion.
- The high student-to-teacher ratio may affect the student admission process; and a lower ratio may require larger teaching staff costs that could affect margins.
- Larger-than-expected capital expenditure for capacity expansion may affect cash flow and gearing ratio.
- Failure to integrate Harbin Institute of Petroleum may affect the company's reputation and could increase its operating expenses.

Financials & valuation: Kepei Education

Buy

Financial statements

Year to	12/2019a	12/2020e	12/2021e	12/2022e
Profit & loss summary (RMBm)				
Revenue	714	959	1,276	1,465
Gross profit	482	671	867	1,011
Other income and gains	81	87	53	63
Operating expenses	-102	-110	-144	-157
EBITDA	533	734	894	1,074
Depreciation & amortisation	-73	-86	-118	-157
Operating profit	460	647	776	918
Finance costs, net	-2	-13	-27	-27
PBT	458	634	753	904
Taxation	-2	-6	-8	-9
Reported net profit	456	628	746	895
Core net profit	450	618	736	885
Cash flow summary (RMBm)				
Cash flow from operations	539	873	1,010	1,170
Capex	-210	-1,780	-530	-500
Cash flow from investment	-414	-1,780	-530	-500
Dividend paid	-176	-179	-245	-292
Cash flow from financing	543	307	6	-438
Balance sheet summary (RMBm)				
PP&E	1,423	2,403	2,792	3,113
Intangible fixed assets	0	690	690	690
Cash & cash equivalents	1,112	517	1,012	1,255
Total assets	3,423	4,536	5,464	6,096
Contract liabilities	412	568	710	853
Interest-bearing debt	100	600	880	763
Net debt	-1,012	83	-132	-492
Shareholders' fund	2,790	3,239	3,739	4,342

Ratio, growth and per share analysis

Year to	12/2019a	12/2020e	12/2021e	12/2022e
Y-o-y % change				
Revenue	24.1	34.2	33.1	14.9
Gross profit	23.7	39.3	29.3	16.6
EBITDA	29.3	37.6	21.9	20.1
Operating profit	31.2	40.6	19.9	18.2
Reported net profit	33.4	37.6	18.8	20.0
Core net profit	30.1	37.4	19.1	20.3
Core EPS	4.5	36.3	18.6	20.1
Ratios (%)				
ROE	21.3	20.5	21.1	21.9
ROA	15.6	15.5	14.7	15.3
Gross profit margin	67.5	70.0	68.0	69.0
EBITDA margin	74.7	76.6	70.1	73.3
Operating profit margin	64.5	67.5	60.9	62.6
Core net profit margin	62.9	64.4	57.7	60.4
Gross gearing	3.6	18.5	23.5	17.6
Per share data (RMB)				
EPS	0.23	0.32	0.37	0.45
Core EPS	0.23	0.31	0.37	0.44
DPS	0.09	0.12	0.15	0.18
Book value	1.39	1.62	1.87	2.17

Key forecast drivers

Year to	12/2019a	12/2020e	12/2021e	12/2022e
No. of student enrolled	57,924	88,204	102,238	115,144
Average pricing*	13,070	12,623	12,887	13,075

*Represents average tuition and boarding fees per student

Valuation data

Year to	12/2019a	12/2020e	12/2021e	12/2022e
EV/EBITDA	19.1	15.4	12.4	10.0
PE*	24.3	17.8	15.0	12.5
PEG	0.9	0.7	0.6	0.6
Dividend yield (%)	1.6	2.2	2.6	3.2

* Based on HSBC EPS (diluted)

ESG metrics

Environmental Indicators	12/2019a
GHG emission intensity*	145
Energy intensity*	240
CO_2 reduction policy	Yes
Social Indicators	**12/2019a**
Employee costs as % of revenues	18
Employee turnover (%)	10
Diversity policy	Yes

Governance Indicators	12/2019a
No. of board members	9
Average board tenure (years)	2
Female board members (%)	11
Board members independence (%)	33

Source: Company data, HSBC

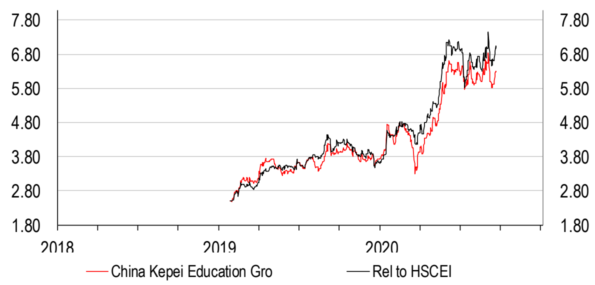
* GHG intensity and energy intensity are measured in kg and kWh respectively against revenue in USD '000s

Issuer information

Share price (HKD)	6.30
Target price (HKD)	8.50
RIC (Equity)	1890.HK
Bloomberg (Equity)	1890 HK
Market cap (USDm)	1,638

Free float	25%
Sector	Discovery Research
Country	China
Analyst	York Pun, CFA
Contact	+852 2822 4396

Price relative



Source: HSBC
Note: Priced at close of 17 Sep 2020

Business analysis

Kepei has a long history in operating its existing schools:

- **Guangdong Polytechnic College:** This institution contributed c90% of Kepei's total student enrolment, and provides undergraduate education services as well as junior colleges and adult college programmes. The school also cooperates with multiple higher education institutions to provide its junior college students with "top-up programmes" (from junior college diplomas to undergraduate degrees). Frost & Sullivan data taken from Kepei's own IPO prospectus shows that the school was ranked No.1 amongst 61 private universities (excluding independent colleges) in southern China in terms of the number of new admissions and student enrolments as of school year 2017/18. In school year 2019/20, the school's student enrolment exceeded 50,000 (including c20,000 from adult courses) and has a capacity utilisation of 91%.
- **Zhaoqing School:** Being the first school operated by Kepei with an even longer operating history, this school currently provides secondary vocational education programmes with 11 majors (including automotive services, e-commerce, and electron mechanical application). It also offers "3+2" programmes with Guangdong Polytechnic College: following the completion of the 3-year secondary vocational training, qualified graduates can take the national college entrance exam for adults (成人高考) to advance to junior college programmes for two years of additional studies in the Guangdong Polytechnic College, and will receive the junior college diploma upon graduation. It is worth noting that the number of students enrolled in the "3+2" programmes is equal to nearly one-third of the total student enrolments of Zhaoqing School in school year 2019/20.

Exhibit 71: Kepei: Summary of school portfolio

	Guangdong Polytechnic College	Zhaoqing School
Region	Guangdong, China	Guangdong, China
Type	Private university	Secondary vocational school
Student enrolment (in SY19/20)	Undergraduate programme: 23,823 Junior college programme: 6,833 On-campus adult college programme: 4,783 Off-campus adult college programme 14,876	Secondary vocational programme: 7,609
Land area (square meter)	>1m	>60k
Year of start with the group	Established in 2005	Established in 2000
Equity interests	100%	100%
Tuition fees (SY19/20)	Undergraduate programme: RMB23,800 Junior college programme: RMB17,800 On-campus adult college programme: RMB5,900-13,300 Off-campus adult college programme: RMB680-980	Secondary vocational programme: RMB7,200-11,100
Boarding fees (SY19/20)	RMB1,800-2,000	RMB1,170-1,570
Ranking in CUAA (2020)	138	N/A
Employment ratio (SY18/19)	97.8%	N/A
Capacity (SY19/20)	29,148	7,288
Utilisation ratio (SY19/20)	91.1%	92.7%
Remark	Student-to-teacher ratio: 20.2 (in SY18/19)	Student-to-teacher ratio: 16.7 (in SY18/19)

Note: Employment ratio refers to the total number of graduates obtaining employment in business entities and governmental or non-governmental institutions, pursuing further studies or becoming self-employed, divided by the total number of graduates. SY=School year.
Source: Company data, HSBC

Solid growth driven by the upgrade

Note Kepei has registered a mixed performance in its two schools in recent years: Guangdong Polytechnic College has seen its student enrolment number rise from c18,000 to over 50,000 in school year 2015/16 to school year 2019/20, representing a CAGR of c30%; this has not only surpassed the growth of its Zhaoqing School but was also ahead of some other schools – i.e. Guangdong Baiyun University under China Education Group recorded almost flat growth over the same period.

The rapid expansion of Guangdong Polytechnic College was due to its upgrade in 2014, which has enabled the school to offer undergraduate programmes. Contribution of the undergraduate programmes (in student enrolment) increased from 18% in school year 2015/16 to 41% in school year 2019/20; meanwhile, this has also led to growth in tuition and boarding fees – for instance, tuition fees for undergraduate programmes of Guangdong Polytechnic College rose from RMB17,500-18,000 in school year 2015/16 to RMB23,800 in school year 2019/20 – we calculate that the average price per student has risen 14% from FY15 to FY18, and only dropped after that (due to the expansion of its adult student courses).

We estimate that the new campus will add 10,000 student capacity, or c30% of its existing capacity

Kepei has also recently disclosed that the total admission quota of Guangdong Polytechnic College has increased 64% (or c7,000) y-o-y to c17,800 for school year 2020/21 (including 11,200 for undergraduate programmes and 6,600 for junior college programmes). This, in our view, is underpinned by the solid operating track record in Guangdong Polytechnic College and helps to secure a near-term growth outlook; it is also worth noting that the new campus of Guangdong Polytechnic College will commence operation in the coming years, with an additional capacity of 10,000 students (see Appendix 4 for the summary of the capacity expansion plans of different schools).

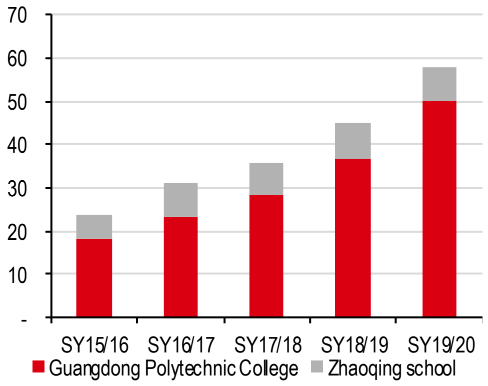
Industry-leading profit margins

Kepei has maintained an industry-leading gross profit margin (GPM) over the past five fiscal years, with an average GPM of 67% (vs. an average of 53% of the other three higher education school operators in our coverage universe). We believe this is largely attributable to its concentrated and well-operated school portfolio, both of which have achieved high capacity utilisation rates. Given its scale benefit, we note the staff costs – which primarily consist of teacher salaries – only accounted for 17% of revenue in FY19, which is markedly lower than the 30% average of the other three higher education peers we cover. We believe this could be partly due to the improving and leading contribution of undergraduate programmes that have higher margins.

The low staff cost ratio, in our view, is also explained by a relatively high student-to-teacher ratio, which we estimated to be equal to around 20x for the Guangdong Polytechnic College in school year 2019/20. While it is not uncommon to see a high student-to-teacher ratio amongst the private higher education schools, this can be a particular concern if the education bureau exerts pressure to reduce this ratio significantly.

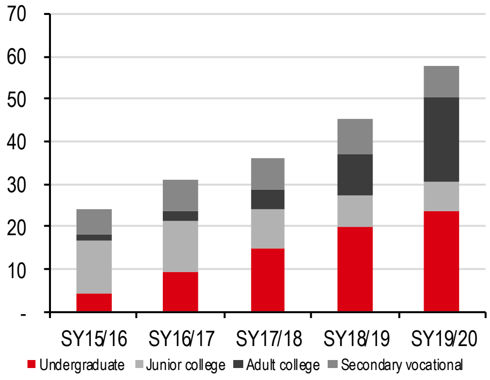
Looking forward, we believe Kepei is well positioned to benefit from the rising enrolment ratio in Guangdong – where the existing level is lower than the national average – as well as its capacity expansion plan; its focus in the vocational education also positions it well towards policymaker's support for enhanced vocational education, including quota expansion in the junior colleges and the "top-up" programme. Nevertheless, and not unlike its peers, we note Kepei is also pursuing external M&A to supplement its growth – while this seems to support the growth outlook, it also casts uncertainties over profitability and synergies. We discuss in greater detail about these potential deals later in the report.

Exhibit 72: Kepei: Student enrolment number increased steadily



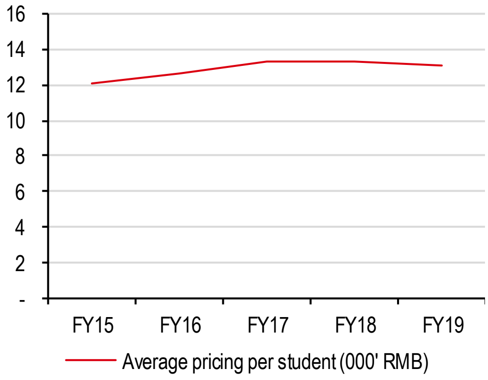
Note: Unit: '000 students. SY=School year.
Source: Company data, HSBC

Exhibit 73: Kepei: School upgrade has driven student enrolment growth



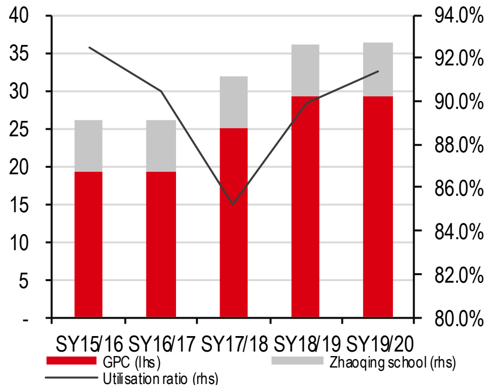
Note: Unit: '000 students. SY=School year.
Source: Company data, HSBC

Exhibit 74: Kepei: Average pricing per student has risen from FY15 to FY19



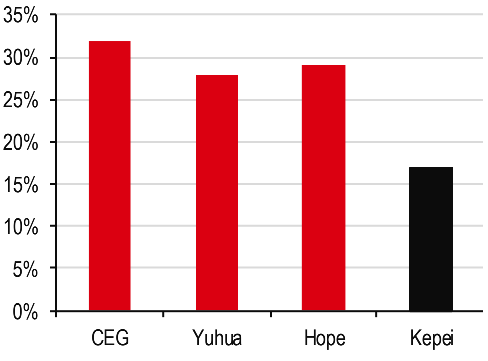
Source: Company data, HSBC

Exhibit 75: Kepei: Capacity utilisation remains at a high level



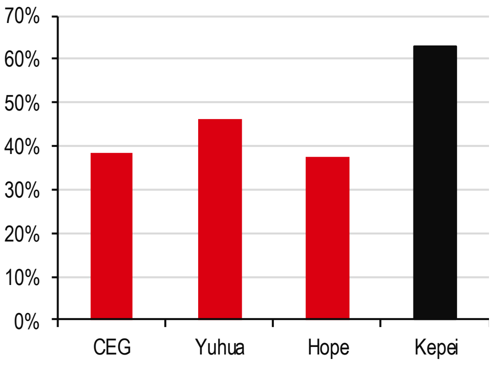
Note: Unit: '000 persons. GPC=Guangdong Polytechnic College. *Excluding the off-campus adult college programmes and all graduating class students. SY=School year.
Source: Company data, HSBC

Exhibit 76: Kepei's staff costs as % of revenue vs. peers in FY19



Source: Company data

Exhibit 77: Kepei's core net profit margin vs. peers in FY19



Source: Company data, HSBC

Acquisition of Harbin School

Kepei announced on 13 January 2020 that it planned to acquire a 100% equity interest in the Harbin Institute of Petroleum (Harbin School), for a total consideration of RMB1.45bn, implying a 21x PE as of FY19 (and 11x EV/EBITDA). This is due to be completed by September 2020, but we note that Kepei has already started to consolidate the profit of Harbin School (as a management fee) in 1H20.

Established in 2003, Harbin School was converted into a private university (from an independent college) in 2012 and currently provides undergraduate programmes with over 9,300 students. We believe the acquisition may further increase the contribution of undergraduate programmes to Kepei and represents a quality addition to the latter's portfolio. The employment rate of Harbin School ranked No.2 amongst the private universities in Heilongjiang Province with a high registration rate (around 97% in school year 2019/20), according to the company's disclosure. We also believe the school is well positioned toward favorable employment conditions in Heilongjiang Province, which according to the provincial education department, has registered more than a 60% employment ratio for its higher education graduates up to June 2020, up nearly 18ppt vs. a year earlier.

Nevertheless, Harbin School had a lower net profit margin of 44% in FY19 vs. Kepei (63%) and this could dilute the company's profitability after the consolidation. We note Harbin School has recorded a relatively muted admission growth rate, at a CAGR of 5% over the past four school years. This is due to its high capacity utilisation rate, which was equal to 95% in 2020. Nevertheless, Harbin School already has a capacity expansion plan for 3,000 new students by school year 2021/22, although this could mean higher capital expenditure/funding needs.

To further assess the potential impact, we conduct a pro-forma analysis based on Kepei's disclosed financial data as of FY19. Our analysis suggests that net profit would increase 15% while margins would decline, and the gearing ratio would rise.

Exhibit 78: Kepei: Summary of Harbin School acquisition and pro-forma analysis

Transaction/school background			Items
Consideration (RMBm)			1,450
Equity interest			100%
Land area (sqm.)			>660k
Student enrolment (19/20)			9,366
Employment rate (2019)			96%
Capacity utilisation ratio (19/20)			95%
Average pricing per student (RMB)			18,000
Student-to-teacher ratio			18:1
Pro-forma analysis	**Before acquisition**	**After acquisition**	**% of change**
Student enrolment (19/20)	57,924	67,290	16%
Contribution of undergraduate programmes	41%	49%	8ppt
Revenue (FY19, RMBm)	714	869	22%
Revenue per student (FY19, RMB)	14,462	14,869	3%
Core net profit (FY19, RMBm)	456	525	15%
NPM	64%	60%	-4ppt
Net gearing	-36%	2%	N/A

Note: Assume that (1) the transaction is wholly funded by Kepei's existing financial resources, (2) the consolidation happened in FY19, and (3) we haven't taken into account the potential impact from capacity expansion.
Source: Company data, HSBC estimates

Looking further forward…

Kepei established a joint venture in September 2019 (with a capital injection of cRMB142m, representing a 45% equity interest). The joint venture acquired 100% equity interest in the Information College of Huaibei Normal University – an independent college located in Anhui Province – for a total consideration of RMB250m in October 2019. We note that the consideration could have included a one-off "break up" fee for the school's future conversion into a private university. However, the school currently has no independent campus (i.e., the so-called 校中校) and, upon potential conversion, could require more capital expenditure to fund its expansion.

Financial analysis

Revenue and core earnings: Kepei registered a revenue CAGR of 25% in FY17-19, mainly driven by growth in its student numbers. We calculate that its core earnings increased at a faster CAGR of c37% over this period.

Operating costs and margins: Cost of sales (COS) registered a CAGR of 25% in FY17-19, keeping the profit margin at a steady ratio. Teaching staff costs are a major component and contributed 44% of COS in FY19, followed by depreciation and amortisation (D&A), which contributed 28% of COS in FY19.

Selling and administrative expenses, which respectively were 3% and 11% of revenue in FY19, both registered over 30% CAGR in FY17-19. We note that this was partly due to the higher promotion fees associated with student recruitment. That being said, we still calculated that its core net profit margin increased from 53% to 63% in FY17-19, in part due to the sharp growth in other income and gains (which primarily comprised of interest income and rental income).

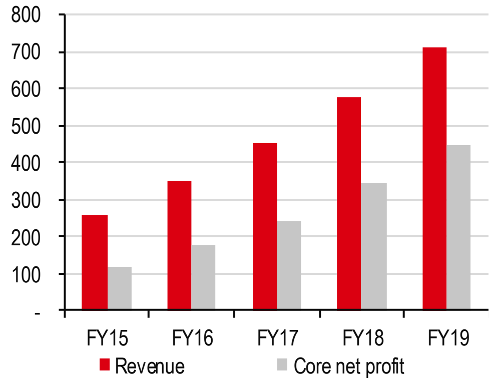
Balance sheet: Around 80% of the company's assets were comprised of properties, leases, and cash in FY19. Conversely, Kepei has limited liabilities with contract liabilities the key component and which contributed c65% in FY19, followed by payables (at 17% of liabilities).

Debts and gearing ratio: Interest-bearing debt registered steady growth in FY17-18 but, following the redemption of the convertible bonds in FY19, the exposure has declined from cRMB440m to RMB100m. Meanwhile, the gearing ratio, calculated as total debt to total equity, declined to below 5% – the lowest amongst the higher education players.

Cash flow: Kepei maintained positive operating cash flow in FY17-19, which registered a solid CAGR of 16%. Note that capital expenditure has increased sharply since FY17 (cRMB200-400m per year), which was mainly due to the construction of new campuses for Guangdong Polytechnic College.

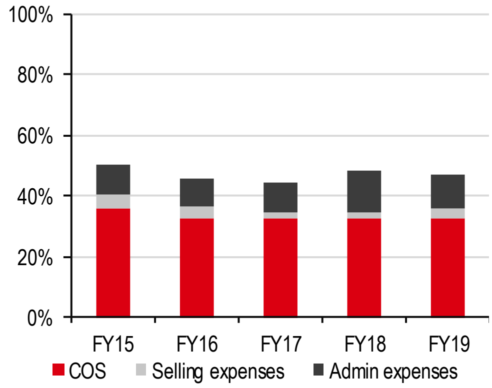
Dividend: Kepei declared a total dividend of HKD0.1 per share in FY19, which implied about a 40% dividend payout ratio of its core earnings.

Exhibit 79: Kepei: Revenue and core net profit (RMBm), FY15-19



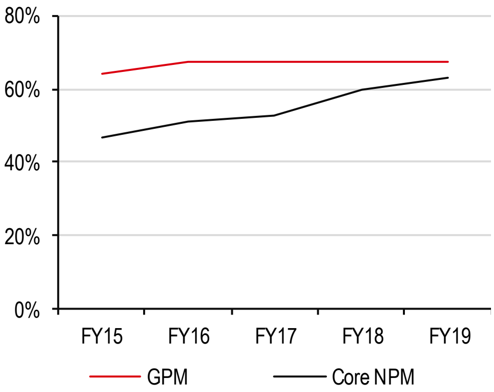
Source: Company data, HSBC

Exhibit 80: Kepei: Operating costs as % of revenue, FY15-19 (RMBm)



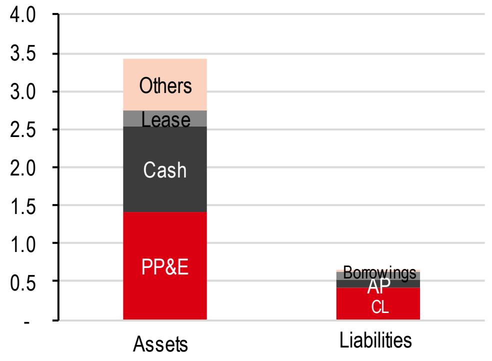
Source: Company data, HSBC

Exhibit 81: Kepei: Margins, FY15-19



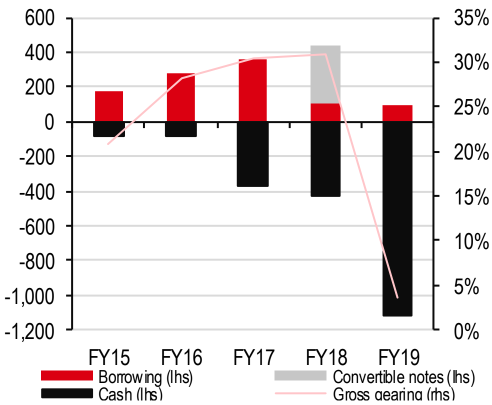
Source: Company data, HSBC

Exhibit 82: Kepei: Balance sheet structure (RMBm), FY19



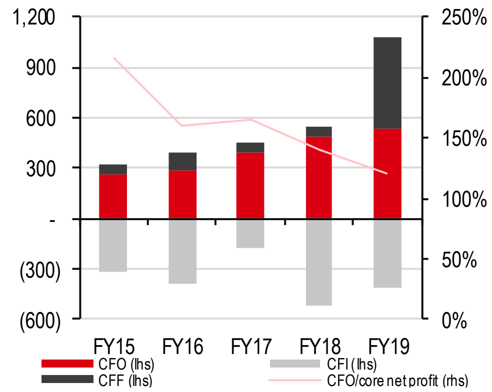
Note: *Include structured deposits. AP=Account payables, CL=Contracted liabilities.
Source: Company data, HSBC

Exhibit 83: Kepei: Debt-structure (RMBm) and gearing ratio, FY15-19



Note: Gross gearing ratio is calculated as total interest-bearing debt to total equity.
Source: Company data, HSBC

Exhibit 84: Kepei: Cash flow breakdown (RMBm), FY15-19



Source: Company data, HSBC

1HFY20 results

Kepei registered 17% y-o-y revenue growth in 1HFY20, with core net profit up nearly 30% y-o-y. The faster profit growth was driven by margin expansion, as reflected by a near 4% y-o-y rise in the gross profit margin (GPM) to around 74% while its core net profit margin (NPM) increased to a similar level, in part thanks to the profit contribution from Harbin School.

We note that, by educational business segment, tuition fee growth in 1H20 was led by the secondary vocational school (up 58% y-o-y) and adult courses (up 52% y-o-y), followed by the degree programme (up 28% y-o-y). Tuition fees in the junior college actually declined 6% y-o-y.

It is worth noting that adult courses expanded significantly in 1H20, with student enrolment numbers (including on-campus and off-campus) more than doubling y-o-y. This, alongside the expansion of the student admission quota for school year 2020/21 and the full consolidation of Harbin School, should help to support profit growth in FY21e.

Exhibit 85: Kepei: Results summary and comparison (RMBm, unless otherwise specified)

	1H19	2H19	1H20	y-o-y	h-o-h
Key income statement					
Revenue	359	355	419	17%	18%
-Tuition fees	329	326	414	26%	27%
-Boarding fees	28	24	5	-82%	-79%
-Other education service fees	2	4	0	-97%	-99%
COS	(107)	(126)	(109)	2%	-13%
Gross profit	252	229	309	23%	35%
Other income and gains	46	35	63	36%	79%
Selling expenses	(4)	(20)	(2)	-47%	-89%
Administrative expenses	(46)	(31)	(43)	-8%	38%
Other expenses	(0)	(1)	-	NA	NA
Operating profit	248	213	327	32%	54%
Finance costs	(2)	(0)	(2)	17%	493%
Share of gains and losses	(1)	0	(1)	NA	NA
PBT	246	213	324	32%	53%
Taxation	(1)	(1)	(4)	271%	346%
MI	-	-	-	NA	NA
Reported net profit	245	212	321	31%	51%
Core net profit	245	204	311	27%	52%
Core EPS (RMB)	0.13	0.10	0.16	23%	53%
DPS (HKD)	-	0.09	-	NA	NA
Key balance sheet					
PP&E	1,280	1,423	1,519	19%	7%
Cash and cash equivalents	1,106	1,112	863	-22%	-22%
Debts	111	100	386	247%	286%
Contract liabilities	1	412	36	3058%	-91%
Total liabilities	353	633	778	120%	23%
Total equity	2,555	2,790	2,925	14%	5%
Key ratios and business driver					
GPM	70.3%	64.6%	73.9%	3.6ppt	9.2ppt
Operating expenses to revenue	14.1%	14.4%	10.7%	-3.4ppt	-3.7ppt
OPM	69.0%	59.9%	78.1%	9.1ppt	18.3ppt
Core NPM	68.3%	57.6%	74.3%	6.1ppt	16.8ppt
Gross gearing	4.4%	3.6%	13.2%	8.8ppt	9.6ppt
Net gearing	-38.9%	-36.3%	-16.3%	22.6ppt	19.9ppt
Student enrolment*	52,960	57,924	71,925	53%	40%
Average pricing (RMB)	6,942	6,057	6,059	-13%	0%
No. of schools*	2	2	2	0%	0%
Capacity utilisation	89.1%	91.4%	82.2%	-8%	-10%

Note: *Excluding the Harbin School as not yet been consolidated as of 1HFY20.
Source: Company data, HSBC

Forecasts and valuation

We forecast the future financial performance of Kepei based on the following considerations:

- Revenue: We forecast 27% revenue CAGR for Kepei in FY19-22e, driven by:
  - **26% CAGR in student enrolment:** Driven by both organic growth in its existing schools (c80% of the increment) and the contribution from the consolidation of Harbin School. We assume no other newly acquired schools.
  - **Flat average pricing** during FY19-22e, as the potential fee hike of Guangdong Polytechnic College and the higher pricing of Harbin School are being offset by the change in student mix – we forecast the contribution of adult courses (which levied a lower pricing) to increase from 34% to 51% during this period.
  - **17% CAGR in other income**.
- **Margins:** We expect the GPM to grow 1.5ppt over FY19-22e, after taking into account the lower margins in Harbin School as well as stronger operating leverage at existing schools. We forecast core NPM to decline by c2.5ppt, largely on lower margins at Harbin School.

Overall, we forecast Kepei's core net profit to grow by a CAGR of 25% over this time period. Note that we have not assumed any potential impact from the potential conversion of independent colleges as well as the potential conversion of its schools into "for-profit" ones.

Exhibit 86: Kepei: Summary of financial forecasts (RMBm, unless otherwise specified)

	FY19a	FY20e	FY21e	FY22e	CAGR (FY19-22e)
Key income statement					
Revenue	714	959	1,276	1,465	27%
COS	(232)	(288)	(408)	(454)	25%
Gross profit	482	671	867	1,011	28%
Operating expenses	(102)	(110)	(144)	(157)	16%
Operating profit	460	647	776	918	26%
EBITDA	533	734	894	1,074	26%
Finance costs, net	(2)	(13)	(27)	(27)	142%
Taxation	(2)	(6)	(8)	(9)	67%
Reported net profit	456	628	746	895	25%
Core net profit	450	618	736	885	25%
Core EPS (RMB)	0.23	0.31	0.37	0.44	25%
DPS (RMB)	0.09	0.12	0.15	0.18	25%
Key ratios and items					
GPM	67.5%	70.0%	68.0%	69.0%	1.5ppt
Operating expenses to revenue	14.2%	11.5%	11.3%	10.7%	-3.5ppt
EBITDA margin	74.7%	76.6%	70.1%	73.3%	-1.3ppt
Core NPM	62.9%	64.4%	57.7%	60.4%	-2.5ppt
Gross gearing	3.6%	18.5%	23.5%	17.6%	14.0ppt
Student enrolment	57,924	88,204	102,238	115,144	26%
Average pricing per student (RMB)	13,070	12,623	12,887	13,075	0%

Source: Company data, HSBC estimates

Valuation

We use a discounted cash flow (DCF) methodology to value Kepei Education as we believe this better captures its strong cash generating capabilities and long-term growth outlook. The key assumptions in our three-stage DCF model are as follows:

- Stage one – we use our explicit forecasts for FY21-22e.
- Stage two – we assume a FCFF CAGR of 8% over the medium term, lower than the y-o-y growth in operating cash flow of 20% in FY22e, as we factor in the potential impact from adopting the "for-profit" school classification and the subsequent reduction in growth opportunities. This is also below its peers average (at 10%), in view its shorter track record in acquisitions.
- Stage three – we assume a terminal growth rate of 2%.

Our 11.2% cost of equity assumption is based on a beta of 1.6x, a risk-free rate of 2.5%, and a market risk premium of 5%. We also assume that interest-bearing debt contributes 30% of the capital structure over the long term bearing an interest rate of 4%. Together, we derive a WACC as 8.9%. Overall, we derive a target price of HKD8.50, which implies a 20x PE and 16x EV/EBITDA for FY21e. With 35% upside from current levels, we initiate coverage on the stock with a Buy rating.

Exhibit 87: Kepei: DCF assumptions

	FY21e	FY22e	CAGR (medium-term)	Terminal growth
FCFF (RMBm)	507	697	8%	2%
WACC				8.9%
Enterprise value (RMBm)				14,418
Equity value (RMBm)				14,550
Implied fair value (HKD/share)				**8.5**
TP implied PE (FY21e)				20x
TP implied PEG (FY21e, over FY19-21e)				0.7x
TP implied dividend yield (FY21e)				2.0%
TP implied EV/EBITDA (FY21e)				16x

Source: HSBC estimates

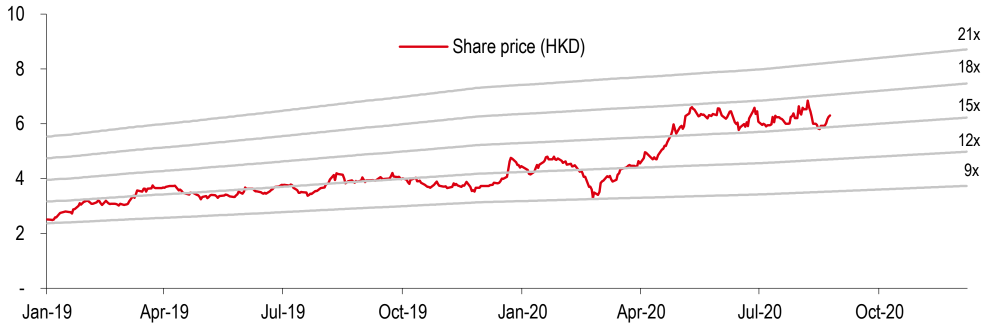
Meanwhile, we cross-check the implied PE against both the company's historical average and its peers, and found that:

- The implied PE ratio for FY21e is higher than its historical average of 14x since its IPO, which we believe is justified by its strong execution (in securing organic growth); we also note Kepei's share price has been on an upward trajectory since listing. Nevertheless, this is lower than the implied average PE of its peers, probably reflecting Kepei's slower profit growth forecast.
- The implied PEG is also lower than the implied average of our higher education coverage and we believe this is justified because despite the solid execution showed by Kepei in organic growth, we believe it still has to establish a longer and firmer track record in M&A.

Key downside risks:

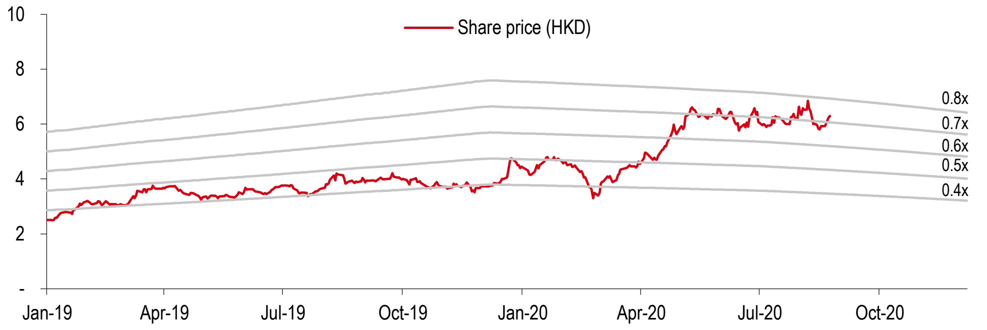
- Slower-than-expected expansion of the existing school portfolio may affect the company's revenue growth.
- The high capacity utilisation ratio may hinder the company's expansion.
- The high student-to-teacher ratio may affect the student admission process; and a lower ratio may increase teaching staff costs that could affect margins.
- Larger-than-expected capital expenditure for capacity expansion may affect the cash flow and gearing ratio.
- Failure to smoothly consolidate Harbin Institute of Petroleum may affect the company's reputation and could increase its operating expenses.

Exhibit 88: Kepei: 1-year forward PE band chart since listing



Source: Bloomberg, HSBC estimates

Exhibit 89: Kepei: 1-year forward PEG band chart since listing



Source: Bloomberg, HSBC estimates

Exhibit 90: Kepei: Valuation comparison

Company	BBG ticker	Price cur	Mkt cap USDm	PE (x) FY19a	PE (x) FY20e	PE (x) FY21e	PB (x) FY19a	PB (x) FY20e	PB (x) FY21e	Yield (%) FY19a	Yield (%) FY20e	Yield (%) FY21e	PEG (x) FY19a	PEG (x) FY20e	PEG (x) FY21e
CEG	839 HK	HKD	3,950	34.2	28.0	19.6	3.8	3.1	2.8	0.9	1.7	2.6	1.1	0.9	0.6
Yuhua	6169 HK	HKD	2,887	24.8	20.0	16.4	5.4	5.0	4.3	2.1	2.6	3.1	1.1	0.9	0.7
Hope	1765 HK	HKD	2,238	28.5	22.3	17.1	3.1	2.6	2.4	1.3	1.7	2.3	1.0	0.8	0.6
NHE	2001 HK	HKD	1,068	18.2	13.5	11.1	3.0	2.4	2.1	1.4	2.1	2.5	0.7	0.5	0.4
Edvantage	382 HK	HKD	791	19.7	18.0	14.0	3.5	2.9	2.4	0.0	1.8	2.3	1.1	1.0	0.8
Minsheng	1569 HK	HKD	626	11.9	9.4	8.0	1.1	1.0	0.9	2.6	3.1	4.0	0.5	0.4	0.4
Kepei	1890 HK	HKD	1,638	24.3	17.8	15.0	4.0	3.4	3.0	1.6	2.2	2.6	0.9	0.7	0.6
Weighted avg.				**26.7**	**21.4**	**16.3**	**3.9**	**3.3**	**2.9**	**1.4**	**2.1**	**2.7**	**1.0**	**0.8**	**0.6**

Note: HSBC estimates for CEG, Hope, Kepei and Yuhua, Bloomberg consensus for other stocks. Priced as of 17 September 2020.
Source: Bloomberg, HSBC estimates

Maple Leaf (1317 HK)

- As a leading K-12 school operator, Maple Leaf offers differentiated services and has a proven track record in meeting targets
- COVID-19 and de-globalisation could pose a challenge to its near-term growth, but we believe the long-term outlook is intact
- Initiate at Buy with a target price of HKD3.20, implying a 11x FY21e PE and 2.6x FY21e PEG (the latter will drop to 0.5x in FY22e)

A pioneer in international K-12 education

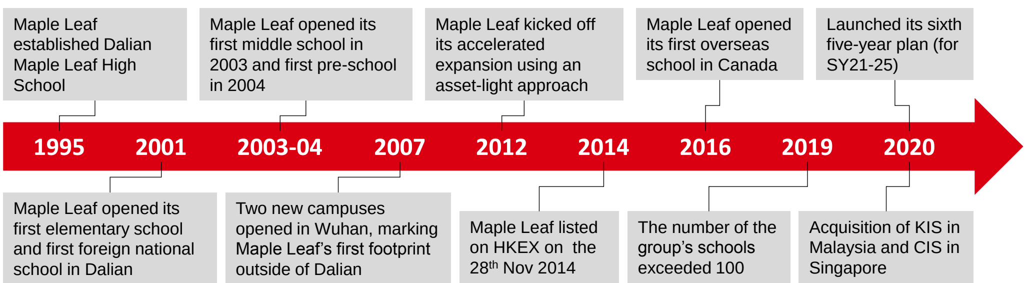
A leading international school operator in mainland China

Maple Leaf is a leading international K-12 school operator that originated in Dalian, mainland China. It operates 110 schools, including 18 high schools, 28 middle schools, 29 primary schools, 32 preschools, and three foreign national schools (for foreign students in mainland China) covering 28 cities in mainland China, Canada, Australia, Singapore, and Malaysia. Maple Leaf's high schools mainly provide dual-curriculums, including a Chinese diploma and a British Columbia (BC) diploma (will change to the MLES World School Program from school year 2020/21) while its primary and middle schools follow Chinese compulsory education programmes; in some of its schools, AP, A-level, and IB curriculums are also available. Among Maple Leaf's 41,076 students (as of 1HFY20) nearly half (c48%) were in primary school, 22% in middle school, 18% in high school, 11% in preschool, and only 1% in foreign national schools. Driven by its school network expansion, Maple Leaf recorded a 26% core net profit CAGR on a 20% revenue CAGR over FY17-19.

Founded in 1995, Maple Leaf is a pioneer in international K-12 education in mainland China, with the Dalian Maple Leaf High School being the first and largest BC certified offshore school. Since 2007, the group has expanded beyond Dalian. Both the Dalian Maple Leaf High School and its Wuhan Maple Leaf International School rank in the top-100 in Hurun Education's 2020 Top International Schools League Table.

Moreover, from 2012, Maple Leaf has started to expand through an asset-light approach (mainly through cooperation with local governments), helping its school numbers grow from 21 in 2011 to 100 in 1HFY20. Maple Leaf has a tradition of releasing a five-year plan and in 2020 it entered into its sixth five-year plan period (for school year 2020/21 to school year 2024/25).

Exhibit 91: Maple Leaf: Key corporate milestones



Note: SY=School year.
Source: Company website, Company data, HSBC

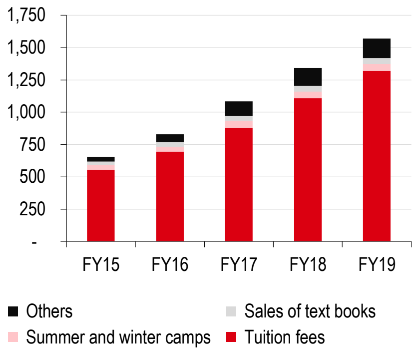
Snapshot of Maple Leaf (1317 HK)

Founded in 1995, Maple Leaf Education is a leading private K-12 international school operator founded in Liaoning, China. As of August 2020, the group had over 47,000 students with c7,000 enrolled as BC offshore students, studying in its 110 schools. On 28 November 2014, Maple Leaf Education was listed on the main board of HKEX. The founder, Mr. Shu Liang Sherman Jen, is the largest shareholder, with a c51% shareholding in the group.

Key senior management team includes:

- Mr. Shu Liang Sherman Jen, Chairman, CEO & Executive Director
- Ms. Jingxia Zhang, CFO & Executive Director
- Mr. James William Beeke, Executive Director
- Ms. Wan Mun Yee Sabine, Company Secretary

Revenue by segment (RMBm)



Note: "tuition fees" include both tuition and boarding fees.
Source: Company data, HSBC

Forecasts and valuation

(RMBm)	FY19a	FY20e	FY21e	FY22e
Revenue	1,570	1,608	2,431	2,809
EBITDA	793	806	1,050	1,200
Core net profit	693	586	751	882
EPS (diluted, RMB)	0.23	0.20	0.25	0.30
DPS (HKD)	0.09	0.07	0.09	0.11

- Our target price of HKD3.20 for Maple Leaf Education is derived from a DCF approach and implies a 11x PE, 2.6x PEG, and 4% yield for FY21e

Source: Company data, HSBC estimates

Peer comparison

Company	BBG ticker	PE (x) FY19a	FY20e	FY21e
Tianli	1773 HK	55.4	38.9	27.3
Maple Leaf	1317 HK	9.0	10.7	8.3
Wisdom	6068 HK	13.4	11.4	9.3
Bright Scholar	BEDU US	23.5	17.4	12.1
Virscend	1565 HK	16.3	15.8	13.1
Weighted avg		**30.4**	**23.2**	**17.0**

Note: Priced as of 17 September 2020.
Source: HSBC estimates for Tianli, Maple Leaf, Wisdom, and Virscend, Bloomberg consensus for other stocks.

Do you know?

- The education philosophy of Maple Leaf is "to combine the strengths of Chinese and Western education system to provide students with a bilingual and bi-cultural education" (结合中西教育方法优点，为学生提供兼备中西文化内涵的双语教育).
- Maple Leaf is the first K-12 education group listed on the HKEX.
- When Dalian Maple Leaf International School was first opened in 1995, only 14 students enrolled in its first year.
- During 2006-10, Maple Leaf also tried to sponsor a vocational and technical college. However, the company eventually sold the project after three years and decided to focus on K-12.

Key risks and challenges

- Rising competition for international education in tier 1 or tier 2 cities would make it difficult for Maple Leaf to gain market share, while the relatively low income level of residents in lower-tier cities would limit the development of the international education market there.
- Unfavourable overseas policies or operating environments (such as visa policies, safety, and health issues) would affect students' or parents' decisions to study abroad.
- Failure to maintain a high quality of education, especially in newly established schools, would affect the brand's reputation and cast doubt on its future expansion.
- Failure to integrate acquisitions and potential goodwill impairments.

Financials & valuation: Maple Leaf Education

Buy

Financial statements

Year to	08/2019a	08/2020e	08/2021e	08/2022e
Profit & loss summary (RMBm)				
Revenue	1,570	1,608	2,431	2,809
Gross profit	735	748	1,094	1,267
Other income and gains	190	108	93	97
Operating expenses	-233	-238	-389	-435
EBITDA	793	806	1,050	1,200
Depreciation & amortization	-101	-189	-252	-272
Operating profit	692	617	798	929
Finance costs, net	25	-18	-52	-48
PBT	681	577	738	869
Taxation	-27	-23	-29	-34
Reported net profit	657	549	693	815
Core net profit	693	586	751	882
Cash flow summary (RMBm)				
Cash flow from operations	857	980	1,296	1,461
Capex	-314	-3,851	-630	-854
Cash flow from investment	-38	-3,871	-632	-855
Dividend paid	-251	-151	-222	-284
Cash flow from financing	-304	436	-296	-358
Balance sheet summary (RMBm)				
PP&E	2,419	4,750	5,208	5,645
Intangible fixed assets	297	2,532	2,491	2,450
Cash and cash equivalents	2,813	358	727	975
Total assets	6,524	8,876	9,692	10,378
Contract liabilities	1,376	2,120	2,427	2,781
Interest-bearing debt	331	1,073	1,073	1,073
Net debt	-2,482	715	346	98
Shareholders' fund	4,153	4,347	4,877	5,476

Ratio, growth and per share analysis

Year to	08/2019a	08/2020e	08/2021e	08/2022e
Y-o-y % change				
Revenue	17.1	2.4	51.2	15.6
Gross profit	17.7	1.7	46.3	15.8
EBITDA	25.5	1.6	30.3	14.3
Operating profit	23.9	(10.8)	29.2	16.4
Reported net profit	21.0	(16.4)	26.2	17.7
Core net profit	16.1	(15.4)	28.1	17.5
EPS	12.1	(15.4)	28.1	17.5
Ratios (%)				
ROE	17.8	13.8	16.3	17.0
ROA	11.4	8.2	8.9	9.6
Gross profit margin	46.8	46.5	45.0	45.1
EBITDA margin	50.5	50.1	43.2	42.7
Operating margins	44.1	38.4	32.8	33.1
Core net profit margin	44.1	36.5	30.9	31.4
Gross gearing	7.8	22.9	20.5	18.3
Per share data (RMB)				
EPS	0.22	0.19	0.23	0.28
Core EPS	0.23	0.20	0.25	0.30
DPS	0.09	0.07	0.09	0.11
Book value	1.42	1.56	1.75	1.95

Key forecast drivers

Year to	08/2019a	08/2020e	08/2021e	08/2022e
No. of student enrolled	41,241	47,035	52,488	58,027
Average pricing*	31,971	33,176	40,997	41,267

* Represents average tuition and boarding fees per student

Valuation data

Year to	08/2019a	08/2020e	08/2021e	08/2022e
EV/EBITDA	5.0	9.2	6.7	5.7
PE*	9.0	10.7	8.3	7.1
PEG	2.2	2.6	2.0	0.3
Dividend yield (%)	4.3	3.5	4.5	5.3

* Based on HSBC EPS (diluted)

ESG metrics

Environmental Indicators	08/2019a
GHG emission intensity*	154.5
Energy intensity*	376.7
CO_2 reduction policy	Yes
Social Indicators	**08/2019a**
Employee costs as % of revenues	40.6
Employee turnover (%)	n/a
Diversity policy	Yes

Governance Indicators	08/2020a
No. of board members	7
Average board tenure (years)	7.4
Female board members (%)	14.3
Board members independence (%)	42.9

Source: Company data, HSBC

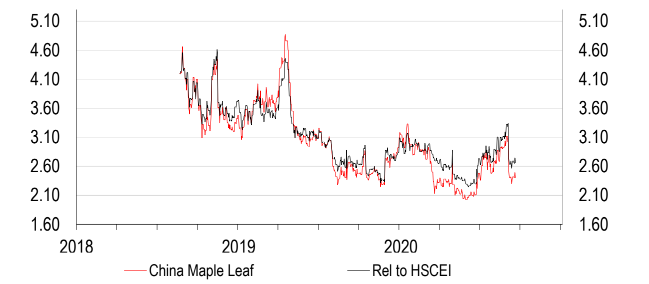
* GHG intensity and energy intensity are measured in kg and kWh respectively against revenue in USD '000s

Issuer information

Share price (HKD)	2.42
Target price (HKD)	3.20
RIC (Equity)	1317.HK
Bloomberg (Equity)	1317 HK
Market cap (USDm)	935

Free float	48%
Sector	Discovery Research
Country/Region	China
Analyst	York Pun, CFA
Contact	+852 2822 4396

Price relative



Source: HSBC

Note: Priced at close of 17 Sep 2020

Business analysis

Maple Leaf is a pioneer in international K-12 education in China, mainly offering the BC curriculum and targeting tier 2-3 cities in China with more competitive tuition fees. Among its 100 schools as of 1HFY20, only five of them are in tier 1 cities; the average tuition fees at Maple Leaf's schools are also generally lower than that for other K-12 international schools (according to the company's own presentation).

Student enrolment has been the major revenue driver

Over FY14-19, the group recorded a 24% revenue CAGR, mainly driven by student enrolment (+25% CAGR) on the back of its school network expansion – from both M&A and its asset-light model – as well as a modest improvement in utilisation (from 60% to 68% over FY14-19). Conversely, its average pricing (as represented by tuition and boarding fees per student) registered a 2% compound annual decline, in part due to the change in student structure (i.e., a smaller percentage share of high schools, where fees are comparatively higher).

The shift in revenue mix reflects structural changes and rising competition

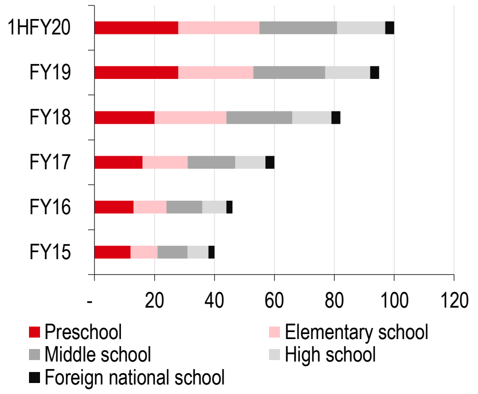
Tuition (and boarding) fees are Maple Leaf's major revenue source (84% of total revenue in FY19), followed by 10% from others (mainly from supermarkets on the campus, the sale of school uniforms, and the provision of other services), 3% from text books and 3% from summer and winter camps. By grades, high schools contributed the most to revenue from tuition fees (at 33% of total revenue), followed by primary schools (29%), middle schools (16%), preschools (5%), and foreign nationals (2%). However, as mentioned before, the percentage revenue share of high school tuition has fallen in recent years, mainly due to: (1) the group's recent strategic transformation to establish a pyramid-shaped student structure (i.e. more primary/middle school students) to safeguard student quality and (2) an increase in the non-tuition revenue contribution – both highlighted in its fifth five-year plan. However, Maple Leaf's high school student enrolment has declined over the past two fiscal years, probably reflecting rising competition, in our view.

Exhibit 92: Maple Leaf: School portfolio summary (1HFY20)

Location	High school	Middle school	Primary school	Pre-school	Foreign National	Number of schools
Hubei, China	1	3	3	8	1	**16**
Liaoning, China	1	2	2	9	1	**15**
Zhejiang, China	1	3	3	2	1	**10**
Hainan, China	1	2	4	2		**9**
Jiangsu, China	2	3	3			**8**
Chongqing, China	1	2	2	2		**7**
Henan, China	1	2	2	1		**6**
Tianjin, China	1	2	2	1		**6**
Shandong, China		2	2	1		**5**
Shannxi, China	1	1	1	1		**4**
Guangdong, China	1	1	1			**3**
Inner Mongolia, China		1	1	1		**3**
Shanghai, China	1	1				**2**
Sichuan, China		1	1			**2**
BC and Ontario, Canada	3					**3**
South Australia, Australia	1					**1**
Total	**16**	**26**	**27**	**28**	**3**	**100**
Number of student	7,360	9,131	19,565	4,620	400	41,076
Student %	18%	22%	48%	11%	1%	100%

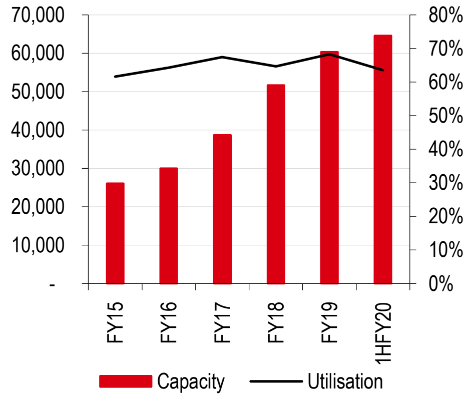
Source: Company data, HSBC

Exhibit 93: Maple Leaf: Number of schools by programmes, FY15-1HFY20



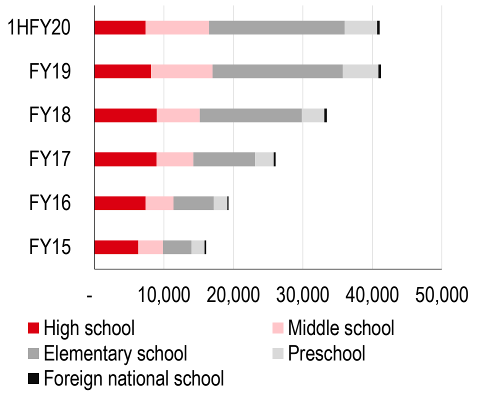
Source: Company data, HSBC

Exhibit 94: Maple Leaf: Total student capacity and utilisation, FY15-1HFY20



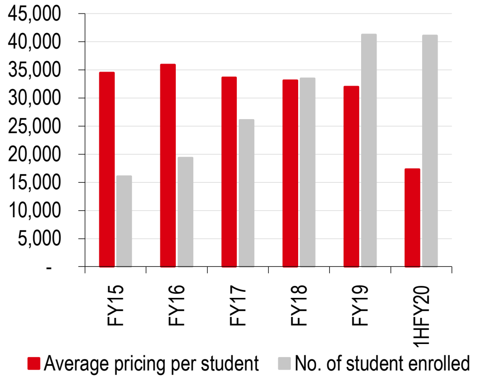
Source: Company data, HSBC

Exhibit 95: Maple Leaf: Number of students by programme, FY15-1HFY20



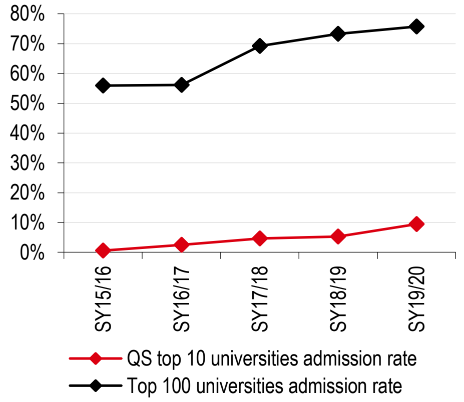
Source: Company data, HSBC

Exhibit 96: Maple Leaf: Average pricing vs. average student enrolment, FY15-1HFY20



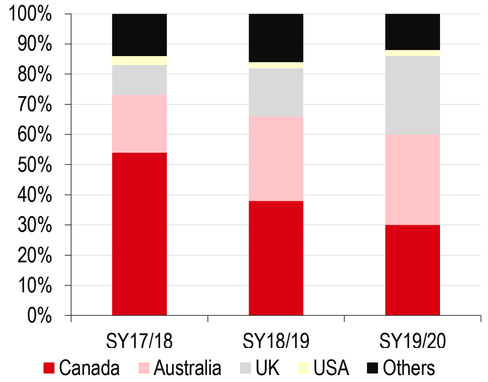
Source: Company data, HSBC

Exhibit 97: Maple Leaf: Most students were admitted to the top-100 schools overseas



Note: Top 100 universities are defined by Maple Leaf. SY=School year.
Source: Company data, HSBC

Exhibit 98: Maple Leaf: Destinations of high school graduates have changed



Note: SY=School year.
Source: Company website, HSBC

The sixth five-year plan targets more than doubling enrolled students by school year 2024/25

Release of the sixth five-year plan

Over the past 25 years, Maple Leaf has established a track record of posting five-year strategic plans. In the fifth five-year plan (school year 2015/16-school year 2019/20), Maple Leaf set a target of over 45,000 enrolled students by the end of school year 2019/20 and started to establish a pyramid-shaped educational structure. We note that Maple Leaf has reached its student enrolment target while it has established three large school districts – in Hubei, Hainan, and Tianjin. Moreover, the group's progress to enhance its students' academic performance since 2010 is also reflected by the rising percentage of high school graduates being enrolled into the MLES top-100 universities (the top-100 universities ranked by Maple Leaf) and QS top-10 universities (Exhibit 97). We also notice a shift in high school graduates' destinations: in the past, most of (c54%) Maple Leaf's graduates were admitted to Canadian universities but this dropped significantly in 2019-20, when there was a sharp rise in students going to the UK and Australia.

In June 2020, the group announced its sixth five-year plan, with a focus on:

- **Continued school district development:** To reach 110,000 student enrolments (100,000 in mainland China and 10,000 overseas) across ten mainland China and two offshore school districts. We estimate this implies a 22% student enrolment CAGR over FY20-25e. Meanwhile, Maple Leaf also hopes to raise its tuition fees for high schools, middle schools, and primary schools to RMB100,000/school year, RMB60,000/school year, and RMB50,000/school year in school year 2025/26e, implying an 8-14% CAGR over the next six years, per our estimates.
- **Implementation of MLES World School Program**: To fully implement its new course starting from the 2020 fall semester. This new programme has obtained accreditation from two authoritative certification institutions (UK NARIC and Cognia).

Exhibit 99: Maple Leaf's student targets over the past five-year plans (vs. actual)

	SY95/96-SY99/00	SY00/01-SY04/05	SY05/06-SY09/10	SY10/11-SY14/15	SY15/16-SY19/20	SY20/21-SY24/25
Student number target	n/a	3,900	10,000	20,000	45,000	110,000
Student number achieved	550	3,500	7,426	16,078	47,000	TBC

Note: SY=School year.
Source: Company data, "Maple Leaf Educational Philosophy and Practice", HSBC

Upon completion, the overseas business would contribute c30% to Maple Leaf's revenue

Expanding outside mainland China

In 2020, Maple Leaf has announced its acquisition of the Canadian International School (CIS) in Singapore and Kingsley Edugroup (KIS) in Malaysia:

- **CIS:** CIS is the largest international school in Singapore (with a 20% market share) with strong IBDP average scores (34/45) and pass rates (98%). CIS recorded a 41% profit after tax (PAT) CAGR over 2017-19 on an 11% revenue CAGR. We estimate the acquisition represents 18x PE and 13x EV/EBITDA for FY20e, and the deal to be earnings accretive, even without factoring in the potential synergies (such as from the sharing of know-how, exchange programmes, and curriculum development). Note that 90% of the CIS stake was acquired on 27 August 2020 while the remaining stake should be acquired after the completion of school year 2021/22.
- **KIS:** KIS is a K-12 focused school in Malaysia that provides A-level curriculum. While the deal would allow Maple Leaf to step into Malaysia, the financial impact looks less significant than CIS. Maple Leaf started to consolidate KIS from March 2020 and the privatisation of Kingsley was completed in July 2020.

Exhibit 100: Comparison of key metrics for Maple Leaf, CIS and KIS (RMBm), FY19

	Revenue	EBITDA margin	PAT margin
Maple Leaf (FY19 ended August)	1,570	51%	42%
CIS (FY19 ended December)	598	41%	17%
KIS (FY19 ended June)	51	28%	7%

Source: Company data, HSBC

Exhibit 101: Maple Leaf: School portfolio (1HFY20)

City	Province	Country	Set up year	Business model	Origin	High school	Middle school	Primary school	Pre-school	Foreign National	Total
Dalian	Liaoning	China	1995	Self-owned	Party Acquired	1	2	2	9	1	15
Wuhan	Hubei	China	2007	Self-owned	Party Acquired	1	1	1	1	1	5
Tianjin TEDA	Tianjin	China	2008	Self-owned	Acquired (100%)	1	1	1	1		4
Chongqing Yongchuan	Chongqing	China	2009	Self-owned		1	1	1	1		4
Zhenjiang	Jiangsu	China	2011	Self-owned		1	1	1			3
Luoyang	Henan	China	2012	Profit-sharing		1	1	1			3
Ordos	Inner Mongolia	China	2012	Free			1	1	1		3
Shanghai	Shanghai	China	2013	Self-owned		1	1				2
Pingdingshan	Henan	China	2014	Self-owned			1	1	1		3
Tianjin Huayuan	Tianjin	China	2014	Rent			1	1			2
Jingzhou	Hubei	China	2015	Self-owned	Acquired (100%)		1	1			2
Yiwu	Zhejiang	China	2015	Self-owned		1	1	1		1	4
Pinghu	Zhejiang	China	2016	Self-owned			1	1	1		3
Xi'an	Shannxi	China	2016	Profit-sharing		1	1	1	1		4
Huai'an	Jiangsu	China	2016	Rent			1	1			2
Kamloops	British, Columbia	Canada	2016	Rent		1					1
Haikou (Guokeyuan)	Hainan	China	2017	Self-owned	Acquired (52.4%)	1	1	1	1		4
Huzhou	Zhejiang	China	2017	Rent			1	1	1		3
Weifang	Shandong	China	2017	Profit-sharing			1	1	1		3
Chongqing Liangping	Chongqing	China	2017	Rent			1	1	1		3
Yancheng	Jiangsu	China	2017	Profit-sharing		1	1	1			3
Richmond	British, Columbia	Canada	2017	Rent		1					1
Shenzhen	Guangdong	China	2018	Rent	Acquired (55%)	1	1	1			3
Haikou (Wumei)	Hainan	China	2018	Self-owned	Acquired (100%)		1	3	1		5
Xiangyang	Hubei	China	2018	Self-owned & Rent	Acquired (100%)				7		7
Luzhou	Sichuan	China	2019	Self-owned	Acquired (75%)		1	1			2
Adelaide	South Australia	Australia	2019	Rent		1					1
Jinan	Shandong	China	2019	Asset-light			1	1			2
Xiangyang	Hubei	China	2019	Asset-light			1	1			2
Thunder Bay	Ontario	Canada	2019	Asset-light		1					1
Total						**16**	**26**	**27**	**28**	**3**	**100**

Note: Both rent and profit-sharing belongs to asset-light model.
Source: Company data, HSBC

Exhibit 102: Maple Leaf: Schools in the pipeline, 2020-21

School	Province	Country	Set up year	Business model	Estimated capacity
KIS	Kuala Lumpur	Malaysia	2020	Acquired	2,600
CIS	Tanjong Katong + Lakeside	Singapore	2020	Acquired	4,115
Tianjin Sino City	Tianjin	China	2020	Asset-light	1,620
Dalian	Liaoning	China	2020	TBC	500
Horinger	Hohhot, Inner Mongolia	China	2020	Asset-light	1,500
Xiangyang	Hubei	China	2020	TBC	150
Jinan	Shandong	China	2020	Asset-light	1,200
Tianjin Nankai	Tianjin	China	2020	TBC	600
Hillside	Hillside Drive	Singapore	2020	Acquired	800
Southwest & Central	n/a	China	2021	TBC	2,500
Canada K-12 school	n/a	Canada	2021	TBC	1,500
Nanjing Lishui	Jiangsu	China	2022	TBC	4,000

Note: Capacity for 1,500 students is also expected to be added in Wuhan's self-owned Campus in 2020.
Source: Company data, HSBC

Exhibit 103: Maple Leaf: Domestic student enrolment target per sixth five-year plan, ranked by student increase

School District	SY20/21	SY21/22	SY22/23	SY23/24	SY24/25	CAGR (SY20/21-24/25)	Increase
GBA	760	1,000	1,155	1,250	9,275	87%	8,515
Southwest	6,325	6,690	6,980	7,315	13,005	20%	6,680
Yangtze River Delta	5,315	6,365	7,600	8,835	10,950	20%	5,635
Hubei	8,230	9,225	10,240	11,185	13,060	12%	4,830
Northwest	1,960	2,220	2,570	2,940	6,780	36%	4,820
Liaoning	7,560	8,345	9,120	9,835	12,255	13%	4,695
Henna	2,445	2,995	3,625	4,180	6,910	30%	4,465
Tianjin	5,675	6,390	7,220	7,880	9,660	14%	3,985
Shandong	1,510	2,355	3,305	4,190	4,950	35%	3,440
Beijing	-	-	-	-	3,000	n/a	3,000
Hainan	7,585	8,350	9,225	9,920	10,450	8%	2,865
Jiangsu	3,855	4,585	5,380	6,070	6,710	15%	2,855
Inner Mongolia	1,480	2,045	2,630	3,280	3,860	27%	2,380
Domestic total	**52,700**	**60,565**	**69,050**	**76,880**	**110,865**	**20%**	**58,165**

Note: The student enrolment for overseas target per sixth five-plan is 10,000. SY=School year.
Source: Company data, HSBC

Overseas studies: Near-term headwinds

In contrast to most of its peers, Mable Leaf sees the vast majority of its high school graduates planning to study overseas. This is a niche market with good growth potential but, in our view, it is also facing some near-term headwinds.

The total number of students studying abroad recorded a CAGR of 22% over 2000-10, moderating to a CAGR of 11% over 2010-18, and reaching 662,100 students in 2018 – this makes mainland China the global leading originator of overseas students.

However, the outbreak of COVID-19, plus the "de-globalisation" trend, has posted some near-term headwinds to overseas studies from mainland China:

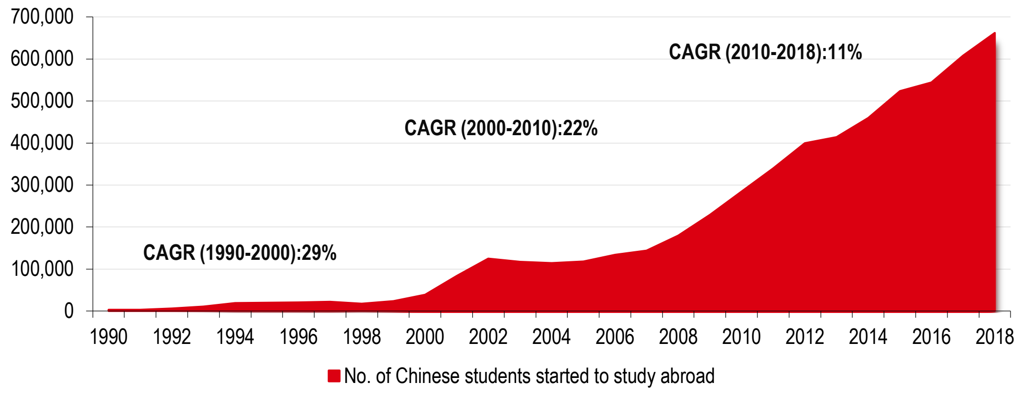
- Firstly, there's a potential dent in demand for overseas studying in the near term given the impact of COVID-19, with a survey conducted by Quacquarelli Symonds (QS) in May suggesting 6% of students (who originally planned to study overseas) no longer want this option and 60% of them plan to defer their plan, while 7% of them plan to switch to another country.
- Furthermore, the "de-globalisation" trend is also likely to affect the planning of many students and families, hence halting or changing their plans to live and study overseas. For more discussion on the "de-globalisation" trend, please read a report published by our macro team: *Excuse me, globalization's been stuck already*, 22 May 2020. This is supported by the change in preferred overseas study location for potential mainland students over the past few years. As illustrated in Exhibit 105 and Exhibit 107, the US has been a key overseas destination for mainland Chinese students; however, student preferences have changed. A survey conducted by Xindongfang over the past six years shows the falling percentage of students planning to go to the US, probably reflecting the impact from rising trade tensions between the US and China.

The changing industry has also impacted international schools, including Maple Leaf. The school operator has reported lower profits for 1H20 partly due to the decline in its ancillary services (especially overseas camps). The group's financial performance, in our view, could be further affected by the above-mentioned factors as well as declining demand for overseas studies.

That being said, we also note there could be a counter-effect that could help to alleviate some of this impact. Some of the existing overseas students (especially at the high school stage) may return during the pandemic and turn to domestic international schools. Moreover, Maple Leaf could also see a small potential impact from the heightened US-China trade tensions, as only 2% of its high school graduates were admitted to universities in the US in 2020. Lastly, given Maple Leaf's solid financial position, the unfavourable operating environment may offer more M&A opportunities – either domestic or overseas – just like the recent acquisition of CIS.

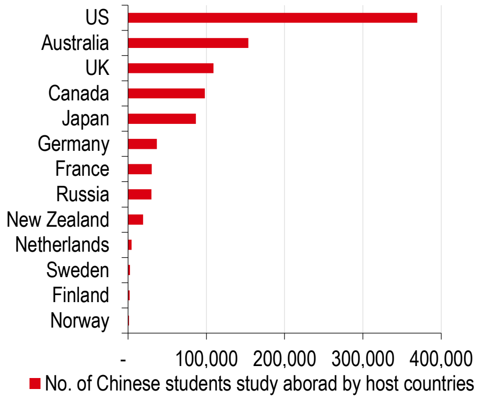
Longer-term, we believe the underlying demand for overseas studies will remain strong – it is worth noting that despite a large absolute number, overseas students still equal less than c10% of annual high school graduates in mainland China. We do expect the growth of overseas studies to resume once the pandemic is contained and the uncertainties around "de-globalisation" are settled.

Exhibit 104: Number of Chinese students that went abroad to study, 1990-2018



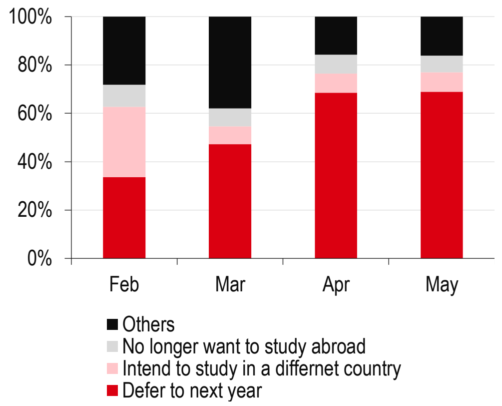
Source: Ministry of Education of the PRC, HSBC

Exhibit 105: US was the largest destination for mainland Chinese students (persons), SY18/19



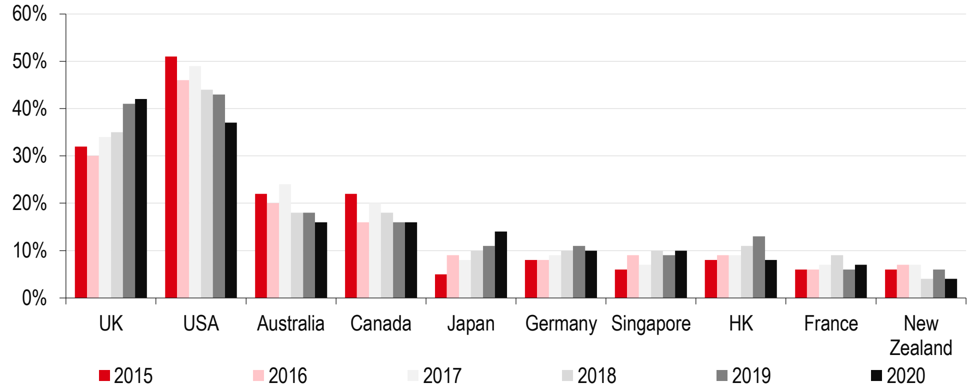
Note: SY=School year.
Source: Institute of International Education (Project Atlas 2019 release), HSBC

Exhibit 106: COVID-19 is holding back many overseas students, according to a QS survey



Source: QS (How COVID-19 is impacting prospective international students at different study levels), HSBC

Exhibit 107: Intended destinations for studying abroad, 2015-20



Source: Report on Chinese Students Overseas Student by Xindongfang, HSBC

Financial analysis

Revenue and net profit: Maple Leaf recorded a 26% net profit CAGR on the back of a 20% revenue CAGR over FY17-19, mainly driven by its capacity expansion while its capacity utilisation remained flat over this period. Revenue from tuition and boarding fees recorded a 23% CAGR over the same period, outpacing other revenue sources. For tuition and boarding fees:

- The 23% tuition revenue CAGR was mainly driven by a 26% CAGR in student enrolment while its average pricing decreased by a 3% compound annual decline due to: (1) a change in the student mix with a declining number of high school students, which have higher pricing and (2) the impact from relatively lower tuition charges at its newly acquired schools, such as in Haikou and Luzhou.
- For high schools it recorded a 5% CAGR in tuition and boarding fees, which we believe is due to the company's strategy to establish a pyramid-shaped student structure; this has resulted in a decline in the number of high school students, but probably compensated for by stronger academic results.

Margins: Maple Leaf's core net profit margin (NPM) has been expanding over FY17-19, from 40% in FY17 to 44% in FY19 despite a decreasing gross profit margin (GPM), thanks to:

- Effective controls on selling expenses and administrative expenses (SG&A), whose percentage of revenue declined 2ppt over FY17-19.
- Rise in other gains and losses, which almost tripled over FY17-19 mainly due to a rise in the reversal of other payables and gains from fair value changes of financial assets.

Balance sheet structure: Maple Leaf has a relatively simple balance sheet. Its largest asset item is cash (45% of total assets), followed by property, plant and equipment (PPE) (37%), investment properties (5%), prepaid lease payments (4%), and goodwill (4%) as of FY19. For its liabilities, contract liabilities are Maple Leaf's largest liability component (60% of total liability), followed by other payables (19%), and debt (15%).

Gearing ratio: Maple Leaf was debt free in FY15-16 and remained in a net cash position over FY17-19. Its gross gearing (calculated by total interest-bearing debt to equity) rose to 17% in FY17 but then gradually dropped to just 8% in FY19, the lowest among our K-12 coverage universe. We note that this could change significantly, following its recent acquisition of CIS.

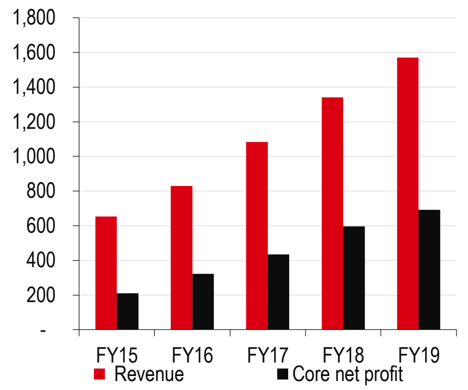
Cash flow and capital expenditure (capex): The average operating cash flow (CFO) to net profit ratio of Maple Leaf was 155% over the past five years, mainly supported by the strong cash generating capability of the school operator's business model. The ratio, however, has shown a downward trend given the change in working capital related to:

- A decrease in other payables in FY18-19.
- A new RMB30m short-term loan with a third-party in FY19.

The majority of Maple Leaf's investing cash-flow goes towards capex (including acquisitions) but this was also impacted by the purchase of investment properties (in FY17) and investment or disposal of financial assets. Its capex was less than RMB250m per year over FY11-17 but increased to over RMB300m in FY18-19, mainly as the group accelerated its expansion through acquisitions over the past two fiscal years.

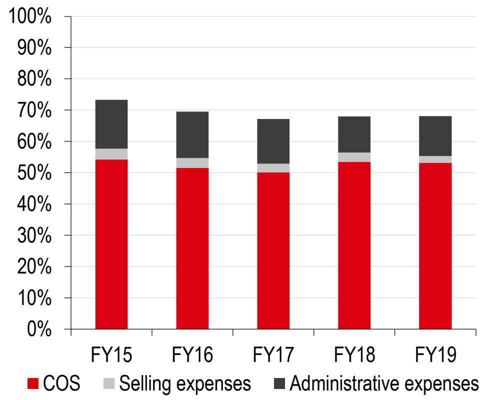
Dividends: Maple Leaf has maintained a largely stable dividend payout ratio of c40% in FY17-19, but declared no dividend in 1HFY20 (probably due to the acquisition for CIS, which was announced later).

Exhibit 108: Maple Leaf: Revenue and core net profit (RMBm), FY15-19



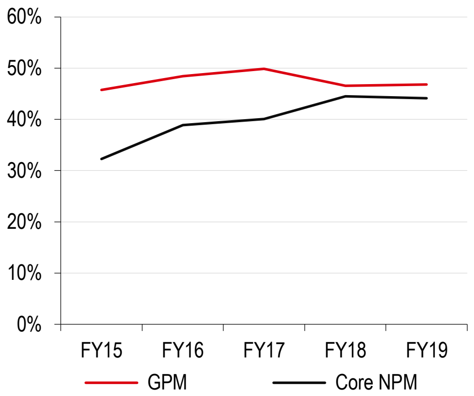
Source: Company data. HSBC

Exhibit 109: Maple Leaf: Expenses as % of revenue, FY15-19



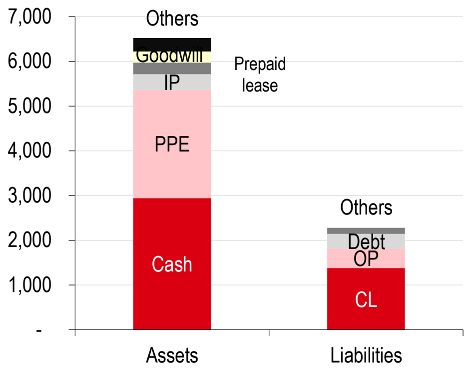
Source: Company data. HSBC

Exhibit 110: Maple Leaf: Margins, FY15-19



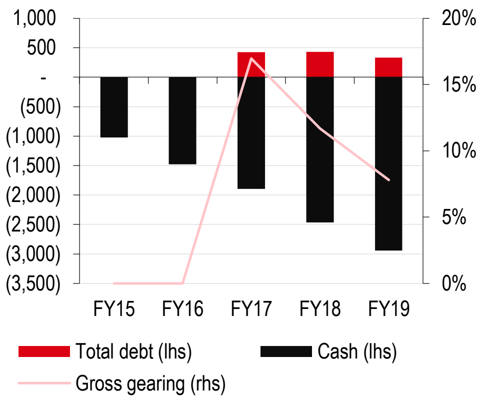
Source: Company data. HSBC

Exhibit 111: Maple Leaf: Balance sheet structure, FY19



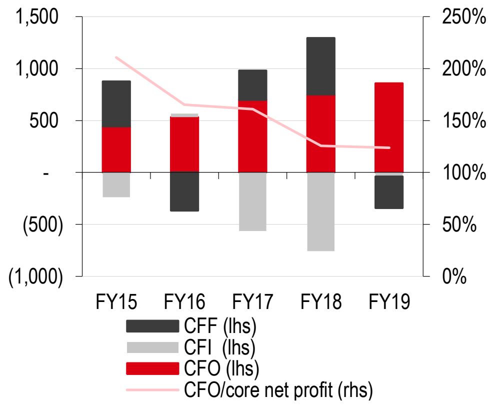
Note: CL=Contract liabilities, OP=Other payables, IP=Investment properties.
Source: Company data, HSBC

Exhibit 112: Maple Leaf: Debt-structure (RMBm) and gearing ratio, FY15-19



Note: Gross gearing ratio is calculated as total interest-bearing debt to total equity.
Source: Company data, HSBC

Exhibit 113: Maple Leaf: Cash flow breakdown, FY15-19



Source: Company data, HSBC

1HFY20 results

Maple Leaf's revenue grew just 6% y-o-y in 1HFY20 mainly as a result of the continuous slowdown in tuition and boarding fee growth, at 13% y-o-y (from 19% y-o-y in FY19), and dragged down by a 7% y-o-y decline in its high school student enrolment. This was compounded even further by a decline in other revenue, notably the cancellation of overseas winter camps. The lower revenue growth, combined with a decline in both investment and other income caused an 11% decline in the group's core earnings in 1HFY20; the interim dividend was suspended.

Exhibit 114: Maple Leaf: Result summary, 1HFY20

Year ended Aug (RMBm)	1HFY19	2HFY19	1HFY20	y-o-y	h-o-h
Key income statement					
Revenue	**744**	**826**	**792**	**6%**	**-4%**
Tuition fees	631	687	712	13%	4%
- High school	*255*	*261*	*253*	*-1%*	*-3%*
- Middle school	*110*	*135*	*141*	*28%*	*5%*
- Elementary school	*220*	*232*	*262*	*19%*	*13%*
- Preschool	*32*	*45*	*40*	*25%*	*-11%*
- Foreign national school	*15*	*14*	*15*	*4%*	*6%*
Summer and winter camps	28	26	3	-88%	-87%
Sales of text books	30	16	30	0%	92%
Others	55	96	46	-16%	-52%
COS	(418)	(418)	(441)	5%	5%
Gross profit	327	408	351	7%	-14%
Investment and other income	35	27	29	-17%	7%
Other gains and losses	57	72	19	-66%	-73%
Marketing expenses	(14)	(20)	(16)	11%	-22%
Administrative expenses	(103)	(97)	(103)	0%	7%
Operating profit	302	390	281	-7%	-28%
Finance costs	(6)	(5)	(8)	46%	51%
PBT	296	385	273	-8%	-29%
Income tax	(15)	(12)	(9)	-41%	-27%
MI	(3)	0	2	NA	386%
Reported net profit	284	372	262	-8%	-30%
Core net profit	**307**	**385**	**273**	**-11%**	**-29%**
EBITDA	346	447	343	-1%	-23%
Core EPS (RMB)	0.10	0.13	0.09	-10%	-29%
DPS (RMB)	0.04	0.05	(0.16)	NA	NA
Key balance sheet					
PP&E	2,193	2,419	2,512	15%	4%
Cash and cash equivalent	1,667	2,813	2,146	29%	-24%
Debt	322	331	325	1%	-2%
Contract liabilities	677	1,376	712	5%	-48%
Total liabilities	1,376	2,278	1,695	23%	-26%
Total equity	3,864	4,246	4,365	13%	3%
Key ratios and business driver					
GPM	43.9%	49.4%	44.4%	0.5ppt	-5.0ppt
Operating expense to revenue	15.7%	14.1%	15.0%	-0.7ppt	0.8ppt
OPM	40.5%	47.3%	35.5%	-5.1ppt	-11.8ppt
Core NPM	40.9%	46.7%	34.7%	-6.2ppt	-12.0ppt
Gross gearing ratio	8.3%	7.8%	7.4%	-0.9ppt	-0.4ppt
Net gearing ratio	-34.8%	-58.5%	-41.7%	-6.9ppt	16.7ppt
Student enrolment	36,099	41,241	41,076	14%	0%
Average pricing	17,483	16,668	17,324	-1%	4%
No. of schools	93	95	100	8%	5%
Capacity utilisation	63.0%	68.3%	63.6%	0.6ppt	-4.7ppt

Source: Company data, HSBC

Forecast and valuations

Forecast

We forecast the future financial performance of Maple Leaf based on the following considerations:

- **Revenue:** We forecast a 21% revenue CAGR over FY19-22e on the following assumptions:
  - **12% CAGR on student enrolment:** We forecast Maple Leaf to register a student enrolment CAGR of c9% on its existing schools and new schools, with the remaining 3% contributed by the consolidation of CIS and KIS. We assume both CIS and KIS to have full-year earnings contribution staring from FY21e.
  - **9% CAGR in average pricing:** We expect this to be bolstered by the consolidation of CIS and KIS (which have higher pricing, especially in CIS) while its existing school portfolio will have flat average pricing.
  - **18% CAGR for other income:** We expect its camping revenue to recover from FY22e, but in the meantime, we factor in the positive contributions from CIS and KIS.
- **Margins:** In FY19-22e, we expect Maple Leaf's GPM and core NPM to drop by 2ppt and 12ppt, respectively, mainly led by the lower profit margins in both CIS and KIS.

Overall, we expect its core earnings to grow at an 8% CAGR in FY19-22e.

Exhibit 115: Maple Leaf: Key forecasts

Year ended Aug (RMBm)	FY19a	FY20e	FY21e	FY22e	CAGR (FY19-22e)
Key income statement items					
Revenue	**1,570**	**1,608**	**2,431**	**2,809**	**21%**
- Tuition fees	1,319	1,427	2,152	2,395	22%
- Summer and winter camps	54	4	4	27	-21%
- Sales of text books	46	46	47	48	1%
- Others	152	131	228	340	31%
COS	(835)	(860)	(1,337)	(1,542)	23%
Gross profit	735	748	1,094	1,267	20%
Investment and other income	62	48	33	37	-15%
Other gains and losses	129	60	60	60	-22%
Operating expenses	(233)	(238)	(389)	(435)	23%
EBIT	692	617	798	929	10%
Finance costs	(11)	(41)	(60)	(60)	76%
Tax	(27)	(23)	(29)	(34)	8%
Reported net profit	657	549	693	815	7%
Core net profit	**693**	**586**	**751**	**882**	**8%**
EBITDA	793	806	1,050	1,200	15%
Core EPS (RMB)	0.23	0.20	0.25	0.30	8%
DPS (RMB)	0.09	0.07	0.09	0.11	7%
Key ratios and operation items					
GPM	46.8%	46.5%	45.0%	45.1%	-1.7%
EBITDA margin	50.5%	50.1%	43.2%	42.7%	-7.8%
EBIT margin	44.1%	38.4%	32.8%	33.1%	-11.0%
NPM	41.8%	34.1%	28.5%	29.0%	-12.8%
Core NPM	44.1%	36.5%	30.9%	31.4%	-12.7%
Operating exp as & of revenue	14.9%	14.8%	16.0%	15.5%	0.6%
Effective tax rate	3.9%	3.9%	3.9%	3.9%	0.0%
Dividend payout	41.8%	40.0%	40.0%	40.0%	-1.8%
Gross gearing ratio	7.8%	22.9%	20.5%	18.3%	10.5%
No. of student enrolled	41,241	47,035	52,488	58,027	12%
Average pricing	31,971	33,176	40,997	41,267	9%

Source: Company data, HSCB estimates

Valuation

We use a discounted cash flow (DCF) methodology to value Maple Leaf as we believe this better captures its strong cash generating capabilities, impact from capital expenditure, and long-term growth outlook. The key assumptions in our three-stage DCF model are as follows:

- Stage one – we use our explicit forecasts for FY21-22e.
- Stage two – we assume a FCFF CAGR of 6% over the medium term, lower than the y-o-y growth in operating cash flow of 14% in FY22e, as we factor in the potential impact from adopting the "for-profit" school classification and a more mature sector. Moreover, this is lower than its peer average in the K-12 stage (at 11%), in view of its track record and uncertainties regarding the implementation of its new curriculum.
- Stage three – we assume a terminal growth rate of 2%.

Our 11% WACC assumption is based on a beta of 1.9x, a risk-free rate of 2.5%, and a market risk premium of 5%. We also assume that interest-bearing debt contributes 17% of capital structure and a cost-of-debt of 5%. Overall, we derive a target price of HKD3.20, which implies an 11x PE and a 4% dividend yield for FY21e, and a 2.6x PEG based on FY19-21e EPS CAGR (or 0.5x for FY20-22e). With 32% upside from current levels, we initiate coverage on the stock with a Buy rating.

Exhibit 116: Maple Leaf: DCF assumptions

	FY21e	FY22e	CAGR (medium-term)	Terminal growth
FCFF (RMBm)	709	652	6%	2%
WACC				11%
Enterprise value (RMBm)				8,754
Equity value (RMBm)				8,052
Total outstanding shares (m)				2,995
Implied fair value (HKD/share)				**3.2**
TP implied PE (FY21e)				11x
TP implied PEG (FY21e, over FY19-21e)				2.6x
TP implied dividend yield (FY21e)				4%
TP implied EV/EBITDA (FY21e)				8x

Source: HSBC estimates

We cross-check the implied PE against both Maple Leaf's own historical average and average of its peers. We select listed private K-12 school operators in China for comparison, and we found:

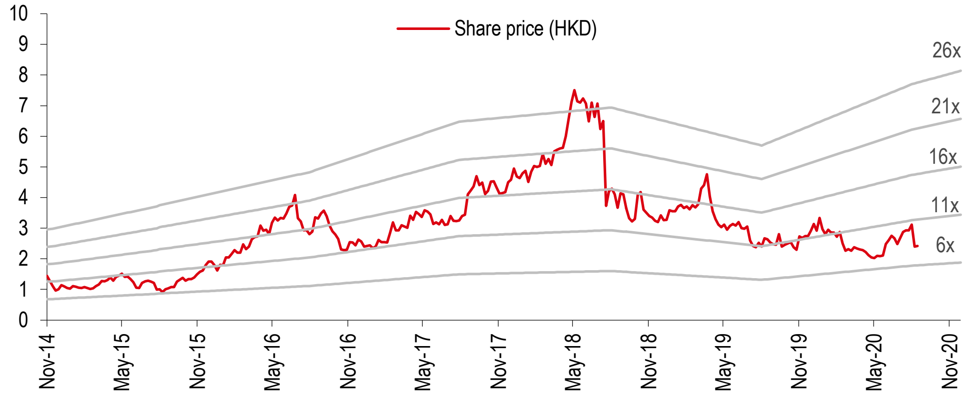
- The implied FY21e PE ratio of 11x is largely in line with its historical average of 12x post the "8-10" event, but at a discount to the K-12 peers; we believe this is justified as Maple Leaf's EPS CAGR over FY19-21e is the lowest among its peers.
- The implied PEG based on FY19-21e EPS CAGR is above its peer average of 0.9x, as we forecast a low EPS CAGR during this time period; however, the implied PEG based on FY20-22e EPS would fall to just 0.5x.

All in all, we believe the stock, which is currently trading at only 8x FY21e PE, to be undervalued, in view of a fully-fledged profit recovery that we expect to see in FY21e. We do expect the stock to re-rate substantially if it delivers successfully on its sixth five-year plan.

Key downside risks:

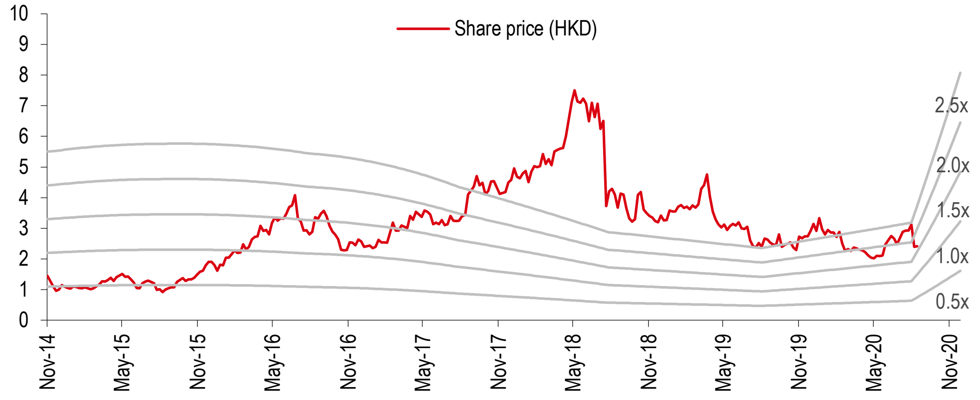
- Unfavourable domestic policies regarding K-12 private school operators.
- Unfavourable overseas policies and environment (such as visa policies, safety, and health issues) would affect students' or parents' decisions to study abroad.
- Lower student enrolment and tuition hikes from intense competition in higher-tier cities or weak spending power of families in economically-underdeveloped regions.
- Failure to maintain education quality, especially in new schools, would affect its reputation.
- Failure of integration after acquisition and potential goodwill impairment.

Exhibit 117: Maple Leaf: 1-year forward PE-band chart, since listing



Source: Refinitiv Datastream, HSBC estimates

Exhibit 118: Maple Leaf: 1-year forward PEG band chart, since listing



Source: Refinitiv Datastream, HSBC estimates

Exhibit 119: Maple Leaf: Valuation comparison

Company	BBG	CMP	Mkt cap	PE (x)			PEG (x)			Dividend yield (%)		
	Ticker	(LC)	(USDm)	FY19a	FY20e	FY21e	FY19a	FY20e	FY21e	FY19a	FY20e	FY21e
Tianli	1773 HK	8.07	2,161	55.4	38.9	27.3	1.3	0.9	0.6	0.5	0.7	1.0
Maple Leaf	1317 HK	2.42	935	9.0	10.7	8.3	2.2	2.6	2.0	4.3	3.5	4.5
Wisdom	6068 HK	3.14	882	13.4	11.4	9.3	0.7	0.6	0.5	3.1	3.6	4.8
Bright Scholar	BEDU US	6.75	812	23.5	17.4	12.1	0.6	0.4	0.3	-	1.8	1.1
Virscend	1565 HK	2.40	957	16.3	15.8	13.1	1.4	1.4	1.1	3.4	3.4	3.4
Weighted avg.				**30.4**	**23.2**	**17.0**	**1.3**	**1.1**	**0.9**	**1.9**	**2.2**	**2.6**

Note: HSBC estimates for Tianli, Maple Leaf, Wisdom and Virscend, Bloomberg consensus for other stocks. Priced as of 17 September 2020).
Source: Bloomberg, HSBC estimates

Tianli Education (1773 HK)

- Tianli Education is a leading private K-12 school operator based in Sichuan with a focus on second- and third-tier cities
- It has replicated the high quality of education in some of its new schools but its reliance on government subsidies is a concern
- Initiate at Hold with a target price of HKD8.00, implying a 26x FY21e PE and 0.6x FY21e PEG

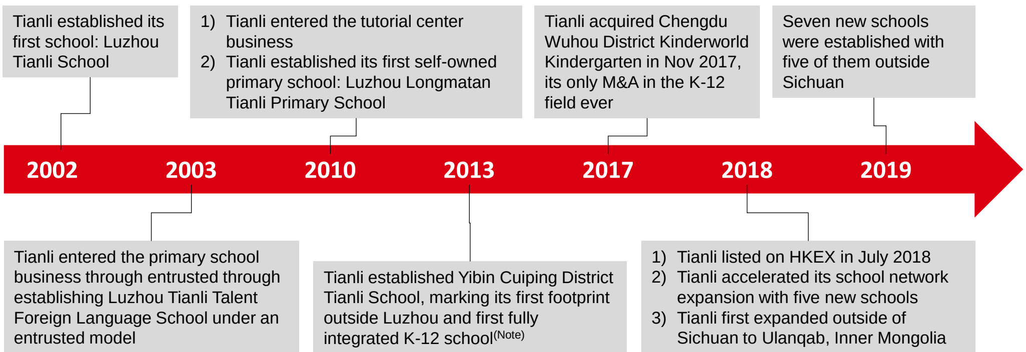
A fast-expanding K-12 private education service provider

Tianli was the second-largest private K-12 school operator in western China (as of 2017, per student enrolments)

Tianli Education is a leading private school operator that originated in western China, offering K-12 education and tutoring services (for K-12 and pre-nursery children). Tianli was the second largest private K-12 school operator in western China with a market share of 0.3%, per Frost and Sullivan which cited its IPO prospectus. With strong growth in student numbers and steadily rising tuition fees, Tianli recorded 40% revenue CAGR over FY17-19, with a core earnings CAGR of 39%.

- Tianli established its first school, Luzhou Tianli School (offering middle school and high school programmes), in 2002. Since then it has tapped into primary schools, first through the entrusted model (i.e. providing school management services) in 2003, and later started its first own primary school in 2010. In 2013, Tianli expanded outside Luzhou with Yibin Cuiping District Tianli School, its first school that offered complete K-12 programmes covering kindergarten, primary school, middle school, and high school stages. The group accelerated its K-12 school network expansion and started to expand outside of Sichuan from 2018, when it was listed, with 24 K-12 schools in operation (15 self-owned, five self-owned under lease, and four entrusted) in 2019.
- Moreover, Tianli entered tutorial services in 2010 and started its first early childhood education centre in 2014. It rapidly expanded into non-degree education services with nine centres started in 2017, increasing to 16 centres in 2019 (but has reduced to nine centres in 1HFY20 due to business transformation).

Exhibit 120: Tianli: Key corporate milestones



Note: Schools offering programs ranging from kindergarten to Grade 1-12.
Source: Company data, HSBC

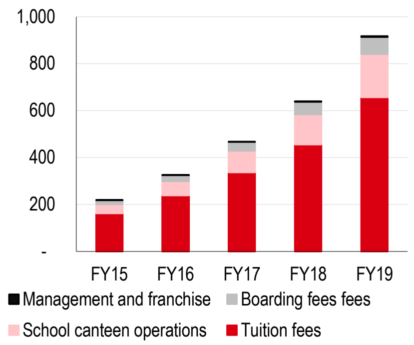
Snapshot of Tianli Education (1773 HK)

Founded in 2002, Tianli Education is a well-established private school operator in China, with its key business focusing on K-12 education (from kindergartens to high schools) and headquartered in Sichuan Province. As of 2019, the group operated 24 K-12 schools, including seven kindergartens, 19 primary schools, 17 middle schools, and 13 high schools, which are located in 16 cities in seven provinces in China. In the 2019 fall semester, total student enrolment was c40,000. Tianli Education was listed on the main board of HKEX on 12 July 2018. Mr. Luo Shi is the largest shareholder, with a c42% shareholding in the group.

Key senior management team includes:

- Mr. Luo Shi, Chairman, CEO & Executive Director
- Ms. Yang Zhaotao, Executive Director
- Mr. Wang Rui, CFO & Executive Director

Revenue by segment (RMBm)



Source: Company data

Forecasts and valuation

(RMBm)	FY19a	FY20e	FY21e	FY22e
Revenue	917	1,230	1,823	2,501
EBITDA	381	541	742	995
Core net profit	260	370	528	741
EPS (diluted, RMB)	0.13	0.18	0.26	0.36
DPS (RMB)	0.04	0.05	0.07	0.10

- Our target price of HKD8.00 for Tianli Education is derived from a DCF approach and implies a 26x PE, 0.6x PEG, and 1% dividend yield for FY21e

Source: Company data, HSBC estimates

Peer comparison

Company	BBG Ticker	PE (x) FY19a	FY20e	FY21e
Tianli	1773 HK	55.4	38.9	27.3
Maple Leaf	1317 HK	9.0	10.7	8.3
Wisdom	6068 HK	13.4	11.4	9.3
Bright Scholar	BEDU US	23.5	17.4	12.1
Virscend	1565 HK	16.3	15.8	13.1
Weighted avg		**30.4**	**23.2**	**17.0**

Note: Priced as at 17 September 2020.
Source: HSBC estimates for Tianli, Maple Leaf, Wisdom and Virscend, Bloomberg consensus for other stocks

Do you know?

- The core of Tianli's education philosophy is "Six Establishments and One Accomplishment" (六立一达), which represents the seven crucial objectives Tianli encourages its students to achieve: health, morality, wisdom, behaviour, mind, creativity, and a positive influence on society in addition to self-realisation (立身、立德、立学、立行、立心、立异、达人).
- Tianli's share price plummeted 62% from its IPO in July 2018 to its trough in October 2018 due to policy headwinds; nevertheless, its share price has appreciated 6x since then.
- Tianli has offered more than RMB1m annual compensation package for its Chief Teacher for academic competitions (i.e., 学科竞赛主教练), according to its advertisements.
- Mr. Luo Shi, the founder of Tianli Education, is the actual controller of Sichuan Tianli Properties Development and Shenzhou Tianli Holdings, and is a representative of the 12th People's Congress of Sichuan Province.
- Chengdu Wuhou District Kinderworld Kindergarten was co-founded by Ms. Tu Mengxuan, the spouse of Mr. Luo Shi, with two other independent third parties in 2014; it was acquired by Tianli Education in 2017.

Key risks and challenges

- Failure to maintain high education quality, especially in newly established schools, would affect brand reputation and cast doubt on its future expansion.
- Decline in government grants would increase the group's financial burden and affect its margins.
- Delays in school construction and the ramp-up period for new schools would drag down its growth and margins, respectively.

Financials & valuation: Tianli Education

Hold

Financial statements

Year to	12/2019a	12/2020e	12/2021e	12/2022e
Profit & loss summary (RMBm)				
Revenue	917	1,230	1,823	2,501
Gross profit	376	526	755	1,047
Other income and gains	30	36	48	58
Operating expenses	-119	-159	-236	-324
EBITDA	381	541	742	995
Depreciation & amortization	-93	-138	-175	-213
Operating profit	287	403	567	782
Finance costs, net	0	-9	-8	-2
PBT	276	385	546	765
Taxation	-7	-10	-14	-19
Reported net profit	265	370	528	741
Core net profit	260	370	528	741
Cash flow summary (RMBm)				
Cash flow from operations	926	1,175	1,727	1,879
Capex	-1,507	-1,286	-1,152	-1,169
Cash flow from investment	-1,066	-1,276	-1,138	-1,153
Dividend paid	-59	-78	-107	-153
Cash flow from financing	-116	413	-261	-702
Balance sheet summary (RMBm)				
PP&E	2,999	4,178	5,187	6,174
Intangible fixed assets	10	10	10	10
Cash and cash equivalents	631	944	1,272	1,296
Total assets	4,723	6,143	7,485	8,504
Contract liabilities	538	647	1,101	1,411
Interest-bearing debt	459	1,000	900	400
Net debt	-172	56	-372	-896
Shareholders' fund	2,439	2,732	3,152	3,740

Ratio, growth and per share analysis

Year to	12/2019a	12/2020e	12/2021e	12/2022e
Y-o-y % change				
Revenue	43.2	34.0	48.2	37.2
Gross profit	39.9	39.8	43.5	38.7
EBITDA	43.7	42.1	37.1	34.1
Operating profit	31.4	40.1	40.8	37.9
Reported net profit	36.1	39.8	42.5	40.4
Core net profit	44.1	42.2	42.5	40.4
EPS	24.6	42.2	42.5	40.4
Ratios (%)				
ROE	11.1	14.3	17.9	21.5
ROA	5.9	6.5	7.5	9.1
Gross profit margin	41.0	42.8	41.4	41.9
EBITDA margin	41.5	44.0	40.7	39.8
Operating margins	31.3	32.8	31.1	31.3
Core net profit margin	28.4	30.1	29.0	29.6
Gross gearing	18.5	36.0	28.1	10.5
Per share data (RMB)				
EPS	0.13	0.18	0.26	0.36
Core EPS	0.13	0.18	0.26	0.36
DPS	0.04	0.05	0.07	0.10
Book value	1.18	1.32	1.52	1.80

Key forecast drivers

Year to	12/2019a	12/2020e	12/2021e	12/2022e
No. of student enrolled	39,926	56,775	76,763	96,802
Average pricing*	22,328	23,668	25,088	26,593

* Represents average tuition and boarding fees per K-12 student

Valuation data

Year to	12/2019a	12/2020e	12/2021e	12/2022e
EV/EBITDA	38.1	27.2	19.3	13.8
PE*	55.4	38.9	27.3	19.5
PEG	1.3	0.9	0.6	0.5
Dividend yield (%)	0.5	0.7	1.0	1.5

* Based on HSBC EPS (diluted)

ESG metrics

Environmental Indicators	12/2019a
GHG emission intensity*	96.1
Energy intensity*	271.5
CO_2 reduction policy	Yes
Social Indicators	**12/2019a**
Employee costs as % of revenues	56.5
Employee turnover (%)	n/a
Diversity policy	Yes

Governance Indicators	12/2019a
No. of board members	8
Average board tenure (years)	1.8
Female board members (%)	12.5
Board members independence (%)	37.5

Source: Company data, HSBC

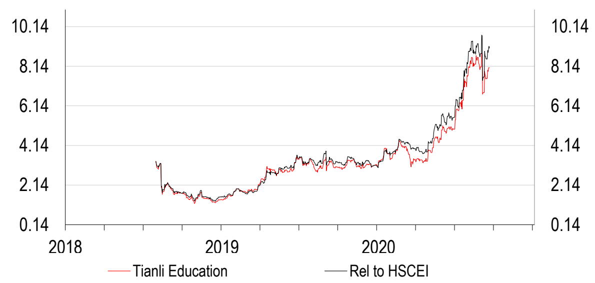
* GHG intensity and energy intensity are measured in kg and kWh respectively against revenue in USD '000s

Issuer information

Share price (HKD)	8.07
Target price (HKD)	8.00
RIC (Equity)	1773.HK
Bloomberg (Equity)	1773 HK
Market cap (USDm)	2,161

Free float	18%
Sector	Discovery Research
Country/Region	China
Analyst	York Pun, CFA
Contact	+852 2822 4396

Price relative



Source: HSBC

Note: Priced at close of 17 Sep 2020

Business analysis

A high quality player with a strong expansion track record

Three different operating models:

– Self-owned: Tianli owns and operates schools

– Entrusted: Tianli provides management services to third-party schools

– Franchised: Tianli licenses early childhood education centres to use its brand

Tianli operates both K-12 schools and tutoring service centres under three business models, i.e. self-owned, entrusted, and franchised, with its self-owned (either self-built or under lease) K-12 schools being its main source of revenue (95% of revenue in FY19). Similar to its peers, tuition fees contributed c72% of its revenue (with c68% coming from its self-owned K-12 schools and c4% from its self-owned tutorial centres), followed by c20% and c8% from school canteen operations and boarding fees (all derived from its self-owned K-12 schools), respectively, as of FY19. The group also provides management and franchise services for its entrusted and franchised schools; however, this revenue accounts for less than 1% of its total revenue during the same fiscal year.

Over FY15-19, Tianli recorded a 43% revenue CAGR. We note this is mainly driven by:

- **Robust track record:** We estimate its K-12 students recorded a 33% CAGR over FY15-19 on:
  - **New schools:** Since 2018, Tianli has accelerated its K-12 school network expansion with five new schools starting operations in 2018 and seven in 2019. Over FY15-19, the number of its K-12 schools rose from seven (with two entrusted) to 24 (with four entrusted), implying a CAGR of 36%. As of August 2020, the company had 16 K-12 schools in the pipeline with eight of them commencing operations in school year 2020/21.
  - **Improved utilisation:** We estimate that it will take three to four years for Tianli to ramp up capacity utilisation of its new schools to a satisfactory level, as it normally recruits new students just in grade one, seven, and ten (the beginning of primary, middle, and high school); we estimate the average utilisation of Tianli's school was 34%/48%/59%/96% for schools in their first, second, third, and fourth year of operation, as of 2019.
  - **Vertically-integrated school networks:** Since 2013, Tianli operates a comprehensive K-12 network, meeting needs from kindergarten kids to high-school students. In school year 2017/18, the internal progression rate of Tianli's kindergarten, primary, and middle school was 60%/82%/41%, helping it to retain quality students in its school networks – particularly under the simultaneous recruitment of public and private schools.
  - **Steady increase in tuition and boarding fees:** Tianli achieved an 8% CAGR in the average pricing per student of its self-owned K-12 schools over FY15-19. Over FY17-18, we have seen price hikes in Tianli's schools in Yibin, Guangyuan and Luzhou. But tuition hikes are only applicable to newly admitted students (i.e. those in grade one, seven, and ten), though the impact of tuition and boarding fee hikes will last for 3-6 years.

Exhibit 121: Tianli: School portfolio summary, FY19

	K-12			Tutorial centres and early education centres
	Number of schools	Number of students	Student %	Number of centres
Self-owned	15	32,216	81%	10
- Sichuan	10	28,863	72%	10
- Yunnan	2	1,518	4%	-
- Guizhou	1	1,114	3%	-
- Henan	1	612	2%	-
- Shandong	1	109	0%	-
Self-owned (lease)	5	3,572	9%	-
- Sichuan	4	2,825	7%	-
- Inner Mongolia	1	747	2%	-
Entrusted	4	4,138	10%	-
- Sichuan	4	4,138	10%	-
Franchised	-	-	0%	2
- Sichuan	-	-	0%	1
- Chongqing	-	-	0%	1
Total	**24**	**39,926**	**100%**	**10**

Source: Company data, HSBC

Exhibit 122: Tianli: School portfolio, as of 30 August 2020

School	Location	Setup year	Business model	Type of services (Note)	Student	Capacity	Utilisation
K-12							
In operation						**Existing**	
Luzhou Tianli School	Luzhou, Sichuan	2002	Self-owned	G 7-12	1,766	3,800	46.5%
Luzhou Tianli Foreign Language School	Luzhou, Sichuan	2003	Entrusted	G 1-6	1,118	1,100	101.6%
Luzhou Longmatan Tianli Primary School	Luzhou, Sichuan	2010	Self-owned	G 1-6	1,455	1,380	105.4%
Affiliated Kindergarten of Luzhou Tianli School	Luzhou, Sichuan	2013	Entrusted	Kindergarten	536	500	107.2%
Yibin Cuiping District Tianli School	Yibin, Sichuan	2013	Self-owned	K-12	5,511	5,350	103.0%
Chengdu Wuhou District Kinderworld Kindergarten	Chengdu, Sichuan	2014	Self-owned (lease)	Kindergarten	199	200	99.5%
Neijiang Tianli (International) School	Neijiang, Sichuan	2015	Self-owned	G 1-12	4,333	4,680	92.6%
Guangyuan Tianli International School	Guangyuan, Sichuan	2015	Self-owned	G 1-12	4,475	4,680	95.6%
Xichang Tianli (International) School	Xichang, Sichuan	2016	Self-owned	G 1-12	4,297	4,680	91.8%
Tianli Kindergarten of Gulin County	Luzhou, Sichuan	2016	Self-owned (lease)	Kindergarten	130	300	43.3%
Cangxi Tianli School	Guangyuan, Sichuan	2017	Self-owned (lease)	G 1-12	2,247	2,710	82.9%
Ya'an Tianli School	Yaan, Sichuan	2017	Self-owned	G 1-12	1,943	3,150	61.7%
Ziyang Tianli School	Ziyang, Sichuan	2018	Self-owned (lease)	G 1-9	1101	2,500	44.0%
Deyang Tianli International School	Deyang, Sichuan	2018	Self-owned	G 1-12	4,599	5,000	92.0%
Hejiang Tianli International School	Luzhou, Sichuan	2018	Entrusted	G 1-12	3,227	5,000	64.5%
Affiliated Green Rhyme Kindergarten of Luzhou Tianli School	Luzhou, Sichuan	2018	Entrusted	Kindergarten	251	300	83.7%
Ulanqab Tianli School	Ulanqab, Inner Mongolia	2018	Self-owned (lease)	G 1-9	1,402	2,000	70.1%
Chengdu Longquan Tianli School	Chengdu, Sichuan	2019	Self-owned	K-6	745	2,103	35.4%
Dazhou Tianli School	Dazhou, Sichuan	2019	Self-owned	G 1-12	1,594	4,200	38.0%
Yunnan Baoshan Tianli School	Baoshan, Yunnan	2019	Self-owned	G 1-12	1,387	1,620	85.6%
Yunnan Yiliang Tianli School	Zhaotong Yunnan	2019	Self-owned	G 1-12	1,680	2,970	56.6%
Guizhou Zunyi Tianli School	Zunyi, Guizhou	2019	Self-owned	G 1-12	1,979	2,160	91.6%
Henan Zhoukou Tianli School	Zhoukou, Henan	2019	Self-owned	G 1-12	1307	1,620	80.7%
Shandong Weifang Tianli School	Weifang, Shandong	2019	Self-owned	G 1-12	347	2,016	17.2%
Dongying Tianli School	Dongying, Shandong	2020	Self-owned	G 1-12	947	2,160	43.8%
Rizhao Tianli School	Rizhao, Shandong	2020	Self-owned	G 1-12	1,303	2,160	60.3%
Jianmenguan Tianli International School	Guangyuan, Sichuan	2020	Self-owned	G 1-12	840	2,160	38.9%
Jiangxi Yichun Tianli School	Yichun, Jiangxi	2020	Self-owned	G 1-12	634	1,440	44.0%
Chengdu Pixian Tianli School	Chengdu, Sichuan	2020	Self-owned	G 1-12	463	2,800	16.5%
Luzhou Tianli Chunyu Campus (flagship school)	Luzhou, Sichuan	2020	Self-owned	K-9	3,487	3,510	99.3%
Luxian Tianli School	Luzhou, Sichuan	2020	Entrusted	K-6	260	1,845	14.1%
Xiangshan Tianli School	Ningbo, Zhejiang	2020	Entrusted	n/a	2,351	2,400	98.0%
Total					**57,914**	**82,494**	**70.2%**
Under construction						**Maximum**	
Dongying Tianli School	Dongying, Shandong	2020	Self-owned	G 1-12		4,000	
Rizhao Tianli School	Rizhao, Shandong	2020	Self-owned	G 1-12		4,680	
Jianmenguan Tianli International School	Guangyuan, Sichuan	2020	Self-owned	G 1-12		4,000	
Jiangxi Yichun Tianli School	Yichun, Jiangxi	2020	Self-owned	G 1-12		6,000	
Chengdu Pixian Tianli School	Chengdu, Sichuan	2020	Self-owned	G 1-12		2,800	
Luzhou Tianli Chunyu Campus (flagship school)	Luzhou, Sichuan	2020	Self-owned	K-9		5,000	
Luxian Tianli School	Luzhou, Sichuan	2020	Entrusted	K-6		1,845	
Xiangshan Tianli School	Ningbo, Zhejiang	2020	Entrusted	n/a		2,400	
Tongren Tianli School	Tongren, Guizhou	2021	Self-owned (lease)	G 1-9		3,000	
Lanzhou Tianli School	Lanzhou, Gansu	2021	Self-owned	n/a		6,000	
Lai'an Tianli School	Lai'an, Anhui	2021	Self-owned	G 1-12		5,000	
Jining Tianli School	Jining, Shandong	2021	Self-owned	n/a		6,000	
Ulanqab Tianli School (second school)	Ulanqab, Inner Mongolia	2021	Self-owned	n/a		4,620	
Kaiyang Tianli School	Guiyang, Guizhou	2022	Self-owned	G 1-12		3,000	
Chuxiong Tianli School	Chuxiong, Yunnan	2022	Self-owned	G 1-12		4,680	
Kaili Tianli School	Kaili, Guizhou	2022	Self-owned	G 1-12		5,000	
Others	TBC	TBC	TBC	TBC		12,724	
Total planned capacity						**62,274**	
Total capacity (existing + planned)						**144,768**	
Tutorial centres and early childhood education centres							
Tutorial centres							
3 tutorial centres	Luzhou, Sichuan		Self-owned				
2 tutorial centres	Yibin, Sichuan		Self-owned				
Early childhood education centres							
2 early childhood education centres	Luzhou, Sichuan		Franchised				
1 early childhood education centres	Luzhou, Sichuan		Self-owned				
1 early childhood education centres	Chongqing		Franchised				

Note: K-12 stands for Kindergarten (G 0), Primary school (G 1-6), Middle school (G 7-9) and High school (G 10-12); K-9 stands for Kindergarten, Primary school and Middle school; K-6 stands for Kindergarten and Primary school.
Source: Company data, Company websites, HSBC

Creating strong academic results at new schools

The rapid expansion of Tianli in recent years, in our view, is underpinned by its business model to replicate its strong academic results – the latter being supported by decent teacher compensation – as well as competitive tuition fees and fast school construction. We discuss in detail below:

- **Solid academic results,** mainly measured by a strong performance in the Gaokao (高考) and Zhongkao (中考), is the cornerstone for domestic K-12 schools. Luzhou Tianli School was recognised as a Sichuan Province First-tier Demonstrative School (四川省一级示范性普通高中) in 2016, according to Tianli. Meanwhile, Tianli has maintained an average university admission rate of 93% and first-tier university admission rate of 64% in 2015-19, well above the average levels in Sichuan (at 35% and 11%, respectively). In 2020, 69-87% of high school graduates in Tianli's schools that participated in the Gaokao (i.e., in Luzhou, Yibin, Guangyuan, and Xichang), achieved Gaokao scores, above the minimum admission scores for first-tier universities; in addition, four of the students are Gaokao top scorers in their respective cities, with two ranked among the top 10 in Sichuan. The strong results seem to suggest that Tianli has the ability to replicate its solid results in Luzhou to other Sichuan-based schools although, for many of the newer schools that established in 2018 (such as in Dazhou and Deyang), it is still too soon to tell.

- **Competitive pricing:** We believe Tianli's school pricing (RMB18,360-31,890 per student in FY19) is competitive, relative to the local income level and education quality. We calculate the average pricing per student of Tianli to the weighted average urban citizens' per capita disposable income was 0.6x in 2019, compared to 0.5-0.8x for the major schools of its peers. More importantly, we believe Tianli offers an attractive alternative for students in second- and third-tier cities in western China, where there's rising demand for differentiated education services.

- **Standardised operations to speed up the expansion:** We note that Deyang Tianli School started operations from September 2018, 11 months after Tianli signed an agreement with the local government. It is also worth mentioning that Tianli's schools – especially the new ones – have solid infrastructure and good campuses, per our own observations. These, in our view, show Tianli has the capability to speed up capacity expansion.

- **Higher compensation to attract talent**: We estimate the average compensation of Tianli's full-time teachers to be around RMB200,000 in FY19, c30% above the average compensation of Wisdom and Virscend. This, in our view, helps Tianli recruit high-quality teachers and supports quality expansion.

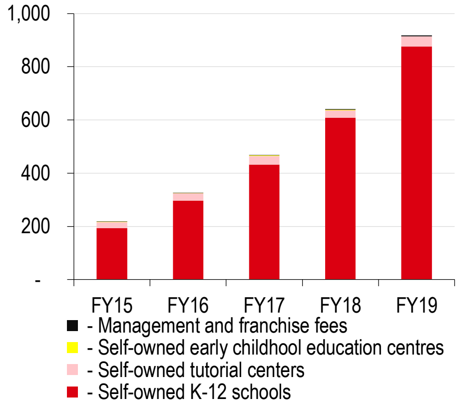
But, there are drawbacks

Despite the solid track record and many positives, we note two noticeable concerns:

- **High reliance on government grants:** In FY18-19, government grant receipts booked in deferred income accounted for over 30% of its total capex and that has played an important role for Tianli in maintaining relatively stable margins and profitability. Please see the later sections for a more detailed discussion.

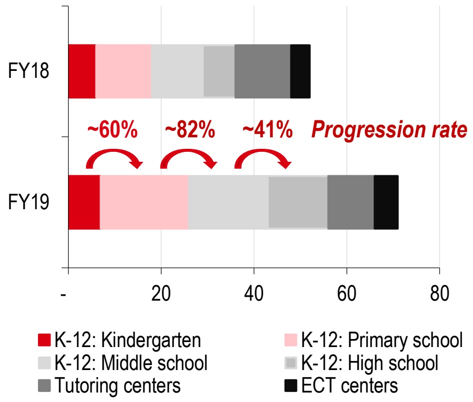
- **Connected transactions:** We note that Nanyuan Construction, a connected party of Tianli that is wholly owned by the major shareholder, Mr. Luo Shi, has been providing construction services for Tianli, with transaction amounts reaching RMB579m and RMB965m, or 74% and 64% of the group's total capex in FY18 and FY19. This may continue or even rise further, pursuant to a new school construction framework agreement between the relevant parties in June 2019. While this may be considered key to Tianli being able to sustain its rapid expansion model, it may also raise questions about good governance. Nevertheless, we note Tianli is working to address the potential concern, such as signing a cooperation agreement with third-party property developers in 2020.

Exhibit 123: Tianli: Revenue by type (RMBm), FY15-19



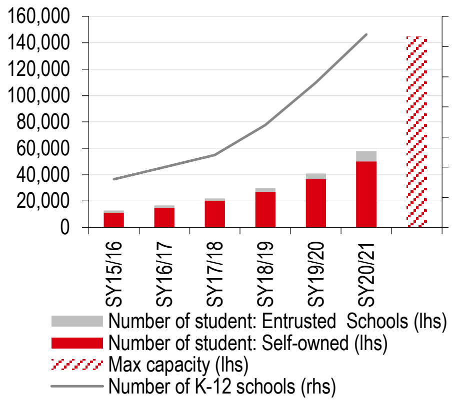
Source: Company data, HSBC

Exhibit 124: Tianli: Number of schools by Grade and type of services, FY18-19



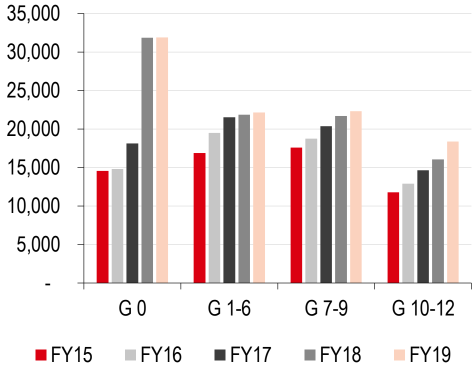
Note: The progression rates are for 2017 fall semester.
Source: Company data, HSBC

Exhibit 125: Tianli: Number of student in K-12 schools and Number of K-12 schools, SY15/16-SY20/21



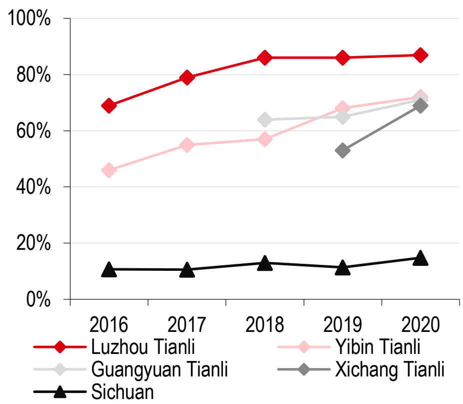
Note: SY21/21 figures are as of 31 August 2020. SY=School year.
Source: Company data, HSBC

Exhibit 126: Tianli: Average pricing of self-owned K-12 school (RMB), FY15-19



Note: G 0 stands for Kindergarten, G 1-6 stands for Primary school. G 7-9 stands for Middle school, and G 10-12 stands for High school.
Source: Company data, HSBC

Exhibit 127: Tianli: First-tier University admission rate: Tianli vs. Sichuan Province, 2016-20



Source: Company data, HSBC

Exhibit 128: Tianli: Range of tuition fees per student of self-owned K-12 school (RMB'000), SY16/17-SY20/21

	SY16/17	SY17/18	SY18/19	SY19/20	SY20/21
High School	20.0-22.0	22.0-25.0	22.0-25.0	23.0-30.0	23.0-30.0
Middle School	20.0-25.0	20.0-25.0	20.0-25.0	20.0-35.0	20.0-52.7
Primary School	20.0-24.0	20.0-24.0	20.0-24.0	20.0-49.8	20.0-51.4
Kindergarten	26.0	26.0-90.0	24.0-90.0	20.0-90.0	20.0-90.0

Note: SY=School year.
Source: Company data, HSBC

Financial analysis

Revenue and net profit: Tianli recorded a 39% core net profit CAGR on a revenue CAGR of 40% over FY17-19, mainly driven by the rapid expansion of its school networks and tuition hikes. In 2019, 7 new K-12 schools commenced operation and the overall utilisation ratio was 68%. As for fee hikes, we note the upper range for its tuition fees in high schools, middle schools, and primary schools increased by RMB5,000, RMB10,000, and RMB25,800 in the school year 2019/20. This was due to higher tuition fees in its newly established schools in Zunyi, Weifang, and Chengdu (Longquan).

Margins: Tianli showed improved profitability over FY15-17 with its gross profit margin increasing from 27% to 42%, and net profit margin rising from 8% to 29%; these margin ratios have remained steady over FY17-19. However, if we exclude the positive impact from government subsidies (see the following section for more details), we estimate the adjusted GPM (excluding the government subsidies) would have been lower, and would have dropped from 25% in FY17 to 23% in FY19.

Costs: Staff costs in Cost of Sales (COS), accounting for 32% of revenue, was the largest cost component of Tianli in FY19, followed by materials consumption (12%), administrative expenses (10%), and D&A (9%). Labour costs and D&A, as a percentage of revenue, have risen 0.8ppt and 1.7ppt, respectively, over FY17-19; however, this was largely offset by teaching related costs and other costs, whose percentage of sales fell 0.7ppt and 0.9ppt over the same period.

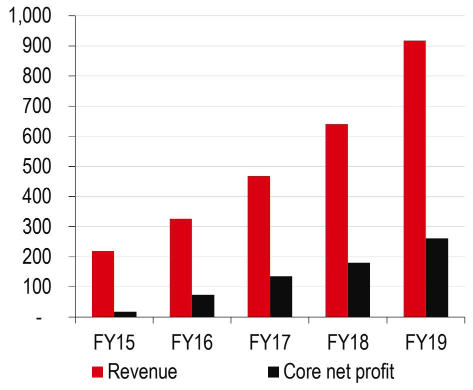
Balance sheet structure: The largest item in total assets is property, plant and equipment (64% of total assets), followed by right-of-use assets (16%), cash (13%), and prepayments and other receivables (7%) – the latter are mainly the prepayments for the acquisition of land use rights as of FY19. As for its liabilities, deferred income is the largest item (27% of total liability) and is unamortised government grants; this is followed by contract liabilities (26%), mainly representing unused tuition fees, boarding fees, and canteen operation fees that are received in advance and will be recognised as revenue within a school year; other key liability components are debt (20%), other payables (11%), amounts due to related parties (10%) and lease liability (4%). Other payables mainly reflect accrued bonuses and employee benefits and miscellaneous advances from students (for uniforms and textbooks) while outstanding amounts due to related parties are mainly related to Nanyuan Construction.

Gearing ratio: Like its peers, Tianli relies on debts (interest-bearing bank loans) to expand its school networks. However, Tianli's total debt level was largely flat in FY16-19 even as expansion accelerated in FY18-19. Accordingly, its gross gearing has significantly declined and it has been in a net cash position since FY18. As of FY19, its gross gearing was only 18%.

Cash flow: The average CFO/net profit of Tianli has been high at 243% over the past five years. This is mainly due to the nature of school operations (cash generating) and was further supported by the considerable government grants received by Tianli. Tianli's investing cash-flow has increased to over RMB1bn in FY18-19 (from no more than RMB420m in FY15-17) on new school expansions and is likely to remain elevated, in view of the expansion plans in the near future.

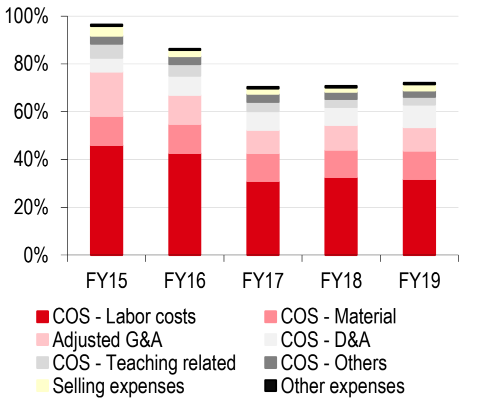
Dividends: Since listing, Tianli has adopted a stable dividend payout ratio of around 30%.

Exhibit 129: Tianli: Revenue and core net profit (RMBm), FY15-19



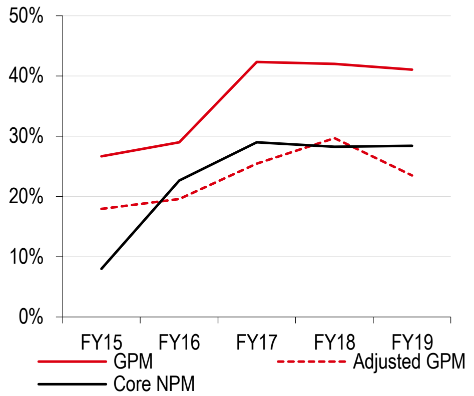
Source: Company data, HSBC

Exhibit 130: Tianli: Cost items as % of revenue, FY15-19



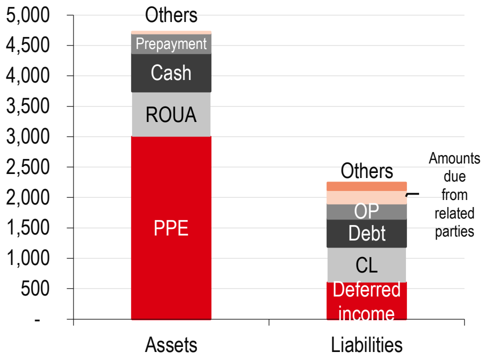
Note: Adjusted G&A equals to administrative expenses excluding listing expenses.
Source: Company data, HSBC

Exhibit 131: Tianli: Margins, FY15-19



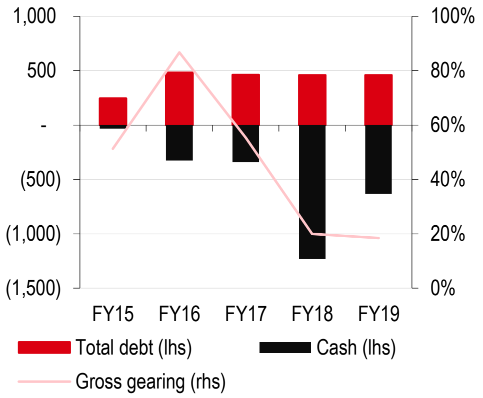
Note: Adjusted GPM excludes government grants, amortisation, and received subsidies.
Source: Company data, HSBC

Exhibit 132: Tianli: Balance sheet structure (RMBm), FY19



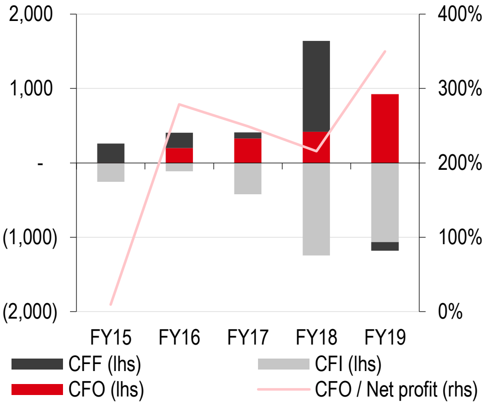
Note: ROUA stands for right-of-use assets, CL stands for contract liabilities, OP stands for other payables.
Source: Company data, HSBC

Exhibit 133: Tianli: Debt-structure (RMBm) and gearing ratio, FY15-19



Note: Gross gearing ratio is calculated as total interest-bearing debt to total equity.
Source: Company data, HSBC

Exhibit 134: Tianli: Cash flow breakdown (RMBm), FY15-19



Source: Company data, HSBC

1HFY20 results

Tianli reported 30% revenue growth with a faster core profit growth of nearly 40% in 1H20 (for the period ended June 2020). While government subsidies have continued to play an important part (up 69% y-o-y, when measured by the amount recognised in the income statement), we note its adjusted gross profit margin has remained stable, probably reflecting an improved operating efficiency in existing schools.

Nevertheless, operating cash-flow deteriorated in 1H20 on the back of the decline in contract liabilities (i.e., mainly deferred tuition and boarding fees) – perhaps due to a timing change in fee collection under COVID-19. It is also worth noting that Tianli has raised over RMB500m in additional debt in 1H20 – mainly long-term debt – and this has led to a rise in its gearing ratio.

Exhibit 135: TIanli: Results summary, 1HFY20

	1H19	2H19	1H20	y-o-y	h-o-h
Key income statement					
Revenue	**438**	**479**	**571**	**30%**	**19%**
- Tuition fees	*307*	*351*	*412*	*34%*	*17%*
- Boarding fees	*39*	*33*	*49*	*27%*	*48%*
- School canteen operations	*89*	*95*	*108*	*21%*	*14%*
- Management and franchise fees	*3*	*1*	*2*	*-40%*	*264%*
COS	(248)	(293)	(295)	19%	1%
Gross profit	190	186	275	45%	48%
Other income and gains	12	17	11	-9%	-35%
Selling and distribution expenses	(7)	(17)	(8)	21%	-52%
Administrative expenses	(43)	(48)	(59)	37%	22%
Other expenses	(3)	(1)	(2)	-54%	49%
Operating profit	150	138	218	46%	59%
Interest expenses	(4)	(9)	(7)	111%	-19%
Share of profit of an associate	1	1	(0)	NA	NA
PBT	147	129	211	43%	63%
Income tax	(1)	(6)	(1)	-26%	-91%
MI	3	2	2	-33%	-5%
Reported net profit	144	121	208	45%	72%
Core net profit	**146**	**115**	**203**	**39%**	**76%**
EBITDA	190	191	280	47%	47%
HSBC EPS (RMB)	0	0	0	39%	76%
DPS (RMB)	-	0	-	NA	-100%
Key balance sheet					
PP&E	2,538	2,999	3,735	47%	25%
Cash and cash equivalents	1,012	631	775	-23%	23%
Debts	444	459	1,014	128%	121%
Contract liabilities	666	588	444	-33%	-24%
Total liabilities	2,281	2,242	3,263	43%	46%
Total equity	2,357	2,481	2,617	11%	5%
Key ratios and business driver					
GPM	43%	39%	48%	4.8ppt	9.4ppt
Adjusted GPM	31%	17%	31%	0.9ppt	14.4ppt
Operating expense to revenue	12%	14%	12%	-0.1ppt	-1.8ppt
OPM	34%	29%	38%	4.0ppt	9.6ppt
Core NPM	33%	24%	36%	2.3ppt	11.5ppt
Gross gearing ratio	19%	18%	39%	19.9ppt	20.3ppt
Net gearing	-24%	-7%	9%	33.2ppt	16.1ppt
Student enrolment	27,165	35,788	36,480	34%	2%
Average pricing	12,182	10,092	12,251	1%	21%
No. of schools	17	24	24	41%	0%
Capacity utilisation	NA	69%	70%	NA	1.3ppt

Note: (1) Adjusted GPM is the GPM excluding government grants amortisation and (2) student enrolment and average pricing are for its self-owned K-12 school.
)Source: Company data, HSBC

Government subsidy: A double-edged sword

Tianli receives a considerable amount of assistance in the form of government grants and this has been a key factor in how the company has maintained a high and steady margin. We believe Tianli's high government grants are related to the government's target to improve education equality. While compulsory education has been widely implemented, different schemes are still underway (such as the elimination of the "large classes" and this gives rise to government grants and incentives for private schools, which, in our view, are sometimes used as a means to achieve these policy goals.

For instance, the State Council published "Some suggestions on the integrated reform and development of compulsory education in urban and rural areas" (关于统筹推进县域内城乡义务教育一体化改革发展的若干意见) in July 2016, seeking to eliminate "super large classes", i.e. classes with more than 66 students, and "large classes", i.e. classes with over 56 students, by 2018 and 2020, respectively. We note that "large classes" or "super large classes" are a critical problem in Sichuan, according to the "Meeting super large class targets as planned in 2018" (2018 年如期完成化解义务教育超大班额任务), released by the MOE on 26 February 2019. While local authorities are developing new public schools and expanding existing ones, the development of private schools can sometimes be a helpful solution, as some may help to offer educational resources at a lower cost or in a faster time period. Tianli has been a key beneficiary, in our view, given its sound track record and reputation for offering high quality and affordable private education in some lower-tier cities (such as Luzhou, where it originated).

It is also worth noting that Tianli has two types of government incentives under its accounts:

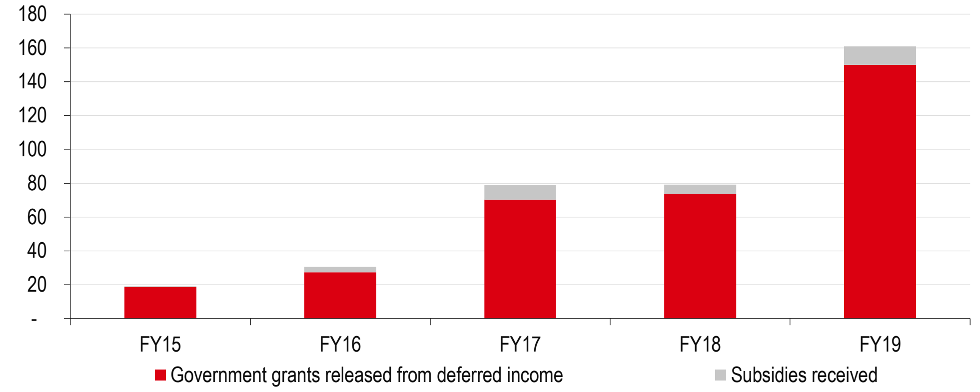
- **Government grants:** The majority of funds received from the government are treated as government grants, which are normally received for the purpose of compensating salaries and wages for teaching activities at certain schools, and are deducted from the staff costs upon the offering of these services. Tianli recognised RMB150m in FY19, which was deducted from the cost of sales. For the expenditure that has not yet happened, this will remain in the deferred income balance. As of FY19, Tianli has RMB603m in deferred income on its balance sheet.
- **Government subsidies** are deducted directly from staff costs upon receipt of subsidies. The amount was minimal at RMB11m in FY19.

As illustrated in Exhibit 136, the amount of government grants released from deferred income and subsidies received have risen sharply in recent years, as Tianli accelerated its expansion. This has become a key support for Tianli in maintaining its high and steady margins. Excluding the impact from government grants and subsidies, we estimate Tianli's adjusted GPM would have been 23-30% over FY17-19 while its core NPM would have been 12-17%, both substantially below reported figures. We also calculate that Tianli's core net profit and profit CAGR in FY17-19 would have declined significantly, if government grants and subsidies are excluded.

We forecast RMB221-312m from the release of government grants and receipts of subsidies over FY20-22e, but note there is a high degree of uncertainty here.

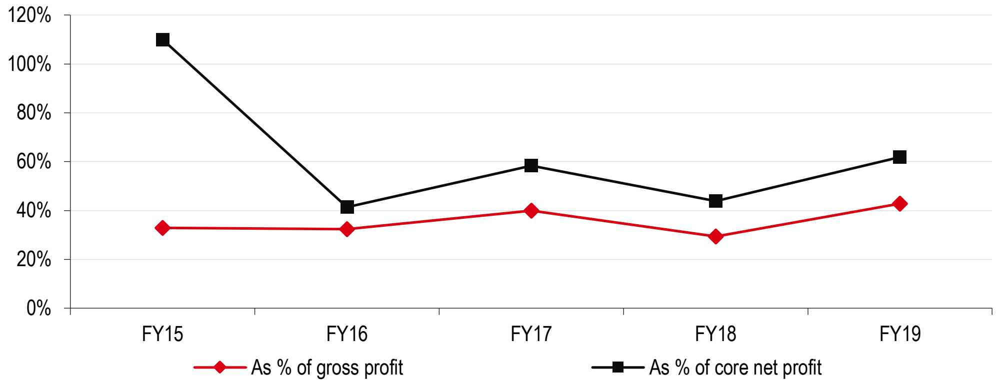
Meanwhile, while government grants seem to smooth out Tianli's profitability amidst the ramp-up of new schools, it distorts the true operating picture and also poses a significant question mark over its future prospects.

Exhibit 136: Government grants released and subsidies received, FY15-19 (RMBm)



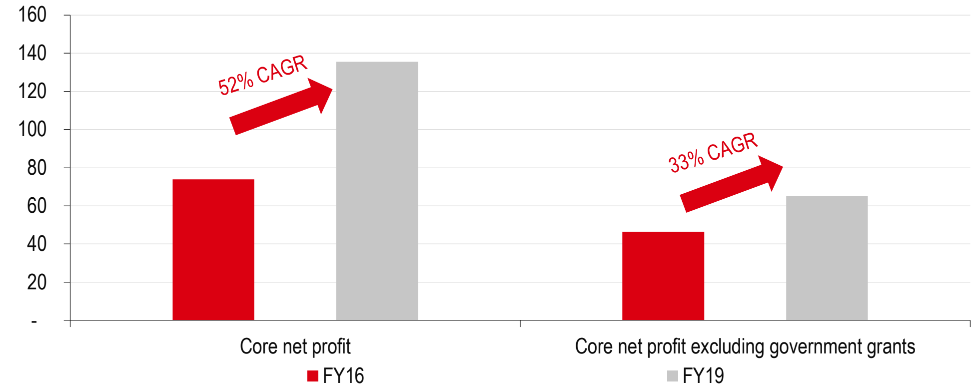
Source: Company data. HSBC

Exhibit 137: Total government grants and subsidies as a % of gross and core net profit, FY15-19



Source: Company data. HSBC

Exhibit 138: Both the growth and level of profits would have declined if government grants are excluded (RMBm)



Source: Company data. HSBC

Forecast and valuations

Forecast:

We forecast the future financial performance of Tianli based on the following considerations:

- **Revenue:** We forecast a 40% revenue CAGR over FY19-22e on the following assumptions:
  - **33% CAGR in student enrolled in its self-owned K-12 schools**: We expect Tianli to add 6-8 new schools per year in the coming three fiscal years, representing an annual growth rate of 16-33% with its capacity utilisation increasing modestly to 69% in FY22e.
  - **6% CAGR in average pricing**: This is similar to its historical growth of 6-9% over FY16-19.
  - **38% CAGR in other income:** In line with the tuition fee trend.
- **Margins:** We expect Tianli to record a high GPM of 42.8% in FY20e, partly on a one-off waiver of social insurance fees during COVID-19. We expect its GPM to drop to 41.4% in FY21e and record a gradual expansion over FY22e, thanks to efficiency improvements and continued government grants. We expect its operating expense ratios to remain stable. This leads to a c1ppt improvement in core NPM forecasts over FY19-22e. Note we have not factored in a potentially higher tax rate for "for-profit" school conversions.

Overall, we expect Tianli's core earnings to grow by a CAGR of 42% in FY19-22e.

Exhibit 139: Tianli: Key forecasts

Year ended Dec (RMBm)	FY19a	FY20e	FY21e	FY22e	CAGR (FY19-22e)
Key income statement items					
Revenue	**917**	**1,230**	**1,823**	**2,501**	**40%**
- Tuition fees	658	915	1,311	1,804	40%
- Boarding fees	72	98	149	207	42%
- School canteen operations	184	212	356	482	38%
- Management and franchise fees	4	5	6	8	30%
COS	(541)	(704)	(1,068)	(1,454)	39%
Gross profit	376	526	755	1,047	41%
Other income and gains	30	36	48	58	25%
Operating expenses	(119)	(159)	(236)	(324)	40%
EBIT	287	403	567	782	40%
Interest expenses	(13)	(20)	(23)	(19)	14%
Income tax	(7)	(10)	(14)	(19)	40%
Reported net profit	265	370	528	741	41%
Core net profit	**260**	**370**	**528**	**741**	**42%**
EBITDA	381	541	742	995	38%
Core EPS (RMB)	0.13	0.18	0.26	0.36	42%
DPS (RMB)	0.04	0.05	0.07	0.10	40%
Key ratios and operation items					
GPM	41.0%	42.8%	41.4%	41.9%	0.8%
Adjusted GPM (Note 1)	23.5%	24.8%	28.5%	29.4%	5.9%
EBITDA margin	41.5%	44.0%	40.7%	39.8%	-1.7%
EBIT margin	31.3%	32.8%	31.1%	31.3%	-0.1%
NPM	29.4%	30.5%	29.2%	29.8%	0.4%
Core NPM	28.4%	30.1%	29.0%	29.6%	1.2%
Operating exp as & of revenue	12.9%	12.9%	12.9%	12.9%	0.0%
Effective tax rate	2.5%	2.5%	2.5%	2.5%	0.0%
Dividend payout	28.9%	29.0%	29.0%	29.0%	0.1%
Gross gearing	18.5%	36.0%	28.1%	10.5%	-8.0%
No. of student enrolled	39,926	56,775	76,763	96,802	34%
- Self-owned	35,788	48,918	66,229	84,589	33%
- Entrusted	4,138	7,857	10,535	12,213	43%
Average pricing (Note 2)	22,328	23,668	25,088	26,593	6%
Number of K-12 schools	24	32	38	44	22%

Note: (1) Adjusted GPM is the GPM excluding government grants amortisation and (2) average pricing in self-owned K-12 school.
Source: Company data, HSBC estimates

Valuation:

We use a discounted cash flow (DCF) methodology to value Tianli as we believe this better captures its strong cash generating capabilities, the impact of its capital expenditure, and long-term growth outlook. The key assumptions in our three-stage DCF model are as follows:

- Stage one – we use our explicit forecasts for FY21-22e.
- Stage two – we assume a FCFF CAGR of 21% over the medium term, lower than the growth in operating cash flow of 35% in FY22e, as we factor in the potential impact from adopting the "for-profit" school classification and a more mature sector (hence lower growth rate). Nevertheless, this is above its peer average in the K-12 (at 11%) given Tianli's solid track record in leveraging government subsidies to expand rapidly.
- Stage three – we assume a terminal growth rate of 2%.

Our 12% WACC assumption is based on a beta of 1.9x, a risk-free rate of 2.5%, and a market risk premium of 5%. We also assume that debt contributes 22% to the capital structure, and a cost-of-debt of 11%. Overall, we derive a target price of HKD8.00, which implies a 26x PE and 0.6x PEG for FY21e. With 1% downside from current levels, we initiate coverage on the stock with a Hold rating.

Exhibit 140: Tianli: DCF assumptions

	FY21e	FY22e	CAGR (medium-term)	Terminal growth
FCFF (RMBm)	556	687	21%	2%
WACC				12%
Enterprise value (RMBm)				13,765
Equity value (RMBm)				14,094
Total outstanding shares (m)				2,075
Implied fair value (HKD/share)				**8.0**
TP implied PE (FY21e)				26x
TP implied PEG FY21e, over FY19-21e)				0.6x
TP implied dividend yield (FY21e)				1%
TP implied EV/EBITDA (FY21e)				19x

Source: HSBC estimates

We cross-check the implied PE against both the company's own historical average and its peers. We select listed private K-12 school operators in China for comparison, and we found that:

- The implied PE (26x) for FY21e is above its historical average (17x, both since listing and post the "8-10" incident) and the weighted average FY21e PE of its peers (of 17x). We believe this is justified as its strong track record, in terms of its high education quality in newly established schools and financial performance, have supported its re-rating since 2019.
- The implied PEG (0.6x) for FY21e is slightly below its K-12 peers' weighted average PEG for FY21e (at 0.9x); the latter was, however, distorted by the data of Maple Leaf and Virscend.

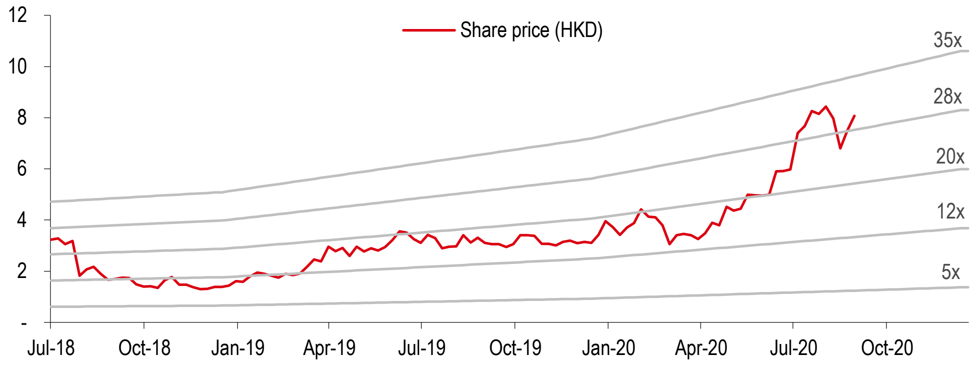
Key upside risks:

- Favourable policies regarding K-12 private school operators.
- Success to replicate the sound education quality in its newly established schools.
- Faster-than-expected school expansion, increase in student enrolments, and tuition hikes.

Key downside risks:

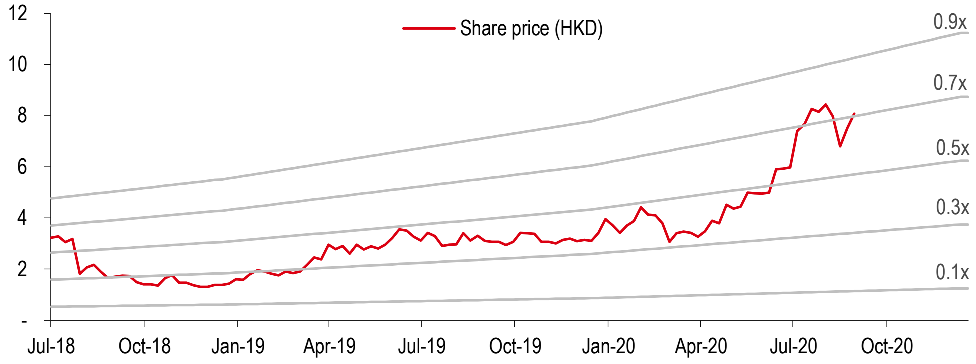
- Unfavourable policies regarding K-12 private school operators.
- Failure to maintain education quality, especially in new schools, that could affect its reputation.
- Delays in school network expansion, unsatisfactory utilisation and slower tuition fee hikes.
- Decline in government grants would increase the group's financial burden and affect margins.
- Higher tax rate for high schools and universities registering as for-profit schools.

Exhibit 141: Tianli: 1-year forward PE-band chart, since listing



Source: Refinitiv Datastream, HSBC estimates

Exhibit 142: Tianli: 1-year forward PEG band chart, since listing



Source: Refinitiv Datastream, HSBC estimates

Exhibit 143: Tianli: Valuation comparison

Company	BBG Ticker	CMP (LC)	Mkt cap (USDm)	PE (x) FY19a	PE (x) FY20e	PE (x) FY21e	PEG (x) FY19a	PEG (x) FY20e	PEG (x) FY21e	Dividend yield (%) FY19a	Dividend yield (%) FY20e	Dividend yield (%) FY21e
Tianli	1773 HK	8.07	2,161	55.4	38.9	27.3	1.3	0.9	0.6	0.5	0.7	1.0
Maple Leaf	1317 HK	2.42	935	9.0	10.7	8.3	2.2	2.6	2.0	4.3	3.5	4.5
Wisdom	6068 HK	3.14	882	13.4	11.4	9.3	0.7	0.6	0.5	3.1	3.6	4.8
Bright Scholar	BEDU US	6.75	812	23.5	17.4	12.1	0.6	0.4	0.3	-	1.8	1.1
Virscend	1565 HK	2.40	957	16.3	15.8	13.1	1.4	1.4	1.1	3.4	3.4	3.4
Weighted avg.				**30.4**	**23.2**	**17.0**	**1.3**	**1.1**	**0.9**	**1.9**	**2.2**	**2.6**

Note: Priced as of 17 September 2020.
Source: HSBC estimates for Tianli, Maple Leaf, Wisdom, and Virscend, Bloomberg consensus for other stocks

Virscend Education (1565 HK)

- Virscend is a Sichuan-based school operator with a high-quality portfolio in both K-12 and higher education areas
- Near-term growth momentum looks strong amid capacity expansion and potential fee hikes, but margin pressure is a concern
- Initiate at Hold with a target price of HKD2.50, implying a 13x FY21e PE and 1.2x FY21e PEG (the latter is likely to fall to 0.5x in FY22e)

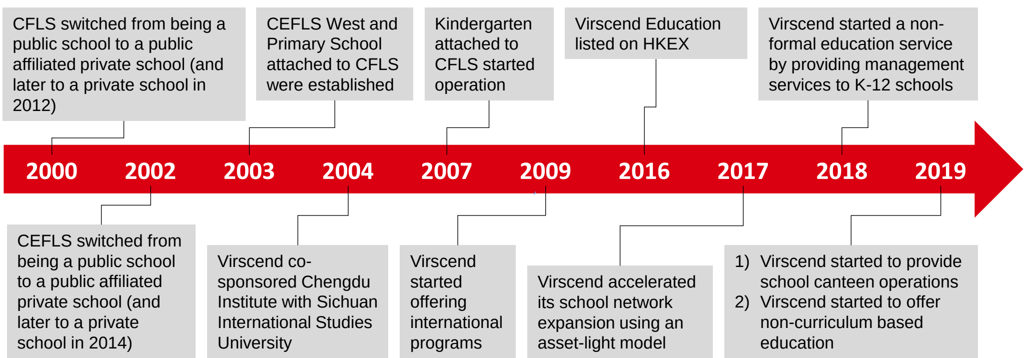
A renowned private school operator in Sichuan China

Virscend has a high-quality school portfolio across different education stages

Virscend Education is a leading private education group based in Chengdu, Sichuan. It primarily provides domestic-based K-12 education services, but also has a small presence in international curriculums (e.g., the AP and A-level courses) as well as higher educational schools. As of 2019, Virscend operates 25 schools in the K-12 education stage (including nine high schools, eight middle schools, six primary schools, and two kindergartens), and two universities – Chengdu Institute Sichuan International Studies University in China and Virscend University in the USA. There were 49,459 students enrolled in 2019, led by higher education (c34% of total), followed by middle schools (c27%), domestic high schools (c20%), primary schools (c17%), while contributions from kindergartens and international high schools – combined at 2% – were insignificant. Over FY17-19, Virscend recorded a 25% revenue CAGR, with a 10% core earnings CAGR.

Virscend's three flagship secondary schools – including Chengdu Foreign Language School (成都外国语学校 , or CFLS), Chengdu Experimental Foreign Language School (成都实验外国语学校, or CEFLS), and Chengdu Experimental Foreign Language School (West) (成都实验外国语学校（西区）, or CEFLS West) – all scored well in relevant academic examinations. The Chengdu Institute, an independent college that Virscend has invested in through cooperation with Sichuan International Studies University, is also a quality name in Sichuan. We estimate these four schools (including their associated primary schools) jointly accounted for c60% of student capacity in 2019.

Exhibit 144: Virscend: Milestones



Source: Company data, HSBC

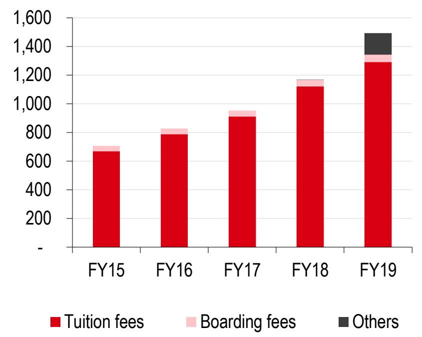
Snapshot of Virscend Education (1565 HK)

Founded in 2000, Virscend Education is a well-established private school operator headquartered in Sichuan China focusing on areas from K12 to higher education. As at end of 2019, there were 49,459 students enrolled in Virscend's schools and its overall capacity utilisation rate was 70%. Tuition fees and boarding fees contributed 90% of its total revenue in FY19. Virscend Education was listed on the main board of the HKEX on 15 January 2016. Mr. Yan Yude's family is the largest shareholder with a c50% shareholding in the group.

Key senior management team includes:

- Ms. Wang Xiaoying, Chairman & Executive Director
- Mr. Yan Yude, CEO & Executive Director
- Mr. Ye Jiayu, Executive Director
- Mr. Deng Bangkai, Executive Director

Revenue by segment (RMBm)



Source: Company data, HSBC

Forecasts and valuation

(RMBm)	FY19a	FY20e	FY21e	FY22e
Revenue	1,493	1,841	2,304	2,902
EBITDA	654	597	844	1,055
Core net profit	397	410	494	681
EPS (diluted, RMB)	0.13	0.13	0.16	0.22
DPS (RMB)	0.07	0.07	0.07	0.07

- Our target price of HKD2.50 for Virscend Education is derived from a DCF approach and implies a 13x PE, 1.2x PEG, and 3% yield for FY21e

Source: Company data, HSBC estimates

Peer comparison

Company	BBG Ticker	PE (x) FY19a	FY20e	FY21e
Tianli	1773 HK	55.4	38.9	27.3
Maple Leaf	1317 HK	9.0	10.7	8.3
Wisdom	6068 HK	13.4	11.4	9.3
Bright Scholar	BEDU US	23.5	17.4	12.1
Virscend	1565 HK	16.3	15.8	13.1
Weighted avg		**30.4**	**23.2**	**17.0**

Note: Price at of 17 September 2020.
Source: HSBC estimates for Tianli, Maple Leaf, Wisdom, and Virscend, Bloomberg consensus for other stocks

Do you know?

- Virscend's education philosophy is "a profound Chinese foundation, a panoramic global outlook and an innovative future" (立学中华，语通世界，开创未来).
- CEFLS and CFLS were originally public schools established in 1963 and 1989, respectively; the two schools were turned into publicly-affiliated private schools in the early 2000s and became pure private schools in 2012-14.
- Yiting Liu, a high school graduate of CFLS was admitted to Harvard University in 1999. Her stories, published as a book titled "Harvard Girl Liu Yiting", gained popularity among Chinese parents and was a bestseller for 16 months in the early 2000s (Source: Xinhua News Agency, 21 November 2001).
- Virscend's share price plunged 78% on 27 November 2019 as its then second largest shareholder, China First Capital Group (1269 HK, Not Rated), sold a c9% stake in Virscend on that day (Source: Company announcement, 28 November 2019, and Bloomberg, 27 November 2019).
- Xinhua Winshare (811 HK, Not Rated) acquired a c24% interest in Chengdu Institute in 2009 but entered into a transfer agreement to exit in 2016. As at the end of 2019, the 2016 transfer was still pending approval but both parties agreed that Sichuan Derui was entitled to 100% of the school sponsor's interest in Chengdu Institute.

Key risks and challenges

- Failure to maintain high education quality, especially in its newly established schools, would affect its reputation and cast doubt over its future expansion.
- Continued margin drag from operating deleveraging of newly established schools.
- Limited upside for tuition hikes given regulations.
- Limited experience in expanding its school networks outside of the Sichuan Province.

Financials & valuation: Virscend Education

Hold

Financial statements

Year to	12/2019a	12/2020e	12/2021e	12/2022e
Profit & loss summary (RMBm)				
Revenue	1,493	1,841	2,304	2,902
Gross profit	577	670	839	1,059
Other income and gains	49	55	42	42
Operating expenses	-133	-187	-236	-268
EBITDA	654	597	844	1,055
Depreciation & amortization	-160	-184	-199	-221
Operating profit	493	413	645	833
Finance costs, net	-49	-93	-119	-113
PBT	412	298	515	710
Taxation	-4	-4	-8	-11
Reported net profit	397	285	494	681
Core net profit	397	410	494	681
Cash flow summary (RMBm)				
Cash flow from operations	916	1,148	1,158	1,320
Capex	-1,257	-680	-690	-840
Cash flow from investment	-1,414	-657	-681	-831
Dividend paid	-223	-220	-220	-220
Cash flow from financing	253	417	-550	-541
Balance sheet summary (RMBm)				
PP&E	4,121	4,418	4,948	5,607
Intangible fixed assets	3	3	3	3
Cash and cash equivalents	406	1,314	1,241	1,189
Total assets	6,330	7,535	7,993	8,600
Contract liabilities	862	1,084	1,378	1,720
Interest-bearing debts	1,945	2,700	2,500	2,300
Net debt	1,539	1,386	1,259	1,111
Shareholders' fund	2,730	2,795	3,069	3,530

Ratio, growth and per share analysis

Year to	12/2019a	12/2020e	12/2021e	12/2022e
Y-o-y % change				
Revenue	27.8	23.3	25.2	26.0
Gross profit	15.1	16.1	25.2	26.3
EBITDA	18.0	(8.7)	41.4	25.0
Operating profit	16.8	(16.3)	56.2	29.3
Reported net profit	11.4	(28.1)	73.1	37.9
Core net profit	13.9	3.3	20.3	37.9
EPS	13.9	3.3	20.3	37.9
Ratios (%)				
ROE	14.4	14.9	16.8	20.6
ROA	8.6	7.7	8.2	9.9
Gross profit margin	38.7	36.4	36.4	36.5
EBITDA margin	43.8	32.4	36.6	36.3
Operating margins	33.0	22.4	28.0	28.7
Core net profit margin	26.6	22.3	21.4	23.5
Gross gearing	70.6	95.5	80.3	64.0
Per share data (RMB)				
EPS	0.13	0.09	0.16	0.22
Core EPS	0.13	0.13	0.16	0.22
DPS	0.07	0.07	0.07	0.07
Book value	0.88	0.90	0.99	1.14

Key forecast drivers

Year to	12/2019a	12/2020e	12/2021e	12/2022e
No. of student enrolled	49,459	59,001	67,079	75,611
Average pricing*	28,314	30,016	32,255	35,906

* Represents average tuition and boarding fees per K-12 student

Valuation data

Year to	12/2019a	12/2020e	12/2021e	12/2022e
EV/EBITDA	12.2	13.1	9.2	7.2
PE*	16.3	15.8	13.1	9.5
PEG	1.4	1.4	1.1	0.3
Dividend yield (%)	3.4	3.4	3.4	3.4

* Based on HSBC EPS (diluted)

ESG metrics

Environmental Indicators	12/2019a
GHG emission intensity*	187.7
Energy intensity*	436.2
CO_2 reduction policy	Yes
Social Indicators	**12/2019a**
Employee costs as % of revenues	36.6
Employee turnover (%)	n/a
Diversity policy	Yes

Governance Indicators	12/2019a
No. of board members	7
Average board tenure (years)	3
Female board members (%)	14%
Board members independence (%)	43%

Source: Company data, HSBC

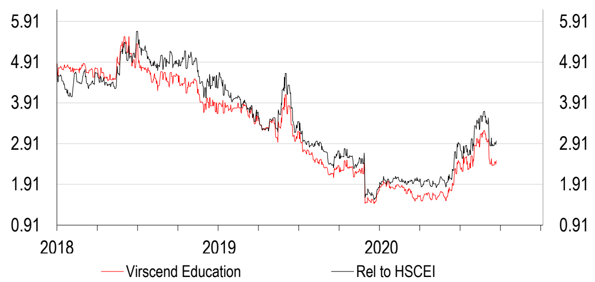
* GHG intensity and energy intensity are measured in kg and kWh respectively against revenue in USD '000s

Issuer information

Share price (HKD)	2.40
Target price (HKD)	2.50
RIC (Equity)	1565.HK
Bloomberg (Equity)	1565 HK
Market cap (USDm)	956

Free float	43%
Sector	Discovery Research
Country/Region	China
Analyst	York Pun, CFA
Contact	+852 2822 4396

Price relative



Source: HSBC

Note: Priced at close of 17 Sep 2020

Business analysis

Virscend started to expand its school network mainly through an asset-light model post IPO

Two key models

Virscend's schools are mainly operated under two business models:

- The self-owned model where Virscend owns the school premises.
- The asset-light model where Virscend cooperates with different stakeholders (like local governments and real estate developers); the partners are normally responsible for providing and leasing school premises to Virscend.

Among the 21 schools (including Virscend University in the US) operated by Virscend in 2019, three are self-owned, 17 are operated under the asset-light model, and one is a hybrid between the two; we believe the asset-light model has accelerated school expansion in recent years as 14 out of the 15 new schools added after 2016 – based on our calculation – are under the asset-light model. It is also worth highlighting that, amongst these new schools, nine were established in 2017 alone.

While this has helped Virscend to quickly expand its school network, particularly when fee hikes were suspended (see below for more details), there are also some drawbacks:

- Virscend's capacity utilisation ratio dropped from 99% in 2016 to 70% in 2019, as the newly established schools are still in the ramp-up stage.
- Its gross profit margin (GPM) dropped from 48% in 2017 to 39% in 2019.

Meanwhile, we believe the newly established schools have also created additional pressure on management and teachers to maintain the teaching quality at new schools. We note the pace of its school expansion – primarily through the asset-light model – decelerated in 2018 and 2019, but is expected to pick up again (with four new campuses starting operations in 2020 and six more to start in 2021-22e).

Increased weighting of secondary schools

By type of schools, secondary schools (including middle and high schools) were the largest revenue contributor in 2019, and responsible for more than half of total revenue; this is followed by primary schools (18%) and universities (15%) – the latter, despite accounting for the largest share in student enrolment (34%), lagged behind K-12 education stages due to its lower pricing. It is also worth noting that, given the growth in Virscend (in terms of both student enrolments and revenue) was led by newly-added secondary schools (mainly through the asset-light model), the percentage share of universities continued to shrink.

Tuition fee hikes suspended from school year 2015/16, but this may change

The last fee hike for the three major secondary schools was in school year 2015/16, and only applied to newly-enrolled students

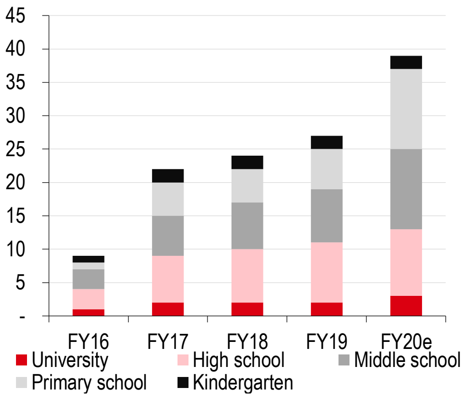
A few years ago tuition fee hikes were a key driver to bolster revenue growth. However, this was suspended in recent years. We note the last fee hike for its three flagship secondary schools took place in school year 2015/16 (and only applied to newly-enrolled students). This was probably one of the reasons why Virscend chose to leverage the asset-light model for expansion. Nevertheless, we highlight the outlook for tuition raises could change in the near future, and which we discuss in detail in the following sections.

Exhibit 145: Virscend's school portfolio summary

Education stages	Province	Number of education phase	Number of students	% of student
High school	Sichuan, China	9	10,616	21%
Middle school	Sichuan, China	8	13,126	27%
Primary school	Sichuan, China	6	8,312	17%
Kindergarten	Sichuan, China	2	517	1%
University	Sichuan, China; Irvine USA	2	16,888	34%
Total		**27**	**49,459**	**100%**

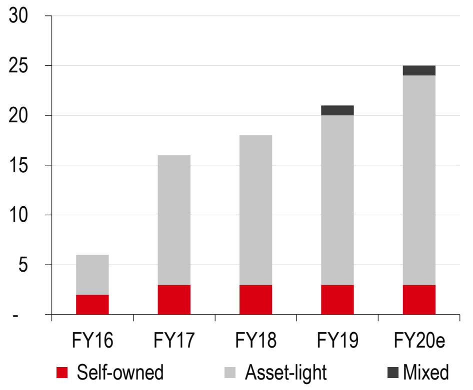
Source: Company data, HSBC

Exhibit 146: Virscend: Number of self-owned education stages, FY16-20e



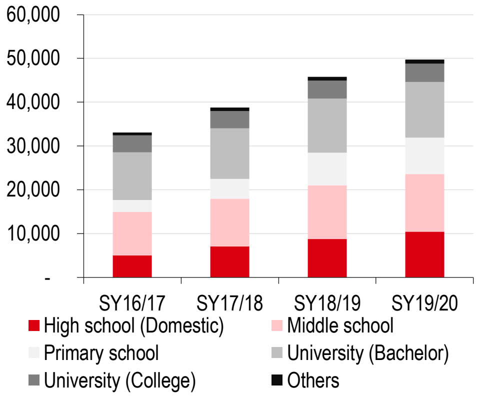
Note: FY20e figures are estimated per schools in operation as of September 2020.
Source: Company data, HSBC estimates

Exhibit 147: Virscend: Number of self-owned schools by business model, FY16-20e



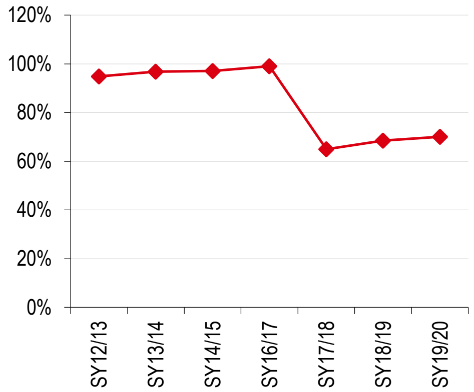
Note: (1) Asset-light model schools have included Chengdu Gaoxin Campus, which was an associate company of the group but became a wholly-owned subsidiary from August 2020, and Virscend University. (2) Mixed stands for the number of schools whose premises are partly self-owned and partly under lease. (3) FY20 figures are estimated per schools in operation as of September 2020.
Source: Company data, HSBC estimates

Exhibit 148: Virscend: Number of student enrolled, SY16/17-SY19/20



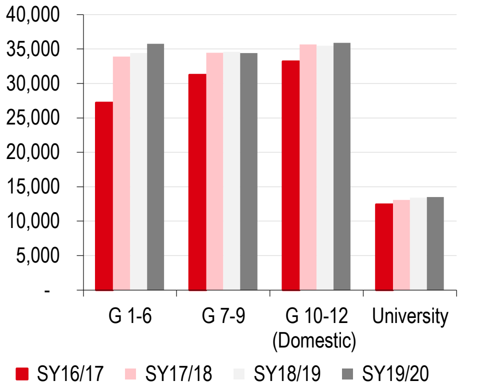
Note: SY=School year.
Source: Company data, HSBC

Exhibit 149: Virscend: Overall capacity utilisation, SY12/13-SY19/20



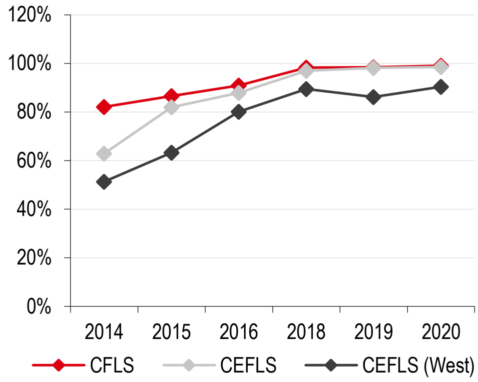
Note: SY=School year.
Source: Company data, HSBC

Exhibit 150: Virscend: Average pricing per student, SY16/17-SY19/20



Note: SY=School year.
Source: Company data, HSBC

Exhibit 151: Virscend: First-tier universities admission rate, 2014-20



Source: School website, HSBC

K-12 schools: A strong moat with potential fee hikes

Virscend has a leading market share in the K-12 market in Chengdu and has strong academic results

Virscend has a leading market share in the private school market in Chengdu (with c4% market share as of 2018, based on Frost & Sullivan data) and strong academic results that reflect:

- In 2017-20, c95% of high school graduates at Virscend were admitted to first-tier universities in mainland China (一本率, see Annex).
- From 2000 to 2020, 40% of the Gaokao top scorers (高考状元, see Annex) in Sichuan and 70% of those in Chengdu graduated from Virscend's schools.
- CFLS is the only foreign language school in Sichuan that has been nominated by the Ministry of Education to recommend its graduates to universities without the need to take the Gaokao (according to Virscend), and contributed over 80% of these students in Sichuan in 2017-19.
- Since its establishment, 11 students have been admitted to Harvard University.
- In 2020 alone, two students were admitted to the UK's top universities, Oxford or Cambridge; 55 students were admitted to Peking University or Tsinghua University.

It is yet to see whether academic success can be replicated at the new schools

We have yet to see whether the strong academic results achieved in the three flagship schools (CFLS, CEFLS, and CEFLS West) can be replicated at the newly established schools, especially those under the asset-light model. There is, nevertheless, some early signs of success: CFLS Panzhihua Campus, which was established in 2017, was nominated as one of the top-100 private schools in China by the Institute of Education Science under the China Academy of Management Science in 2019. In 2020, the first-tier university admission rate at Gaoxin Campus, which was also established in 2017, was 52%.

Meanwhile, Virscend also provides school management and consultation services to public schools, including the Chengxiang middle school of Chengdu and Chengxiang School of Qingbaijiang Chengdu (starting from February 2019). In school year 2018/19, the university admission rate for high school increased to 91% (from 87% in school year 2017/18) and the number of students studying abroad also increased from 10 in school year 2017/18 to 34 in school year 2018/19 (source: Company data). This demonstrates that school management skills and the experiences of Virscend are transferrable – at least to some extent – in our view.

The internal progression system may help to achieve better academic performance

Moreover, Virscend's vertically integrated school portfolio may help to better maintain the academic quality of its students amid the implementation of the simultaneous recruitment of public and other private schools (公民同招, see Annex), which have eliminated assessment-based student selections but still enable internal progression within the same school. With a vertically-integrated portfolio, internal progression is currently open to all graduates of the primary schools attached to CFLS and CEFLS; middle school graduates of Virscend's three flagship schools achieved a 38-62% internal progression rate in 2020.

Virscend plans to launch a middle school for its CFLS primary school (Meinian), a primary school for CEFLS West, a primary school for CEFLS Ya'an campus, and a primary school for CFLS Panzhihua campus, in September 2020, which may cement this strength. In 2020, except for the above mentioned three schools, Virscend also expects to launch three vertically integrated K-12 campuses in Yibin, Deyang, and Xinjing.

There are signs of relaxation in rules around tuition fee setting

Lastly, there are some signs that regulations over fee-setting may be relaxed: for instance, school year 2020/21 tuition fees for some newly established private middle schools, including Xinjin Minjiang CFLS Middle School (Under Virscend) and Chengdu Pixian Tianli School (under Tianli Education), charged a tuition fee of RMB58,000/per school year and RMB52,700/per school year, respectively. This is significantly higher than the average of Virscend's three flagship middle schools, at RMB34,800-33,600 per school year.

Higher education: Expanding but questions remain

The Chengdu Institute is a high-quality independent college offering 28 bachelor's majors and 18 college's majors, including programmes for 16 foreign languages. It offers the largest amount of foreign language studies in the southwestern region of mainland China. Moreover, according to CUAA, it ranked 69th amongst over 250 independent colleges in mainland China and its rank was even higher in the Wu Shulian ranking (19th in 2020).

We also note that:

- Its undergraduates had an overall employment ratio of 93% in 2019, 5ppt higher than the average in Sichuan.
- Over 10% of its undergraduate students have pursued a Master's degree, with c30% of them admitted to top-tier universities.
- Admissions for bachelor majors at Chengdu Institute, a second tier university in Sichuan, were at least 24 scores higher than second-tier university admissions for Sichuan Gaokao participants in 2019.

With nearly 16,900 students (c75% in undergraduate degree programmes and c25% in junior college programmes) accounting for over 30% of the group's total student enrolment, we believe its importance is likely to grow over the near term, in view of the following factors:

- **Capacity expansion**: The school has been operating at full capacity over the past two years but starting from 2020 it will start to use the new Yibin campus, which will add capacity of 12,000 students. It is expected to recruit c2,000 students this coming fall semester. We believe this will allow it to capture growth opportunities from the expansion at junior colleges and the "top-up programme" (from junior college to university).
- **Tuition hike:** According to the latest student recruitment plan, the tuition fee for all bachelor degree majors and certain junior college majors will be raised by RMB3,000, to RMB17,000 and RMB15,000 per school year, respectively. Meanwhile, boarding fees for all newly recruited students will be increased to RMB1,400-2,000, depending on the room type. We believe this fee hike – the first since school year 2014/15 – will help to raise the average pricing in the coming few years.

That said, we note the conversion of Chengdu Institute to a private university will require Virsend to terminate its cooperation agreement with the public university and pay a "break-up fee". If the potential conversion is smooth and successful, it will help to improve Virscend's profitability not only from the savings in cooperating/management fees per annum, but also because of the greater flexibility in raising fees in the future. However, a large "break-up" fee (of RMB125m) is likely to affect near-term profit and drain cash from Virscend, whose levels are already weaker than its peers.

Exhibit 152: Virscend: School portfolio, as of 1HFY20

School / Campus	City	Country	Start year	Business model	Key partner	Interest	Pre-school	Primary school	Middle school	High school	University	Capacity
CFLS	Chengdu, Sichuan	China	2000	Mixed	Derui	100%			1	1		7,688
CEFLS	Chengdu, Sichuan	China	2002	Self-owned	n/a	100%			1	1		7,104
CEFLS (West)	Chengdu, Sichuan	China	2003	Asset-light	Wanhua	100%			1	1		4,500
CFLS Primary School	Chengdu, Sichuan	China	2003	Asset-light	Derui	100%		1				4,262
Chengdu Institute	Chengdu, Sichuan	China	2004	Self-owned	SISU	100%					1	16,200
CFLS Kindergarten	Chengdu, Sichuan	China	2007	Asset-light	Derui	100%	1					350
CEFLS Primary School	Chengdu, Sichuan	China	2017	Self-owned	n/a	100%		1				NA
CFLS Panzhihua Campus	Panzhihua, Sichuan	China	2017	Asset-light	Government	100%			1	1		4,000
CFLS Zigong Campus	Zigong, Sichuan	China	2017	Asset-light	Purun	47% or 57%	1	1	1	1		4,870
CFLS Primary school (Meinian)	Chengdu, Sichuan	China	2017	Asset-light	Fantasia	53%		1				2,160
CEFLS Wulongshan	Chengdu, Sichuan	China	2017	Asset-light	Vanke	45% or 85%		1	1	1		6,330
CFLS Gaoxin	Chengdu, Sichuan	China	2017	Asset-light	n/a	20%				1		3,250
Virscend University	Irvine, California	USA	2017	Asset-light	CBA	51%					1	NA
CEFLS Quxian	Dazhou, Sichuan	China	2018	Asset-light	Government	100%			1	1		4,000
CEFLS Ya'an	Ya'an, Sichuan	China	2019	Asset-light	Government	100%			1	1		2,880
CFLS Primary school (Xichen)	Chengdu, Sichuan	China	2019	Asset-light	Longfor	100%		1				1,620
Total							**2**	**6**	**8**	**9**	**2**	**70,620**

Note: (1) CFLS Gaoxin is an associated company, with a 20% stake hold by Virscend and 80% held by an independent third party. Virscend has purchased the 80% sponsor's interest of Gaoxin campus in Aug 2020. (2) CBA stands for College of Business Administration of California State University – Long Beach. (3) SISU stands for Sichuan International Studies University.
Source: Company data, HSBC

Exhibit 153: Schools under Virscend's management, as of 31 August 2020

School	City	Country	Business model	Grades	Set up year	Effective from
The Chengxiang Middle School of Chengdu	Chengdu, Sichuan	China	Public	High school	1927	2/22/2019
Chengxiang School of Qingbaijiang Chengdu	Chengdu, Sichuan	China	Public	Primary school, middle school	1905	2/22/2019
Anren Guzhen School	Chengdu, Sichuan	China	Public	NA	NA	NA
Chongqing Weilai Shuzi School	Chongqing	China	Public	NA	NA	NA
Yibin Kindergarten	Yibin, Sichuan	China	Private	Pre-school	2020	9/1/2020
Chengdu Vanke Kindergarten	Chengdu, Sichuan	China	Private	Pre-school	2020	9/1/2020

Source: Company data, SCOL.com, HSBC

Exhibit 154: Virscend: School pipeline, 1HFY20

School / Campus	City	Country	Business model	Expected set up year	Estimated capacity
Existing campus					
Primary school for CEFLS Ya'an	Ya'an, Sichuan	China	Asset-light	2020	810
Middle school for CFLS Meinian	Chengdu, Sichuan	China	Asset-light	2020	675
Primary school for CEFLS West	Chengdu, Sichuan	China	Asset-light	2020	1,080
Primary school for CFLS Panzhihua	Panzhihua, Sichuan	China	Asset-light	2020	1,080
Existing campus total					**3,645**
New campus					
Chengdu Institute Yibin Campus	Yibin, Sichuan	China	Asset-light	2020	12,000
Yibin Campus	Yibin, Sichuan	China	Asset-light	2020	5,940
Deyang Campus	Deyang, Sichuan	China	Asset-light	2020	6,760
Xinjin Campus	Chengdu, Sichuan	China	Asset-light	2020	4,920
Guiyang Campus	Guiyang, Guizhou	China	Asset-light	2021	4,650
Luzhou Campus	Luzhou, Sichuan	China	Asset-light	2021	5,280
Meishan Campus	Meishan, Sichuan	China	Asset-light	2021	4,050
Tianfu Lushan Campus	Chengdu, Sichuan	China	Self-owned	2021	4,320
Tianfu Huahai Campus	Chengdu, Sichuan	China	Asset-light	2021	3,030
Renshou Campus	Meishan, Sichuan	China	Asset-light	2021	4,320
New campus total					**55,270**

Source: Company data, HSBC

Exhibit 155: Virscend: Number of schools by business model and education stage

	Existing schools as of 1HFY20		Existing schools + schools in pipeline as of Sep 2020	
	Self-owned	Asset-light	Self-owned	Asset-light
Primary school	1	5	2	15
Middle school	2	6	2	15
High school	1	8	2	16
Higher education	1	1	1	2
Total	**5**	**20**	**7**	**48**

Source: Company data, HSBC

Financial analysis

Revenue and net profit: Virscend recorded a 10% net profit CAGR on the back of a 25% revenue CAGR over FY17-19, mainly driven by its continued school network expansion and gradual improvement in overall capacity utilisation – the latter has increased from 65% in FY17 to 70% in FY19, as well as contribution from a newly established canteen service. By revenue source, the 25% revenue CAGR was mainly from a 19% CAGR in tuition and boarding revenue and RMB144m revenue from the canteen, which was newly established in FY19. For the tuition and boarding revenue of its core programmes (i.e. excl. kindergarten and the high school international programme), primary schools recorded the highest revenue CAGR (at 57%) thanks to its robust student enrolment, followed by high school domestic programmes (21%), middle schools (12%), and universities (7%) over FY17-19. It is worth noting that in 2019 Virscend reported 28% y-o-y revenue growth – the highest since 2013; excluding the impact of the newly established canteen business, however, we estimate the figure would have been 15% – a level which is in line with its past growth rate.

Margins: Virscend's profit margins declined after 2016, mainly due to the operation deleveraging of its newly established schools, in our view. Its operating expenses (excluding FX fluctuations and listing expenses) were largely stable (compared to the revenue trend) and the major decline was driven by the lower GPM. Within the cost of sales, staff costs as a percentage of revenue fell from 38% in FY17 to 30% in FY19 but this was not enough to offset rising depreciation & amortisation, research & development, and other costs. Excluding the impact from canteens (which have a lower margin), we estimate that its GPM will still decline by 2% y-o-y.

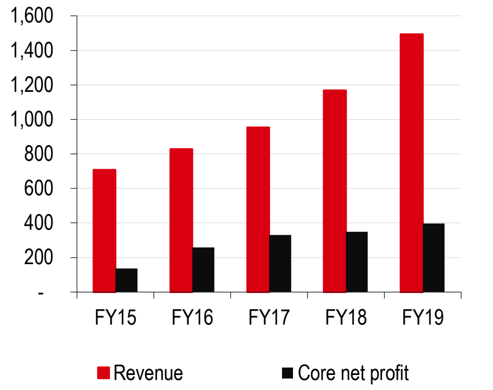
Balance sheet structure: Virscend's largest asset is property, plant, and equipment (65% of total assets), followed by right-of-use assets (18%), prepayments, other receivables and other assets (8%), and cash (6%) as of 2019. Nearly half of the prepayments, other receivables and other assets are interest-bearing loans (including to a third party, a constructor and a partner of a school), with per annum interest rates at 5-14%. For its liabilities, debt is Virscend's largest liability component (54% of total liabilities), followed by contract liabilities (24%), other payables (10%), and lease liabilities (6%).

Gearing ratio: Virscend's net gearing (net debt to equity) rose to 56% in 2019, the second highest within the four K-12 school operators in our coverage universe, mainly due to considerable cash outflow from capital expenditure during the year. In addition, though it has been adjusting its debt term structure towards more long-term debt, its short-term debt still accounts for c47% of its total debt – the highest amongst the K-12 players.

Cash flow and capex: The average CFO/net profit ratio of Virscend was above 200% over the past five years, mainly supported by the strong cash generating capability due to the business model. Investing cash flow remained high in FY19 when it acquired leasehold land and PPE from related parties for RMB848m in 2019 (see the later discussion on connected transactions for details).

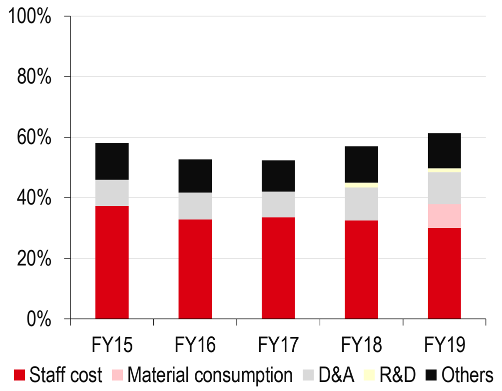
Dividends: Virscend has stuck to a stable half-year DPS of HKD0.04 starting from 2HFY17 (i.e., HKD0.08 DPS per annum).

Exhibit 156: Virscend: Revenue and core net profit (RMBm), FY15-19



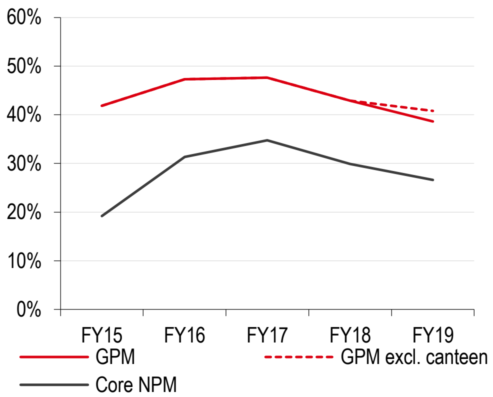
Source: Company data, HSBC

Exhibit 157: Virscend: COS items as % of revenue, FY15-19



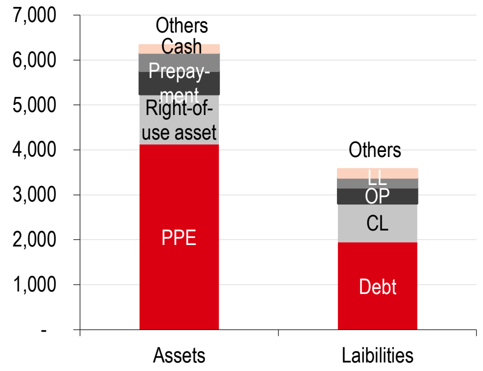
Source: Company data, HSBC

Exhibit 158: Virscend: Margins, FY15-19



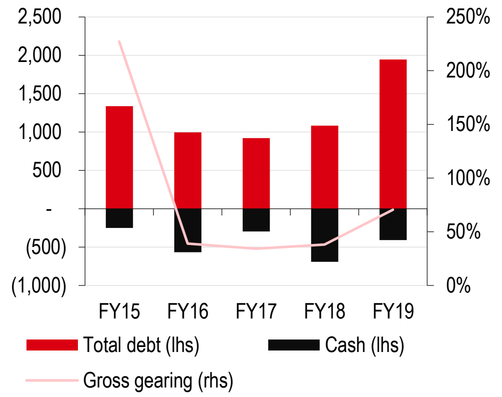
Source: Company data, HSBC

Exhibit 159: Virscend: Balance sheet structure (RMBm), FY19



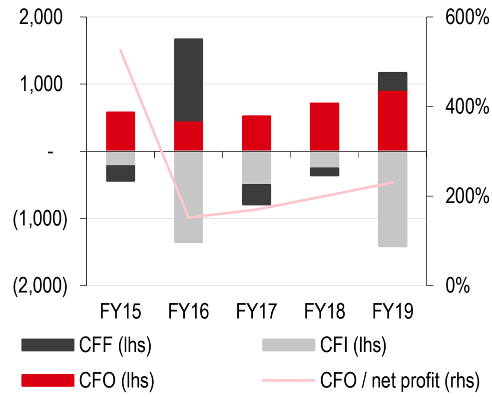
Note: CL stands for contract liabilities, OP stands for other payables, LL stands for Lease liabilities.
Source: Company data, HSBC

Exhibit 160: Virscend: Debt-structure (RMBm) and gearing ratio, FY15-19



Note: Gross gearing ratio is calculated as total interest-bearing debt to total equity.
Source: Company data, HSBC

Exhibit 161: Virscend: Cash flow breakdown (RMBm), FY15-19



Source: Company data, HSBC

1HFY20 results

Virscend's core earnings were only up 3% y-o-y, lagging behind the 17% y-o-y revenue growth in 1HFY20 (ended June 2020). Both the GPM and core NPM have declined and this, in our view, probably reflects the operating deleveraging following its aggressive expansion and lower profitability of its canteen business. Looking forward, we note Viscend's near-term profit will remain under pressure due to: (1) its capacity expansion plan; (2) a large "break-up" fee from the Chengdu Institute conversion (though this may be seen as a one-off); and (3) purchase of its remaining 80% shareholding in CFLS (Gaoxin campus).

Virscend's operating cash flow weakened in 1H20 due to a sharp decline in contract liability (mainly on the deferred income of tuition and boarding fees), which may be attributable to the change in fee collecting time under COVID-19. Meanwhile, the school operator's gross gearing has jumped to over 90%, the highest in our coverage universe. In this regard, we believe capital-raising is likely to happen, especially in view of Virscend's aggressive expansion plans.

Exhibit 162: Virscend: Results summary, 1HFY20

	1H19	2H19	1H20	y-o-y	h-o-h
Key income statement					
Revenue	**754**	**739**	**886**	**17%**	**20%**
- Tuition fees	688	603	763	11%	26%
- Boarding fees	27	25	24	-10%	-3%
- School canteen operations	39	105	92	136%	-13%
- Management and consultation services	0	6	3	1473%	-55%
- Overseas studies consulting fees	-	-	5	NA	NA
COS	(414)	(502)	(507)	22%	1%
Gross profit	340	237	379	12%	60%
Other income and gains	17	35	17	3%	-51%
Selling and distribution expenses	(2)	(5)	(3)	80%	-28%
Administrative expenses	(65)	(53)	(82)	27%	54%
Impairment loss on financial assets	-	(2)	-	NA	-100%
Other expenses	(1)	(8)	(9)	818%	23%
Operating profit	289	204	302	4%	48%
Finance costs	(44)	(34)	(57)	28%	66%
Share of profit and loss of an associate	(5)	3	(2)	-67%	NA
PBT	240	172	243	1%	41%
Income tax	(2)	(1)	(3)	27%	113%
MI	(1)	(10)	4	NA	NA
Reported net profit	236	161	244	3%	51%
Core net profit	**236**	**161**	**244**	**3%**	**51%**
EBITDA	366	288	404	10%	40%
Core EPS (RMB)	0.08	0.05	0.08	3%	51%
DPS (RMB)	0.04	0.04	0.04	-1%	-1%
Key balance sheet					
PP&E	3,532	4,121	4,379	24%	6%
Cash and cash equivalents	524	406	526	0%	30%
Debts	1,688	1,945	2,639	56%	36%
Contract liabilities	490	862	194	-61%	-78%
Total liabilities	2,578	3,576	3,646	41%	2%
Total equity	2,694	2,754	2,884	7%	5%
Key ratios and business driver					
GPM	45.1%	32.1%	42.8%	-2.3ppt	10.7ppt
Operating expense to revenue	8.9%	8.9%	10.7%	1.7ppt	1.8ppt
OPM	38.3%	27.6%	34.1%	-4.3ppt	6.4ppt
Core NPM	31.3%	21.8%	27.5%	-3.8ppt	5.7ppt
Gross gearing ratio	62.7%	70.6%	91.5%	28.8ppt	20.9ppt
Net gearing	43.2%	55.9%	73.3%	30.1ppt	17.4ppt
Student enrolment	45,580	49,459	49,459	9%	0%
Average pricing	15,689	12,693	15,906	1%	25%
No. of schools	24	27	27	13%	0%
Capacity utilisation	68.2%	70.0%	70.0%	1.8ppt	0.0ppt

Source: Company data, HSBC

Connected transactions

Virscend has four major types of related transactions.

- Procurement of PPE and leasehold land from related parties, either directly or through the acquisition of a subsidiary. This contributed to the majority of Virscend's connected transaction amount. Ever since 2012, there are three major procurements:
  - In 2015, Sichuan Derui, a company in which Virscend's founder, Mr. Yan Yude, holds a 69% stake, transferred certain PPE and leasehold land to Virscend for a total consideration of RMB1,390m (settled by offsetting the net balance due from Sichuan Derui and certain other related parties). This enlarged the self-owned site area at the Chengdu Institute from 173,030 sqm to 316,096 sqm.
  - In 2016-17, Virscend procured a piece of land along with certain buildings from Hongming Property, which is an affiliated company of Sichuan Derui, for a consideration of RMB328m, further enlarging the self-owned site area of Chengdu Institute to 400,269 sqm. This provides Virscend with the land to establish a teacher and staff training centre, and more importantly, allows Chengdu Institute to fulfil the basic site area criteria for applying to convert from an independent college to a private university, per our estimate.
  - In 2019, there were two transactions. Firstly, Virscend procured undeveloped land totalling c200,000 sqm through the acquisition of Yanqiang Real Estate, a wholly-owned company of Sichuan Derui for a total consideration of RMB476m. The land will be used to establish a practice and training base to improve students' applicable practical skills, and hence increase their employment prospects. Post this acquisition, the total site area of Chengdu Institute (Chengdu campus) will reach 600,269 sqm.
  - Secondly, also in 2019, Virscend procured two pieces of land on a gross site area of 51,610 sqm along with four properties with a GFA of 60,522 sqm situated on land, from Sichuan Derui, for a total consideration of RMB394m. Prior to this transaction, the middle school sector of CFLS rented the above mentioned land and properties from Sichuan Derui at an annual rental of RMB3m. The relevant property lease ceased after the acquisition.
- The property lease provided by Sichuan Derui to CFLS and the primary school attached to CFLS. The amount was only around RMB10m over 2015-18 and was nil in 2019 (probably due to the accounting reclassification).
- Management services provided by Virscend to Gaoxin campus, which was then an associate of the group, amounted to RMB1-4m per annum in 2018-19.
- Amount due from/to related parties, which are unsecured and interest-free in nature, was significantly reduced post listing but was up again in FY19.

Exhibit 163: Virscend: Connected transactions (RMBm), FY12-19

	FY12a	FY13a	FY14a	FY15a	FY16a	FY17a	FY18a	FY19a
Procurement of PPE and leasehold land				1,390	197	131	-	870
Property lease				5	11	13	10	
Management services							1	4
Others - plant nursery and gardening services	100	39	41					
Others - donation	2	0						
Amount due from related parties	746	902	863		-	5	6	11
Amount due to related parties	100	101	108	15	1	14	33	119

Note: The property lease related connected transaction figure for FY19 shows as nil in the above table as Virscend started to adopt IFRS 16 in FY19; CFLS and the primary school attached to CFLS continues to rent school premises from Sichuan Derui with a total annual rental of cRMB10m (with lease term till September 2020).
Source: Company data, HSBC

Forecast and valuations

Forecast

We forecast the future financial performance of Virscend based on the following considerations:

- **Revenue:** We forecast a 25% revenue CAGR over FY19-22e using the following assumptions:
  - **15% CAGR in student enrolment**: We expect K-12 student enrolment to grow 23% y-o-y in FY20e and maintain mid-teen growth in FY21-22e, mainly driven by the school network expansion; for university enrolment, we expect its growth rate to rise to 11-12% over FY20-22e, after taking into account capacity expansion from the new Yibin campus.
  - **8% CAGR in average pricing**: We factor in a potential price increase, expecting average pricing to rise by 6-7% in FY20-21e and to accelerate to 11% in FY22e.
- **Margins:** We expect its margins to remain under pressure over FY20-21e, in light of the aggressive school expansion plan (around 10 new schools/campuses in total). This is expected to change in FY22e, when we expect the expansion to slow down and the overall utilisation level to increase. We have modelled a RMB125m "break-up" fee for Chengdu Institute's conversion in FY20e (which is excluded from core earnings); note we haven't assumed a potentially higher tax rate upon the "for-profit" school conversion.

Overall, we expect Virscend's core earnings to grow at a CAGR of 20% in FY19-22e.

Exhibit 164: Virscend: Key forecasts

	FY19a	FY20e	FY21e	FY22e	CAGR (FY19-22e)
Key income statement items					
Revenue	**1,493**	**1,841**	**2,304**	**2,902**	**25%**
- Tuition fees	1,291	1,557	1,950	2,458	24%
- Boarding fees	52	55	69	87	19%
- School canteen operations	144	214	268	337	33%
- Management and consultation services	6	6	6	7	5%
- Overseas studies consulting fees	-	9	11	14	n/a
COS	(916)	(1,171)	(1,465)	(1,843)	26%
Gross profit	577	670	839	1,059	22%
Other income and gains	51	55	42	42	-7%
Operating expenses	(133)	(187)	(236)	(268)	26%
EBIT	493	413	645	833	19%
Finance costs	(79)	(115)	(129)	(123)	16%
Income tax	(4)	(4)	(8)	(11)	40%
Reported net profit	397	285	494	681	20%
Core net profit	**397**	**410**	**494**	**681**	**20%**
EBITDA	654	597	844	1,055	17%
Core EPS (RMB)	0.13	0.13	0.16	0.22	20%
DPS (RMB)	0.07	0.07	0.07	0.07	0%
Key ratios and operation items					
GPM	38.7%	36.4%	36.4%	36.5%	-2.2%
EBITDA margin	43.8%	32.4%	36.6%	36.3%	-7.4%
EBIT margin	33.0%	22.4%	28.0%	28.7%	-4.3%
NPM	26.6%	15.5%	21.4%	23.5%	-3.1%
Core NPM	26.6%	22.3%	21.4%	23.5%	-3.2%
Operating exp as % of revenue	8.9%	10.2%	10.3%	9.2%	0.3%
Effective tax rate	0.9%	1.5%	1.5%	1.5%	0.6%
Dividend payout	56.1%	77.1%	44.6%	32.3%	-23.8%
Gross gearing ratio	70.6%	95.5%	80.3%	64.0%	-6.6%
No. of student enrolled	49,459	59,001	67,079	75,611	15%
- K-12	32,571	40,047	46,039	52,257	17%
- University	16,888	18,955	21,040	23,354	11%
Average pricing (tuition and boarding fee)	28,314	30,016	32,255	35,906	8%
- K-12 (tuition only)	34,660	36,450	38,673	43,051	7%
- University (tuition only)	13,435	13,949	14,993	16,161	6%

Source: Company data, HSBC estimates

Valuation

We use a discounted cash flow (DCF) methodology to value Virscend as we believe this better captures its strong cash generating capabilities, the impact of its capital expenditure and long-term growth outlook. The key assumptions in our three stage DCF model are as follows:

- Stage one – we use our explicit forecasts for FY21-22e.
- Stage two – we assume a FCFF CAGR of 6% over the medium term, lower than the growth in operating cash flow of 25% in FY22e, as we factor in the potential impact from adopting the "for-profit" school classification and the subsequent reduced growth opportunities. Moreover, this is lower than its K-12 peer average (at 11%), in view of Virscend's track record and the concerns over high gearing.
- Stage three – we assume a terminal growth rate of 2.0%.

Our 11% WACC assumption is based on a beta of 2.0x, a risk-free rate of 2.5%, and a market risk premium of 5%, as well as a percentage of debt of 39% in the capital structure and a cost-of-debt of 8%. Overall, we derive a target price of HKD2.50, which implies a 13x PE and a 1.2x PEG for FY21e (note the PEG is expected to fall to 0.5x in FY22e). With 4% upside from current levels, we initiate coverage on the stock with a Hold rating.

Exhibit 165: Virscend: DCF assumptions

	FY21e	FY22e	CAGR (medium-term)	Terminal growth
FCFF (RMBm)	581	586	6%	2%
WACC				11%
Enterprise value (RMBm)				7,840
Equity value (RMBm)				6,586
Total outstanding shares (m)				3,089
Implied fair value (HKD/share)				**2.5**
TP implied PE (FY21e)				13x
TP implied PEG (FY21e, over FY19-21e)				1.2x
TP implied dividend yield (FY21e)				3%
TP implied EV/EBITDA (FY21e)				9x

Source: HSBC estimates

We cross-check the implied PE against both the company's own historical average and its peers. We select the listed private K-12 school operators in China for comparison, and we found that:

- The implied FY21e PE of 13x is below its average of 28x since listing (and its historical average of 19x since the "8-10" event) and the weighted average FY21e PE of its peers (at 17x). We believe this is justified given: (1) potential margin pressure ahead amid its aggressive expansion and (2) its relatively low EPS CAGR over FY19-21e among its peers.
- The implied FY21e PEG based on FY19-21e EPS CAGR (1.2x) is higher than its peer average of 0.9x, mainly due to low EPS growth that we are forecasting during this time period; however, the implied PEG based on FY20-22e EPS would only be 0.5x.

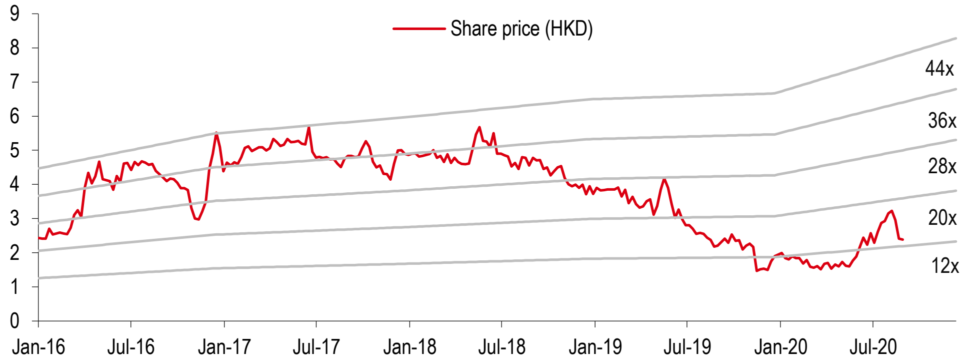
Key upside risks:

- Favourable policies regarding K-12 private school operators.
- Success to replicate the sound education quality in its newly established schools.
- Better margins from faster tuition hikes or less operating deleveraging at new schools.

Key downside risks:

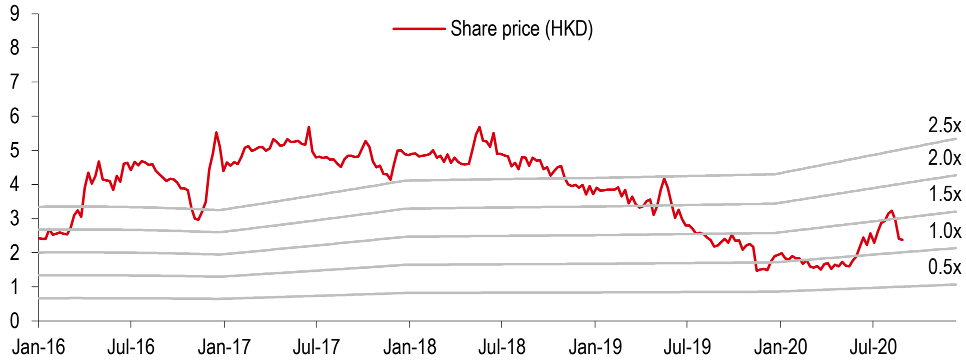
- Unfavourable policies regarding K-12 private school operators.
- Failure to maintain education quality, especially at new schools.
- Lower margins from slower tuition hikes or greater operating deleveraging at new schools.
- A higher tax rate on high schools and universities registering as for-profit schools.
- Break-up fee for Chengdu Institute to end its relationship with the public university.

Exhibit 166: Virscend: 1-year forward PE band chart, since listing



Source: Refinitiv Datastream, HSBC estimates

Exhibit 167: Virscend: 1-year forward PEG band chart, since listing



Source: Refinitiv Datastream, HSBC estimates

Exhibit 168: Virscend: Valuation comparison

Company	BBG	CMP	Mkt cap	PE (x)			PEG (x)			Dividend yield (%)		
	Ticker	(LC)	(USDm)	FY19a	FY20e	FY21e	FY19a	FY20e	FY21e	FY19a	FY20e	FY21e
Tianli	1773 HK	8.07	2,161	55.4	38.9	27.3	1.3	0.9	0.6	0.5	0.7	1.0
Maple Leaf	1317 HK	2.42	935	9.0	10.7	8.3	2.2	2.6	2.0	4.3	3.5	4.5
Wisdom	6068 HK	3.14	882	13.4	11.4	9.3	0.7	0.6	0.5	3.1	3.6	4.8
Bright Scholar	BEDU US	6.75	812	23.5	17.4	12.1	0.6	0.4	0.3	-	1.8	1.1
Virscend	1565 HK	2.40	957	16.3	15.8	13.1	1.4	1.4	1.1	3.4	3.4	3.4
Weighted avg.				**30.4**	**23.2**	**17.0**	**1.3**	**1.1**	**0.9**	**1.9**	**2.2**	**2.6**

Note: Priced as of 17 September 2020.
Source: HSBC estimates for Tianli, Maple Leaf, Wisdom, and Virscend, Bloomberg consensus for other stocks

Wisdom Education (6068 HK)

- Wisdom Education is the largest listed private K-12 school operator in mainland China with a solid operating track record
- We believe its K-12 schools are well-positioned; higher education represents a new opportunity but may stretch its financial leverage
- Initiate at Buy with a target price of HKD4.00, implying a 12x PE and 0.6x PEG for FY21e

The largest listed K-12 school operator in mainland China

About 80% of Wisdom's students are in Guangdong

Wisdom Education is a leading K-12 private education group in mainland China, primarily offering domestic courses for primary school, middle school, and high school students, as well as international programmes (including ACT, A-level, and IGCES courses) in some of its schools. As of school year 2019/20, Wisdom operates twelve K-12 schools with over 60,000 enrolled students. High schools, middle schools, primary schools, and international programmes contribute 23%, 42%, 35%, and 1% of students, respectively. In terms of student enrolments, Wisdom is the largest Hong Kong listed K-12 school operator in China with 6 out of its 12 schools, or c80% of its total students in Guangdong. With robust growth in student numbers and steady fee rises, Wisdom recorded a 31% revenue CAGR and 32% core net profit CAGR in FY17-19.

In 2003 Wisdom established its first school, Dongguan Guangming School, providing middle school and high school education. One year later, the school launched primary school courses. In 2012, Wisdom started to offer international programmes in Dongguan Guangming School. Since 2013, Wisdom has expanded its school portfolio through organic growth and M&A. After acquiring Dongguan Guangzheng Preparatory School in August 2013, Wisdom established its third school in Huizhou, Guangdong; these schools comprise Wisdom's key schools, which contributed 70% of the group's enrolled students as of school year 2019/20. Wisdom further accelerated its school network expansion after its IPO in 2017, adding two to three new schools per year. Wisdom owns and operates all its schools.

Exhibit 169: Wisdom: Key milestones

Source: Company data, HSBC

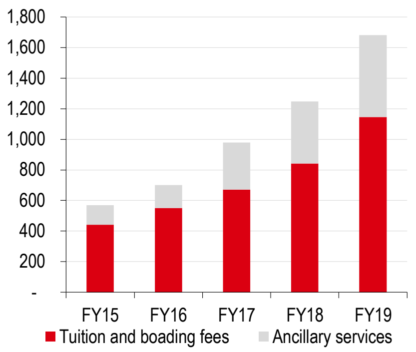
Snapshot of Wisdom Education (6068 HK)

Founded in 2002, Wisdom Education is a leading private K-12 school operator in mainland China, mainly providing domestic curriculum for primary school to high school students. Originated in Guangdong, the group currently operates twelve K-12 schools with six in Guangdong Province and the other six in Liaoning, Shandong, Sichuan, and Fujian provinces. As of school year 2019/20, Wisdom is the largest in terms student enrolment (at 60,116) among all Hong Kong listed K-12 education groups in China. Wisdom Education was listed on the main board of HKEX on 26 January 2017. Ms. Li Suwen and Mr. Liu Xuebin, acting in concert, together hold a c73% shareholding in the group.

Key senior management team includes:

- Ms. Li Suwen, Co-founder, Chairman, CEO, Executive Director, wife of Mr. Liu Xuebin
- Mr. Liu Xuebin, Co-founder, Executive Director
- Mr. Li Jiuchang, COO & Executive Director
- Mr. Wang Yongchun, Executive Director
- Mr. NG Cheuk Him, CFO & Company Secretary
- Mr. LAU Derek, CIRO

Revenue by segment (RMBm)



Source: Company data, HSBC

Forecasts and valuation

(RMBm)	FY19a	FY20e	FY21e	FY22e
Revenue	1,682	1,800	2,384	2,869
EBITDA	656	837	1,013	1,178
Core net profit	434	500	650	779
EPS (diluted, RMB)	0.20	0.24	0.29	0.35
DPS (RMB)	0.08	0.10	0.13	0.16

- Our target price of HKD4.00 for Wisdom Education is derived from a DCF approach and implies a 12x PE, 0.6x PEG, and 4% yield for FY21e

Source: Company data, HSBC estimates

Peer comparison

Company	BBG Ticker	PE (x) FY19a	FY20e	FY21e
Tianli	1773 HK	55.4	38.9	27.3
Maple Leaf	1317 HK	9.0	10.7	8.3
Wisdom	6068 HK	13.4	11.4	9.3
Bright Scholar	BEDU US	23.5	17.4	12.1
Virscend	1565 HK	16.3	15.8	13.1
Weighted avg		**30.4**	**23.2**	**17.0**

Note: Priced as of 17 September 2020.
Source: HSBC estimates for Tianli, Maple Leaf, Wisdom and Virscend, Bloomberg consensus for other stocks

Do you know?

- The education philosophy of Wisdom is "enhance morality and foster talents; nurture worthy and capable, sincere and upright graduates" (贤良方正，立德树人).
- Wisdom's share price has more than quadrupled since its listing in January 2017 before it plummeted following the release of the Draft for Approval on Implementation Regulations of Private Education Promotion Law in August 2018.
- Mr. Liu Xuebin and Ms. Li Suwen have diversified businesses including real estate, hotels, and education.
- Dongguan Guangming School was designated as the Sports-Specialty Student Training Base for Tsinghua University in 2009 and the Youth Basketball Training Base for Guangdong Province in 2011.
- The size of its private K-12 schools varies: as of school year 2019/20, Wisdom operated only 12 schools but is the largest listed K-12 school operator with 60,116 enrolled students, while Maple Leaf operates 100 schools but only has 41,076 students.

Key risks and challenges

- Failure to maintain a high education quality, especially in the newly established schools, would affect its brand reputation and cast doubt over its future expansion.
- Delays in school construction and the ramp-up period of new schools would drag down its growth and margins.
- Unfavourable policies regarding "not-for-profit" private schools would affect Wisdom the most given the group plans to select the not-for-profit category, even for its high schools.

Financials & valuation: Wisdom Education

Buy

Financial statements

Year to	08/2019a	08/2020e	08/2021e	08/2022e
Profit & loss summary (RMBm)				
Revenue	1,682	1,800	2,384	2,869
Gross profit	742	811	1,066	1,249
Other income and gains	33	95	50	50
Operating expenses	-279	-264	-325	-363
EBITDA	656	837	1,013	1,178
Depreciation & amortization	-139	-182	-210	-230
Operating profit	516	655	803	949
Finance costs, net	-87	-119	-92	-95
PBT	409	523	698	841
Taxation	-56	-86	-108	-122
Reported net profit	359	444	600	731
Core net profit	434	500	650	779
Cash flow summary (RMBm)				
Cash flow from operations	577	821	1,103	1,224
Capex	-973	-807	-741	-806
Cash flow from investment	-1,006	-444	-729	-794
Dividend paid	-155	-203	-240	-319
Cash flow from financing	169	-57	-366	-489
Balance sheet summary (RMBm)				
PP&E	3,036	3,602	4,059	4,556
Intangible fixed assets	176	160	150	150
Cash and cash equivalents	1,503	1,473	1,480	1,421
Total assets	6,271	7,383	8,268	9,115
Contract liabilities	751	936	1,119	1,368
Interest-bearing debts	2,649	2,440	2,470	2,457
Net debt	1,145	968	989	1,036
Shareholders' fund	2,161	2,954	3,313	3,725

Ratio, growth and per share analysis

Year to	08/2019a	08/2020e	08/2021e	08/2022e
Y-o-y % change				
Revenue	34.9	7.0	32.4	20.4
Gross profit	31.0	27.6	21.0	16.3
EBITDA	28.1	26.8	22.6	18.2
Operating profit	15.8	23.6	35.0	22.0
Reported net profit	33.6	15.2	29.9	19.7
Core net profit	29.8	17.4	22.4	19.7
EPS	34.9	7.0	32.4	20.4
Ratios (%)				
ROE	21.3	19.6	20.7	22.1
ROA	8.9	8.8	9.3	9.9
Gross profit margin	44.1	45.1	44.7	43.5
EBITDA margin	39.0	46.5	42.5	41.1
Operating margins	30.7	36.4	33.7	33.1
Core net profit margin	25.8	27.8	27.3	27.1
Gross gearing	117.9	80.5	73.0	65.0
Per share data (RMB)				
EPS	0.17	0.22	0.28	0.34
Core EPS	0.20	0.24	0.29	0.35
DPS	0.08	0.10	0.13	0.16
Book value	1.10	1.39	1.55	1.74

Key forecast drivers

Year to	08/2019a	08/2020e	08/2021e	08/2022e
No. of student enrolled	54,420	60,116	71,362	80,472
Average pricing*	21,049	22,319	23,131	24,421

* Represents average tuition and boarding fees per K-12 student

Valuation data

Year to	08/2019a	08/2020e	08/2021e	08/2022e
EV/EBITDA	11.0	8.4	6.9	6.0
PE*	13.4	11.4	9.3	7.8
PEG	0.7	0.6	0.5	0.4
Dividend yield (%)	3.1	3.6	4.8	5.9

* Based on HSBC EPS (diluted)

ESG metrics

Environmental Indicators	08/2019a
GHG emission intensity*	42.6
Energy intensity*	91.6
CO_2 reduction policy	Yes
Social Indicators	**08/2019a**
Employee costs as % of revenues	36.1
Employee turnover (%)	n/a
Diversity policy	Yes

Governance Indicators	08/2020a
No. of board members	7
Average board tenure (years)	5.1
Female board members (%)	14.3
Board members independence (%)	42.9

Source: Company data, HSBC

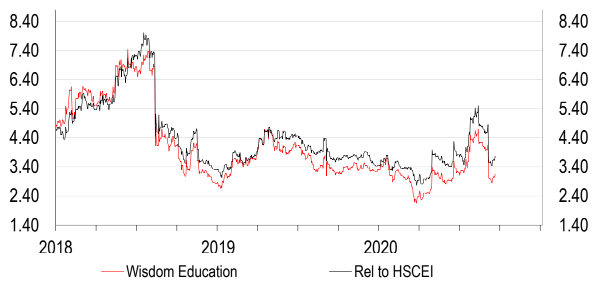
* GHG intensity and energy intensity are measured in kg and kWh respectively against revenue in USD '000s

Issuer information

Share price (HKD)	3.14
Target price (HKD)	4.00
RIC (Equity)	6068.HK
Bloomberg (Equity)	6068 HK
Market cap (USDm)	882

Free float	27%
Sector	Discovery Research
Country/Region	China
Analyst	York Pun, CFA
Contact	+852 2822 4396

Price relative



Source: HSBC

Note: Priced at close of 17 Sep 2020

Business analysis

Wisdom has two major sources of revenue:

- Tuition fees and boarding fees (68% of total revenue in FY19).
- Ancillary services (32% of total revenue), including on-campus canteens, medical rooms, sales of school uniforms and daily necessities, school buses, and study tours.

Over FY14-19, Wisdom recorded 30% revenue CAGR, with a 27% revenue CAGR for tuition fees and boarding fees and a 40% revenue CAGR for ancillary services.

In FY17, ancillary services increased 104% y-o-y as Wisdom started to offer additional services like the provision of school uniforms, school buses, and study tours. As a result, the revenue contribution of ancillary services has increased from c20% in FY14-16 to c30% in FY17-19.

Like its peers, growth in student enrolment and the increase in pricing are Wisdom's key drivers for its revenue. In FY18-19, M&A contributed 6-8% to its tuition and boarding fees revenue y-o-y growth.

- **Student enrolment** in Wisdom's schools increased by a CAGR of 23% over FY14-19. During the period, Wisdom's overall utilisation remained high at 84-96%, as it gradually expanded capacity by a CAGR of 22%. According to our analysis in Exhibit 175, capacity expansion of its existing schools has contributed the most to the increase in student numbers, except for FY18 when two schools, Jieyang School and Weifang Weizhou Foreign Language School, were acquired.
- **Average pricing,** when measured by tuition and boarding fees on a per student basis, rose at a CAGR of 3% over FY14-19. But this average number was affected by acquisitions in FY18 and led to a 6% annualised decline in the fiscal year. By contrast, acquisitions in FY19 helped to boost average fees. Overall, excluding the impact of M&A, Wisdom has been able to steadily raise its average fee over time. We believe this is backed by the solid teaching quality and academic results, especially in Dongguang Guangming.

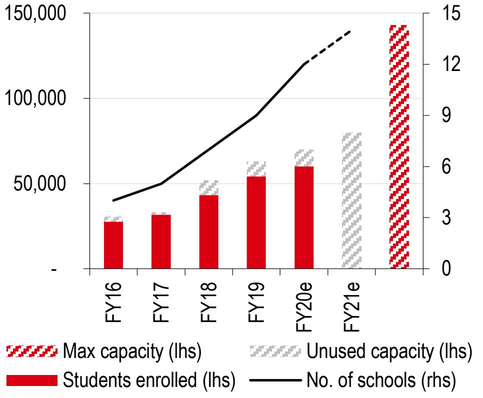
It is hence not surprising to see that the average fee in its Dongguang schools is generally higher than non-Dongguan schools, even after taking into account income differences. This, in our view, reflects the reliance of Wisdom on its major schools in Dongguan, but also indicates room for improvement, especially if academic results at its new schools outside Dongguan pick up.

Exhibit 170: Wisdom: School portfolio summary, 1HFY20

Province	Number of schools	Number of students	% of students
Guangdong	6	47,349	79%
Shandong	2	4,717	8%
Liaoning	1	4,070	7%
Fujian	1	2,894	5%
Sichuan	2	1,086	2%
Total	**12**	**60,116**	**100%**

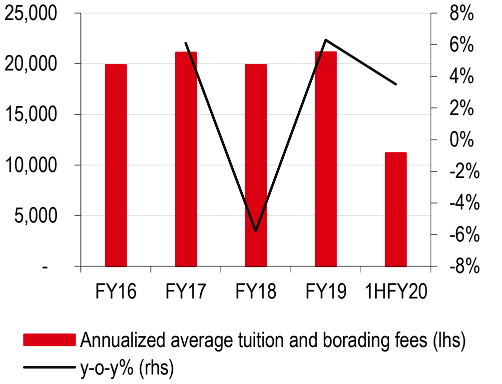
Source: Company data, HSBC

Exhibit 171: Wisdom: A solid track record and a firm pipeline, FY16-21e



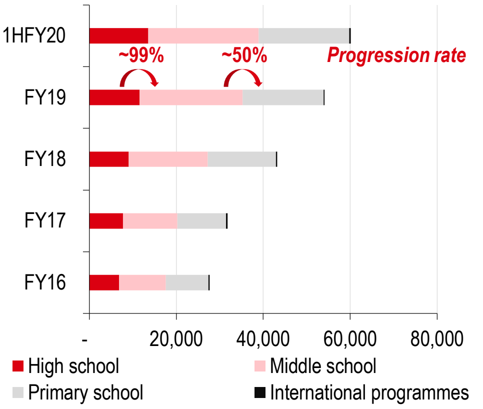
Source: Company data, HSBC

Exhibit 172: Wisdom: Average pricing has been volatile (RMB), FY16-1HFY20



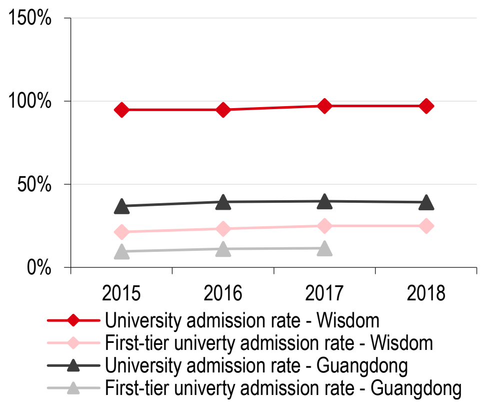
Note: The average pricing are annualised in FY18-19 and their y-o-y's are annualised in FY18-1HFY20 to adjust for the impact of M&As.
Source: Company data, HSBC

Exhibit 173: Wisdom: Number of students by educational stage, FY16-1HFY20



Source: Company data, HSBC

Exhibit 174: Wisdom: University admission rate beats the average in Guangdong, 2015-18



Note: Wisdom's definition for first-tier universities is slightly different from Tianli and Virscend.
Source: School website, Gaokao.eol.cn, HSBC

Exhibit 175: Wisdom: Revenue driver analysis, FY14-1HFY20

	FY14a	FY15a	FY16a	FY17a	FY18a	FY19a	1HFY20
Revenue	**451**	**569**	**701**	**979**	**1,247**	**1,682**	**932**
Tuition and boarding fees	352	442	550	671	841	1,145	671
Ancillary services	99	126	151	308	406	536	261
Revenue y-o-y %		**26%**	**23%**	**40%**	**27%**	**35%**	**12%**
Tuition and boarding fees y-o-y%		26%	24%	22%	25%	36%	16%
- Organic y-o-y%		26%	24%	22%	18%	30%	16%
- M&A y-o-y %		n/a	n/a	n/a	8%	6%	n/a
Ancillary services y-o-y %		27%	19%	104%	32%	32%	2%
Student enrolled	**19,354**	**22,837**	**27,644**	**31,788**	**43,230**	**54,420**	**60,116**
Existing school	14,947	22,555	27,644	31,070	36,679	51,361	59,138
Newly self-built school	256	282	0	718	0	159	978
Newly acquired school	4,151	0	0	0	6,551	2,900	0
Average pricing*	**18,169**	**19,364**	**19,900**	**21,114**	**19,893**	**21,146**	**11,159**
Existing school			19,900	21,311	21,512	21,736	11,133
Newly self-built school			n/a	12,969	n/a	16,473	12,740
Newly acquired school			n/a	n/a	10,829	10,957	n/a
Capacity	**23128**	**25719**	**30,552**	**33,152**	**51,924**	**63,000**	**70,000**
Existing school	15,488	25,031	30,552	32,400	44,804	59,000	67,000
Newly self-built school	944	688	0	752	0	1,000	3,000
Newly acquired school	6,696	0	0	0	7,120	3,000	0
Utilisation	**84%**	**89%**	**90%**	**96%**	**83%**	**86%**	**86%**
Existing school	97%	90%	90%	96%	82%	87%	88%
Newly self-built school	27%	41%	n/a	95%	n/a	16%	33%
Newly acquired school	62%	n/a	n/a	n/a	92%	97%	n/a

Note: Average pricing are calculated by using tuition and boarding fees to divide by student enrolment.
Source: Company data, HSBC

Scale benefits

Student enrolment could double, if capacity and utilisation reach the maximum levels

A feature that differentiates Wisdom from other K-12 school operators is that it operates large schools. As of school year 2019/20, the number of students enrolled in its Dongguan Guangming School, Dongguan Guangzheng School, and Huizhou Guangzheng School reached 17,623, 14,773, and 9,694, respectively. These large-scale schools help Wisdom to achieve scale benefits and optimise potential returns. The maximum capacity of its existing schools is expected to be 127,370, greater than its existing capacity and indicates ample room to expand. Meanwhile, Wisdom has six other K-12 projects in the Greater Bay Area in the pipeline, including one light-asset model school (i.e. using leased school premises) in Dongguan or Foshan that is expected to start operation in school year 2020/21e, and two self-built schools in Chaozhou and Jiangmen that are expected to start operation in school year 2021/22e.

Well-positioned under new student recruitment rules

Internal progression rate from Wisdom's primary to middle schools is c99%

Wisdom has the highest internal progression rates in our K-12 coverage universe. This is show by the percentage of primary school students that progress to the group's own middle schools (99% in FY19) as well as those from its middle schools to high schools (50%). We believe this offers a competitive edge amid the recruitment efforts by other public and private schools, as it helps to better maintain its student quality. That being said, the overall student quality of its primary school students might still be impacted. Therefore, to further enhance its advantage in student sourcing through internal progression, Wisdom is planning to operate some preschools under the entrusted model, i.e. providing management services to third-party owned kindergartens.

Expansion to mitigate policy risks

While all private schools at the compulsory education stage (i.e., primary and middle schools) are required to be classified as "not-for-profit" schools, Wisdom has planned to also classify its high school section as "not-for-profit" schools as well. This would increase the potential policy risk with controls on pricing adjustments and restrictions on M&A for "not-for-profit" schools being the two key concerns. That said, there are some mitigating measures:

- Firstly, some local education bureaus such as the ones in Guangdong seem to adopt more relaxed controls over pricing for "not-for-profit" high schools, so Wisdom is not necessarily worse off (in pricing adjustments). Meanwhile, Wisdom makes over 30% of its revenue (except for 1HFY20, due to the impact of COVID-19) from ancillary services, which are subject to fewer regulatory controls on pricing; bear in mind that the ratio from ancillary services fees for Wisdom is the highest among our K-12 coverage.
- Secondly, Wisdom entered into a strategic agreement with Guangdong Huiyin Haide Equity Investment Fund in March 2019 to establish an education industry fund investing in schools in the GBA. The fund will establish and incubate new schools and Wisdom will have the right-of-first-refusal for any schools in the fund (when it divests). Given Wisdom already holds a stake in the fund, Wisdom can raise its stake and consolidate the schools into the listed group when the schools are mature, helping Wisdom to expand while controlling the risks.
- Last, Wisdom recently announced its plan to enter the higher education space and continue providing online courses post COVID-19 to optimise teaching resources and generate additional income. For the former, in July 2020, Wisdom entered into a cooperative agreement with the Harbin Institute of Technology (HIT) and HIT Big Data Group to establish a private higher education institute in Dongguan; meanwhile, Wisdom also signed an agreement with the local governments of Bazhong in Sichuan and Yibin in Sichuan to establish private higher education schools. This, in our view, may help to diversify and reduce the concentration risks (especially on the policy front), though they may also raise its financial leverage (from an already high level) and divert management resources and efforts away from the K-12 area.

Exhibit 176: Wisdom: Existing school portfolio

School name	Location	Setup year	Origin	Equity interest	Grades	Curriculum	Student SY19	Student SY20	Utilisation SY19	Utilisation SY20	Capacity SY19	Capacity SY20	Capacity Max
Dongguan Guangming	Dongguan, Guangzhou	Sep-03	Self-built	100%	G 1-12	PRC	17,358	17,623	95%	96%	18,300	18,300	18,300
Dongguan Guangzheng	Dongguan, Guangzhou	Sep-13	Acquired	100%	G 1-12	PRC; International	12,645	14,773	84%	87%	15,000	17,000	20,000
Huizhou Guangzheng	Huizhou, Guangzhou	Sep-14	Self-built	100%	G 1-12	PRC; International	8,413	9,694	99%	92%	8,500	10,500	12,000
Panjin Guangzheng	Panjin, Liaoning	Sep-14	Self-built	100%	G 1-12	PRC	3,119	4,070	78%	102%	4,000	4,000	6,200
Weifang Guangzheng	Weifang, Shandong	Sep-16	Self-built	100%	G 1-12	PRC	2,133	2,522	53%	63%	4,000	4,000	8,000
Jieyang Guangzheng	Jieyang, Guangzhou	Sep-17	Acquired	65%	G 1-12	PRC	5,375	4,769	77%	68%	7,000	7,000	18,000
Weizhou School	Weifang, Shandong	Jun-18	Acquired	100%	G 1-6	PRC	2,318	2,195	105%	100%	2,200	2,200	2,200
Guang'an Guangzheng	Guang'an, Sichuan	Sep-18	Self-built	100%	G 1-12	PRC	159	598	16%	60%	1,000	1,000	9,280
Zhang Pu School	Zhangzhou, Fujian	Nov-18	Acquired	100%	G 1-12	PRC	2,900	2,894	97%	96%	3,000	3,000	3,500
Bazhong Guangzheng	Bazhong, Sichuan	Sep-19	Self-built	100%	G 1-12	PRC	n/a	488	n/a	33%	n/a	1,500	10,000
Yunfu Guangming	Yunfu, Guangzhou	Sep-19	Self-built	75%	G 1-12	PRC	n/a	445	n/a	30%	n/a	1,500	10,680
Shunde Guangzheng	Foshan, Guangzhou	Sep-19	Self-built	100%	G 1-12	PRC	n/a	45	n/a	n/a	n/a	n/a	9,210
Subtotal – existing schools							**54,420**	**60,116**	**86%**	**86%**	**63,000**	**70,000**	**127,370**

Note: SY=School year.
Source: Company data, HSBC

Exhibit 177: Wisdom: Schools in the pipeline

School	Location	Setup year	Model	Capacity
Dongguan/Foshan School	Dongguan / Foshan, Guangzhou	Sep-20	Light-asset mode	TBC
Chaozhou School	Chaozhou, Guangdong	Sep-21	Self-built	8,000
Jiangmen School	Jiangmen, Guangdong	Sep-21	Self-built	7,500
Guangzhou School	Guangzhou, Guangdong	TBC	Self-built	TBC
Zhaoqing School	Zhaoqing, Guangdong	TBC	Self-built	TBC
Zhongshan School	Zhongshan, Guangdong	TBC	TBC	10,000
Subtotal – K-12 schools in the pipeline				**Over 15,500**
Dongguan Guangzheng Technology Institute	Dongguan, Guangzhou	TBC	TBC	10,000
Bazhong Guangzheng Technology Institute	Bazhong, Sichuan	TBC	TBC	18,000
Yibin Guangzheng Technology Institute	Yibin, Sichuan	TBC	TBC	TBC
Subtotal - Higher education schools in the pipeline				**Over 28,000**

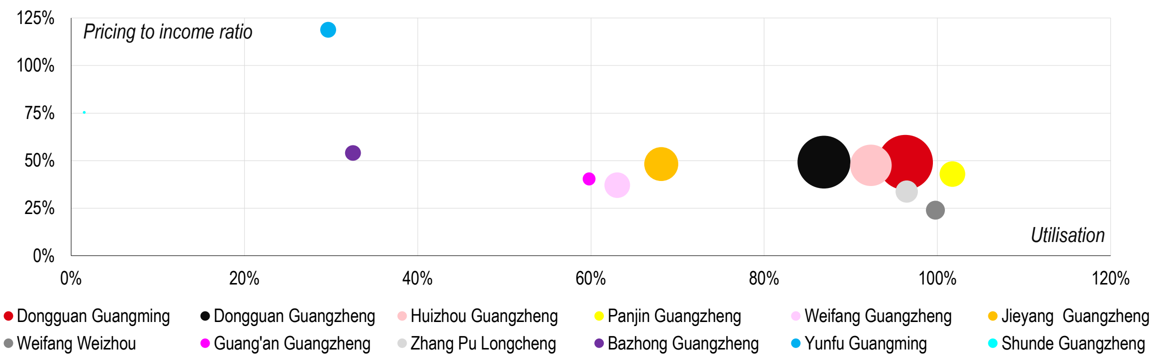
Source: Company data, HSBC

Exhibit 178: Wisdom: Tuition fees and boarding fees per student by school

School name	Average 1HFY19	Average 1HFY20	Average y-o-y%	Annual tuition and boarding fees range: High school	Middle school	Primary school	IP	y-o-y %: High school	Middle school	Primary school	IP
Dongguan Guangming	13,398	13,518	0.9%	30,800-44,800	27,800-33,000	23,200-29,400	n/a	19%	0%	0%	n/a
Dongguan Guangzheng	12,952	13,551	4.6%	26,200-43,800	23,400-27,800	21,400-26,200	70,600-110,600	42%	0%	0%	0%
Huizhou Guangzheng	9,878	10,219	3.5%	25,600-33,800	20,600	20,800	90,600	2%	0%	0%	0%
Panjin Guangzheng	8,960	8,930	-0.3%	20,600-22,200	18,600-20,600	13,600-15,800	n/a	24%	22%	16%	n/a
Weifang Guangzheng	8,004	7,737	-3.3%	18,600-23,000	13,600-20,200	11,600-17,000	n/a	0%	0%	0%	n/a
Jieyang Guangzheng	5,779	6,445	11.5%	12,800-31,000	13,550-18,000	12,550-16,000	n/a	31%	32%	29%	n/a
Weizhou School	5,260	4,985	-5.2%	n/a	n/a	12,800-13,200	n/a	n/a	n/a	0%	n/a
Guang'an Guangzheng	7,333	7,271	-0.8%	19,600	17,600	15,600	n/a	0%	0%	0%	n/a
Zhang Pu School*	6,005	6,578	9.5%	15,750	12,750	9,300	n/a	0%	0%	0%	n/a
Bazhong Guangzheng	n/a	9,092	n/a	21,600	19,600	17,600	n/a	n/a	n/a	n/a	n/a
Yunfu Guangming	n/a	15,924	n/a	33,200-37,800	31,200	26,000	n/a	n/a	n/a	n/a	n/a
Shunde Guangzheng	n/a	20,822	n/a	n/a	43,800	42,000	n/a	n/a	n/a	n/a	n/a
Overall*	**10,773**	**11,159**	**3.6%**								

Note: The average pricing for Zhang Pu School and the overall average pricing are annualised to adjust for the impact of acquisition.
Source: Company data, HSBC

Exhibit 179: Wisdom: School pricing relative to income ratio vs. school utilisation, SY19/20



Note: SY=School year. Price-to-income ratio is calculated as: per student average pricing in 1HFY20 * 2 / per capital annual disposable income of the city where the school locates.
Source: Company data, HSBC

Financial analysis

Revenue and net profit: Wisdom recorded a 32% core net profit CAGR on the back of a 31% revenue CAGR over FY17-19, supported by similar growth rates across different revenue streams. Tuition fees and boarding fees were driven by a 31% CAGR in student enrolment while its average pricing was flat. Overall, capacity utilisation actually fell as Wisdom rapidly expanded its capacity after its IPO. The flattish average pricing over FY17-19 is attributable to an 8% decline in FY18 (due to relatively low pricing at the newly acquired Jieyang and Weifang schools), but then rose 8% in FY19.

Margins and cost components: Both Wisdom's gross profit margin and core net profit margin dropped 5% from their peak in FY15 to FY18, and remained flat (at 44% and 26%, respectively) y-o-y in FY19. Labour costs in the cost of sales (COS) made up 28% of revenue in FY19 and was the largest cost component, followed by the cost of ancillary services (16%), administrative expenses (15%), and depreciation and amortisation (7%). Over FY17-19, GPM decreased by 2% mainly on a 2.7ppt increase in staff costs as a percentage of revenue and a 1.5ppt increase in amortisation of intangibles as a percentage of revenue, partly offset by the reduction in other COS items. G&A increased by 2.2ppt over the same period.

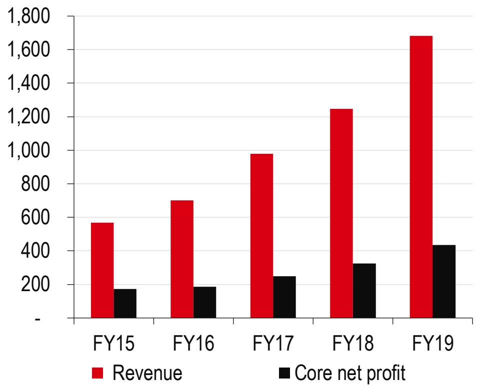
Income tax: Wisdom's effective tax rate (at 14% in FY19) is much higher than its peers; for instance, the effective tax rate for the other three covered K-12 school operators was only 1-4% in the latest fiscal year. We believe this is probably due to: (1) Wisdom's current WFOE, Dongguan Ruixing, is registered in Dongguan, where tax benefits are smaller; (2) Wisdom might have increased its profit repatriation from school operating entities to its WFOE (which are then taxable); and (3) its relatively high revenue contribution from ancillary services (which bear a normal corporate tax rate). That said, we note there is potential room for Wisdom to improve its effective tax rate as it is working on tax planning – one example being it has recently established a new wholly-owned subsidiary with preferential tax treatment in Gangzhou (according to its announcement on 4 August 2020).

Balance sheet structure: Wisdom's largest asset is PPE (48% of total assets) followed by cash (19%), prepaid leases (13%), deposits, prepayments and other receivables (12%) as of FY19. Among the RMB728m in deposits, prepayments and other receivables, RMB197m are prepayments to Dongguan Chinese Real Estate, a related company controlled by the major shareholders. For liabilities: bank borrowings (54%) is the largest item, followed by contract liabilities (19%), payables (12%), and convertible notes (12%). As Wisdom's fiscal year largely matches the school year and the company collects tuition and boarding fees twice a year (prior to each semester), contract liabilities largely represent all tuition fees and boarding fees and are a part of ancillary services revenue to be recognised in the coming semester. For more details on the debt structure, convertible notes, and related transactions, please refer to detailed discussions in the later sections.

Cash flow: The average CFO/net profit ratio of Wisdom was nearly 190% over the past five years, mainly supported by the strong cash generating capability driven by the business model. Wisdom's capital expenditure (including M&A) reached RMB682m, RMB790m, and RMB973m in FY17/18/19, as it accelerated its capacity expansion post its IPO.

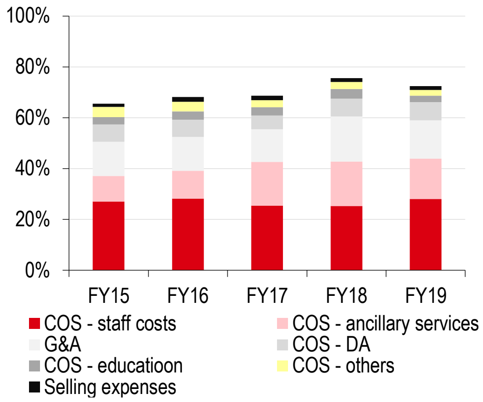
Dividends: Since listing, Wisdom has had a relatively stable dividend payout ratio, averaging around 50% in FY17-19.

Exhibit 180: Wisdom: Revenue and core net profit (RMBm), FY15-19



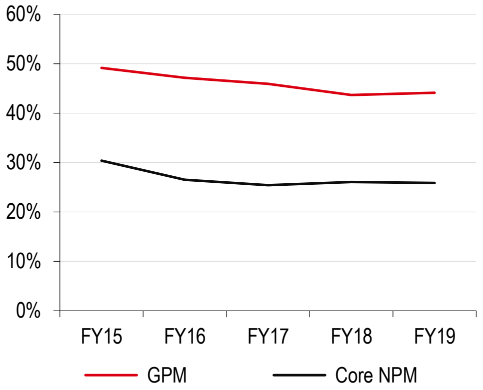
Source: Company data, HSBC

Exhibit 181: Wisdom: Cost items as % of revenue, FY15-19



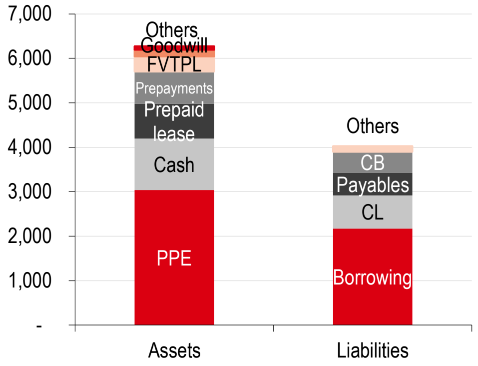
Source: Company data, HSBC

Exhibit 182: Wisdom: Margins, FY15-19



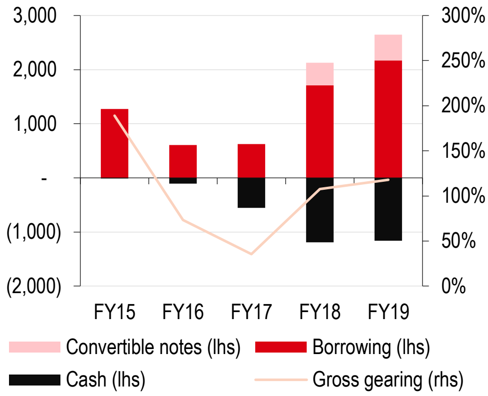
Source: Company data, HSBC

Exhibit 183: Wisdom: Balance sheet structure (RMBm), FY19



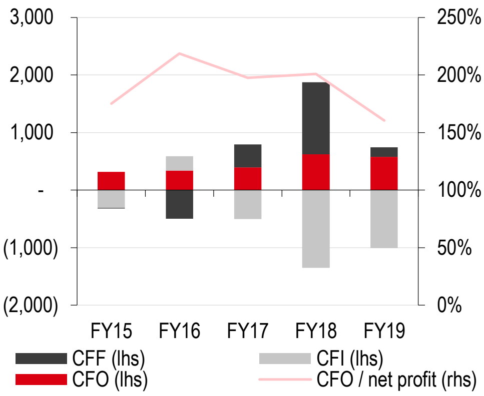
Note: CB stands for convertible bonds, CL stands for contract liabilities.
Source: Company data, HSBC

Exhibit 184: Wisdom: Debt-structure (RMBm) and gearing ratio, FY15-19



Note: Gross gearing ratio is calculated as total interest-bearing debt to total equity.
Source: Company data, HSBC

Exhibit 185: Wisdom: Cash flow breakdown (RMBm), FY15-19



Source: Company data, HSBC

Debt structure

Similar to other school operators, Wisdom relies on debt (bank borrowings and convertible notes) to expand its school network. Wisdom has been in a net debt position since FY14 and its net gearing ratio (net debt, which is calculated as bank borrowings plus convertible notes minus cash and cash equivalents, then divided by the shareholder's equity) was at an historic low (at 4%) in FY17, helped by the IPO. However, its net gearing has been rising since then, reaching 83% in 1HFY20, as the company has accelerated its expansion post its IPO. While the gearing ratio is high – the highest amongst our school operator coverage universe – only around 10% of bank borrowings are short-term debts.

However, financial leverage pressure could build up in the future, owing to:

- Further expansion plans, compounded by recently announced plans to establish higher education schools.
- The repayment of its convertible note that was issued in July 2018 (discussed below).

Convertible notes

In July 2018, Wisdom issued a 24-month HKD500m convertible note to PA Chokmah, a subsidiary of China Ping An Insurance Overseas. The loan is subject to a fixed interest rate of 6.8% per annum, payable every six months. Upon maturity of the notes, up to HKD300m could be converted to Wisdom's shares, at a 10-20% discount to the 90-day closing price average prior to the conversion, and subject to independent shareholders' approval.

The proposed conversion was, however, not passed at the EGM held on 10 July 2020. As a result, Wisdom would need to repay PA Chokmah the relevant loan amount plus an exit fee, which will ensure PA Chokmah realises an IRR of at least 13%. Per our estimate, the outstanding amount of the loan amounts to HKD517m (incl. HKD500m principal and HKD17m accrued interest), and Wisdom would need to repay a total of HKD590m (after taking into account the exit fee). While we believe Wisdom has sufficient financial resources to repay the debt – it still holds RMB540m in bank balances and cash as of 12th June 2020, and intends to use RMB328m of its existing bank balances and cash and RMB260m out if its unused banking facilities to repay the amount – this could intensify pressure on its financial leverage, and hence increase the need for further capital-raising (even after taking into account its recent share placement by issuing 130m shares at HKD4.24 per share, which raised HKD551m).

Connected transactions

Wisdom education was initially the education arm of Cinese Group, a group founded and controlled by Mr. Liu that primarily operates real estate, construction, furniture, hotel, tourism and education businesses.

Prior to Wisdom's listing, there have been significant related party transactions between Wisdom and other companies controlled by Mr. Liu or his relatives.

- The amount due from related parties and the amount due to related parties, mainly non-trade in nature, was RMB1.6bn and RMB433m, respectively in FY15. These inter-related party balances have largely been settled since FY17. Please refer to Exhibit 186 for more details.
- There were also some other related party transactions, such as the purchase of goods. The company has also largely ceased these transactions since listing. In 1HFY20, the remaining related transactions were: (1) hospitality expenses, and (2) leases, which were insignificant in scale.

Exhibit 186: Wisdom: Inter-related party balances (RMBm), FY14-1HFY20

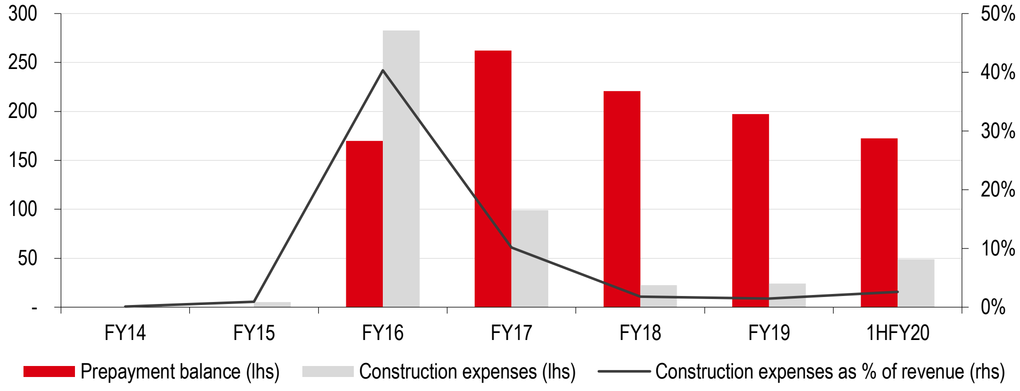
	FY14a	FY15a	FY16a	FY17a	FY18a	FY19a	1HFY20
Amounts due from related parties	1,362	1,586	551	7	-	-	-
Amounts due to related parties	(337)	(433)	(340)	-	-	-	-

Source: Company data, HSBC

In 2016, the group entered into construction agreements with Dongguan Cinese Real Estate, a company controlled by Mr. Liu, for the construction of school premises in Weifang, Guang'an and Yunfu, with total construction fees amounting to RMB840-890m. Wisdom has prepaid certain amounts to Cinese Real Estate regarding the construction. As of 1HFY20, total prepayments regarding the project amounted to RMB444m and the remaining prepayment balance was RMB172m.

The construction expenses encountered in relation to related parties as a percentage of revenue was as high as 40% in FY16 but dropped to only 3% in 1HFY20. Nevertheless, the outstanding prepayment, in our view, could still constitute a potential concern to some investors (see below for details).

Exhibit 187: Wisdom: Key connected transaction items (RMBm), FY14-1HFY20



Source: Company data, HSBC

1HFY20 results

Wisdom's core earnings growth remained strong at 33% y-o-y in 1HFY20 despite decelerating top line growth, which was only 12% y-o-y. The slower revenue growth is due to a combination of: (1) relatively slower student growth (at 12% annualised y-o-y) and a modest increase in average pricing (at 4% annualised y-o-y) in school year 2019/20 and (2) only 2% ancillary services revenue growth, which was dragged down by the outbreak of COVID-19. In school year 2019/20, growth in student enrolments is mainly from capacity expansion and slightly improving utilisation in its existing schools, as its newly self-built Bazhong and Yunfu schools are still relatively small in scale with only c30% utilisation while its Shunde school is still not ready for full-scale operations.

As for its margin expansion, we believe the shift in revenue mix, operating leverage, and larger government grants (47m, +404% y-o-y) have helped. There's a negative correlation between the group's GPM and revenue contribution from its ancillary services; meanwhile, its mature schools are generally a lot larger in scale vs. its new schools. Therefore, operating leverage from mature schools is likely to exceed the margin drag from new schools. While the revenue mix should shift back and government grants are not operating related, efficiency improvements should be recurring.

Exhibit 188: Wisdom: Results summary, 1HFY20

Year ended Aug (RMBm)	1HFY19	2HFY19	1HFY20	y-o-y	h-o-h
Key income statement					
Revenue	**836**	**846**	**932**	**12%**	**10%**
- Tuition and boarding fees	*579*	*566*	*671*	*16%*	*18%*
- Ancillary services	*257*	*280*	*261*	*2%*	*-7%*
COS	(457)	(483)	(497)	9%	3%
Gross profit	379	363	436	15%	20%
Other income	10	23	50	408%	114%
Other gains and losses	19	(19)	40	111%	NA
Selling expenses	(25)	(1)	(20)	-19%	2376%
Administrative expenses	(131)	(122)	(140)	7%	15%
Finance income	10	11	7	-23%	-31%
Operating profit	261	255	373	43%	46%
Finance costs	(39)	(68)	(52)	35%	-24%
PBT	222	187	321	44%	72%
Income tax	(33)	(23)	(62)	89%	173%
MI	4	2	8	131%	241%
Reported net profit	193	166	267	38%	60%
Core net profit	220	215	296	35%	38%
EBITDA	329	327	458	39%	40%
Core EPS (RMB)	0.10	0.10	0.13	29%	35%
DPS (RMB)	0.04	0.04	0.06	37%	36%
Key balance sheet					
PP&E	3,042	3,036	3,248	7%	7%
Cash and cash equivalent	966	1,161	605	-37%	-48%
Debt	2,389	2,649	2,617	10%	-1%
- bank borrowing	1,948	2,169	2,130	9%	-2%
- convertible note	440	479	487	11%	2%
Contract liabilities	710	751	705	-1%	-6%
Total liabilities	3,904	4,024	4,136	6%	3%
Total equity	2,104	2,247	2,419	15%	8%
Key ratios and business driver					
GPM	45.3%	42.9%	46.7%	1.4ppt	3.8ppt
Operating expense to revenue	18.7%	14.5%	17.2%	-1.5ppt	2.7ppt
OPM	31.2%	30.2%	40.0%	8.7ppt	9.8ppt
Core NPM	26.3%	25.4%	31.8%	5.5ppt	6.4ppt
Gross gearing ratio	113.5%	117.9%	108.2%	-5.4ppt	-9.7ppt
Net gearing	67.6%	66.2%	83.2%	15.6ppt	17.0ppt
Student enrolment	54,420	54,420	60,116	10%	10%
Average pricing	10,640	10,409	11,159	5%	7%
No. of schools	9	9	12	33%	33%
Capacity utilisation	86%	86%	86%	-0.5ppt	-0.5ppt

Source: Company data, HSBC

Forecast and valuations

Forecast

We forecast the future financial performance of Wisdom based on the following considerations:

- **Revenue:** We forecast a 19% revenue CAGR over FY19-22e using the following assumptions:
  - **14% CAGR for student enrolment:** We expect one light-asset model school to start operations in FY21e and its Chaozhou School and Jiangmen School to start in FY22e. This is in addition to continuous capacity expansion and utilisation ramp-up of its existing schools. We haven't factored in any contribution from higher education.
  - **6% CAGR from average pricing:** This has taken into account the 9-38% price hikes that were recently announced and other potential tuition hikes for new students to be enrolled starting from school year 2020/21e.
  - **19% CAGR for ancillary services:** We expect its ancillary services revenue to drop in FY20e due to school lockdowns, but to recover in FY21e.
- **Margins:** In FY20e, we expect Wisdom's GPM and core NPM to grow modestly by 1% and 2%, respectively, on stronger operating leverage. We also expect its effective tax rate to drop slightly from FY21e.

Overall, we expect Wisdom's core earnings to grow at a CAGR of 21% in FY19-22e, slightly faster than its revenue CAGR.

Exhibit 189: Wisdom: Key forecasts

Year ended Aug (RMBm)	FY19a	FY20e	FY21e	FY22e	CAGR (FY19-22e)
Key income statement items					
Revenue	**1,682**	**1,800**	**2,384**	**2,869**	**19%**
- Tuition and boarding fees	1,145	1,342	1,651	1,965	20%
- Ancillary services	536	458	733	904	19%
COS	(940)	(989)	(1,318)	(1,620)	20%
Gross profit	742	811	1,066	1,249	19%
Other income	33	75	50	50	14%
Operating expenses	(279)	(264)	(325)	(363)	9%
Finance income	20	13	12	12	-16%
EBIT	516	655	803	949	22%
Finance cost	(107)	(132)	(105)	(107)	0%
Tax	(56)	(86)	(108)	(122)	30%
MI	6	7	10	12	27%
Reported net profit	359	444	600	731	27%
Core net profit	**434**	**500**	**650**	**779**	**21%**
EBITDA	656	837	1,013	1,178	22%
Core EPS (RMB)	0.20	0.24	0.29	0.35	20%
DPS (RMB)	0.08	0.10	0.13	0.16	24%
Key ratios and operation items					
GPM	44.1%	45.1%	44.7%	43.5%	-0.6%
EBITDA margin	39.0%	46.5%	42.5%	41.1%	2.1%
EBIT margin	30.7%	36.4%	33.7%	33.1%	2.3%
NPM	21.4%	24.7%	25.1%	25.5%	4.1%
Core NPM	25.8%	27.8%	27.3%	27.1%	1.3%
Operating exp % of revenue	16.6%	14.7%	13.7%	12.7%	-3.9%
Effective tax rate	13.6%	16.5%	15.5%	14.5%	0.9%
Dividend payout	47.7%	48.0%	48.0%	48.0%	0.3%
Gross gearing ratio	117.9%	80.5%	73.0%	65.0%	-52.9%
No. of student enrolled	54,420	60,116	71,362	80,472	14%
Average pricing	21,049	22,319	23,131	24,421	5%

Source: Company data, HSBC estimates

Valuation

We use a discounted cash flow (DCF) methodology to value Wisdom as we believe this better captures its strong cash generating capabilities, the impact of capital expenditure and the long-term growth outlook. The key assumptions in our three-stage DCF model are as follows:

- Stage one – we use our explicit forecasts for FY21-22e.
- Stage two – we assume a FCFF CAGR of 10% over the medium term, lower than the growth in operating cash flow of 17% in FY22e, as we factor in the potential impact from adopting the "for-profit" school classification and the subsequent reduced growth opportunities. This is lower than the K-12 peer average (at 11%), reflecting concern over a high gearing ratio.
- Stage three – we assume a terminal growth rate of 2%.

Our 10% WACC assumption is based on a beta of 1.9x, a risk-free rate of 2.5%, and a market risk premium of 5%. We also assume that interest-bearing debt contributes 42% to the capital structure and a cost-of-debt of 8%. Overall, we derive a target price of HKD4.00, which implies a 12x PE and 0.6x PEG for FY21e. With 27% upside from current levels, we initiate coverage on the stock with a Buy rating.

Exhibit 190: Wisdom: DCF assumptions

	FY21e	FY22e	CAGR (medium-term)	Terminal growth
FCFF (RMBm)	444	503	10%	2%
WACC				10%
Enterprise value (RMBm)				8,559
Equity value (RMBm)				7,501
Total outstanding shares (m)				2,177
Implied fair value (HKD/share)				**4.0**
TP implied PE (FY21e)				12x
TP implied PEG (FY21e, over FY19-21e)				0.6x
TP implied dividend yield (FY21e)				4%
TP implied EV/EBITDA (FY21e)				8x

Source: HSBC estimates

We cross-check the implied PE against both Wisdom's own historical average and the average of its peers. We select listed private K-12 school operators in China, and we found that:

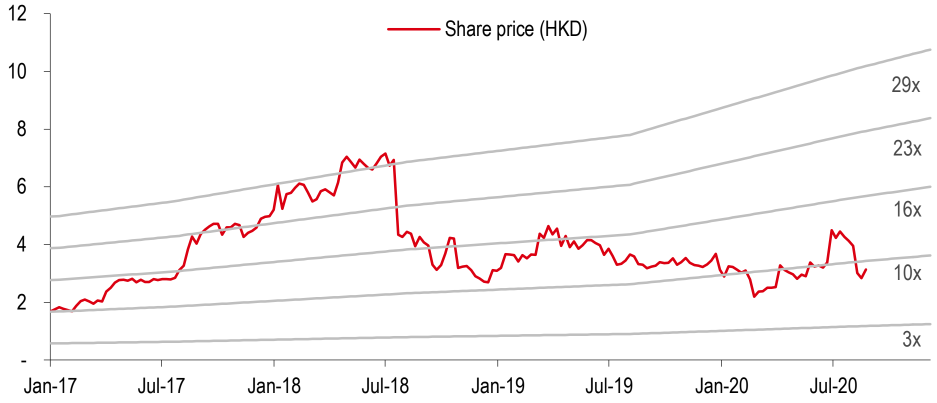
- The implied FY21e PE of 12x is largely in line with its historical average PE post the "8-10" event (of 13x), but at a discount to the 17x FY21e weighted average PE of its K-12 peers. We believe this discount is justified as it reflects investor's concerns about its high financial leverage and the policy uncertainties about school classification – Wisdom plans to choose a "not for profit" type for its schools.
- The implied FY21e PEG of 0.6x is lower than the weighted average FY21e PEG for its K-12 peers. We believe this is justified given: (1) its high gearing and uncertainties regarding its expansion into higher education and (2) the peer average was somewhat distorted by the data of Maple Leaf and Virscend.

All in all, trading only at 9x FY21e PE, we believe Wisdom's solid track record and growth outlook in K-12 is under-estimated by investors.

Key downside risks:

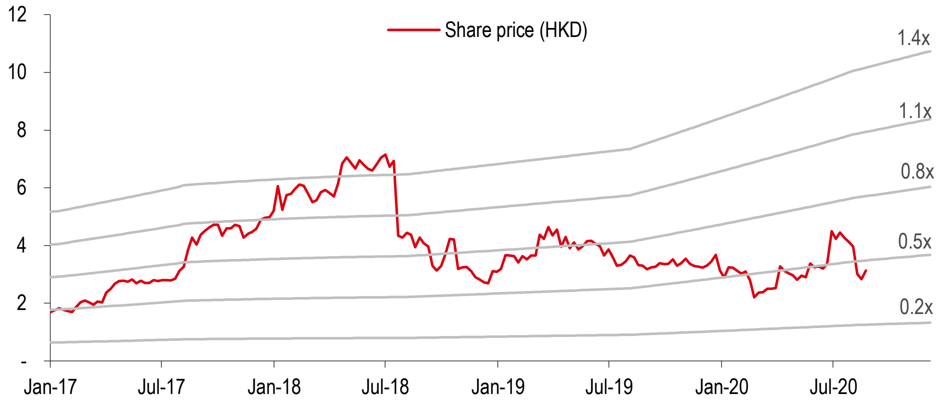
- Unfavourable policies regarding K-12 private school operators.
- Failure to maintain education quality, especially in new schools, would affect reputation.
- Delays in school network expansion, unsatisfactory utilisation, and slower tuition hikes.
- A higher-than-expected financial burden from its borrowings

Exhibit 191: Wisdom: 1-year forward PE-band chart, since listing



Source: Refinitiv Datastream, HSBC estimates

Exhibit 192: Wisdom: 1-year forward PEG band chart, since listing



Source: Refinitiv Datastream, HSBC estimates

Exhibit 193: Wisdom: Valuation comparison

Company	BBG Ticker	CMP (LC)	Mkt cap (USDm)	PE (x) FY19a	FY20e	FY21e	PEG (x) FY19a	FY20e	FY21e	Dividend yield (%) FY19a	FY20e	FY21e
Tianli	1773 HK	8.07	2,161	55.4	38.9	27.3	1.3	0.9	0.6	0.5	0.7	1.0
Maple Leaf	1317 HK	2.42	935	9.0	10.7	8.3	2.2	2.6	2.0	4.3	3.5	4.5
Wisdom	6068 HK	3.14	882	13.4	11.4	9.3	0.7	0.6	0.5	3.1	3.6	4.8
Bright Scholar	BEDU US	6.75	812	23.5	17.4	12.1	0.6	0.4	0.3	-	1.8	1.1
Virscend	1565 HK	2.40	957	16.3	15.8	13.1	1.4	1.4	1.1	3.4	3.4	3.4
Weighted avg.				**30.4**	**23.2**	**17.0**	**1.3**	**1.1**	**0.9**	**1.9**	**2.2**	**2.6**

Note: Priced as of 17 September 2020.
Source: HSBC estimates for Tianli, Maple Leaf, Wisdom, and Virscend, Bloomberg consensus for other stocks

Yuhua Education (6169 HK)

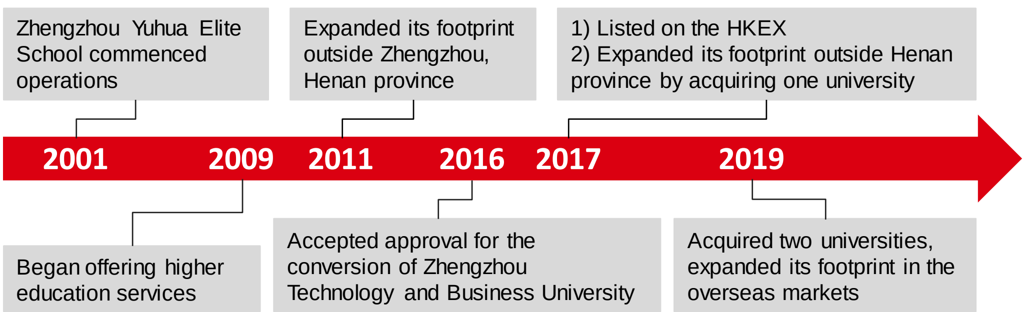
- Yuhua is a leading private school operator with a diverse portfolio and a rising weighting towards higher education in recent years
- We believe Yuhua needs to look for more M&A to drive its future growth and its solid balance sheet should support these initiatives
- Initiate at Buy with a target price of HKD8.50, implying a 20x FY21e PE and 0.9x FY21e PEG

Diverse school portfolio across educational stages

Yuhua Education is a leading private school operator that is headquartered in Zhengzhou, Henan. It has a diverse portfolio across different educational stages. The company currently operates 28 schools in China and one school in Thailand, including four universities and 25 K-12 schools. In 1HFY20, student enrolments exceeded 138,000 with around c75% of that coming from three major private universities in mainland China.

The history of Yuhua Education can be traced back to 2001 when the founder Mr. Li Guangyu established the first school, the Zhengzhou Yuhua Elite School. In 2005, the company expanded its business scope by establishing its first kindergarten and first primary school. In 2009, the company began to offer higher education services with the Henan Polytechnic University Wanfang College (later converted into a private university and renamed the Zhengzhou Technology and Business University). To further expand its business and geographical reach, in 2011, Yuhua established eight schools in the K-12 stage across three cities outside Zhengzhou. After its IPO in 2017, Yuhua expanded further through acquisitions – its student enrolments increased from around 51,000 to over 98,000 in FY17-19, implying a CAGR of 39%.

Exhibit 194: Yuhua: Key milestones of corporate development



Source: Company data, HSBC

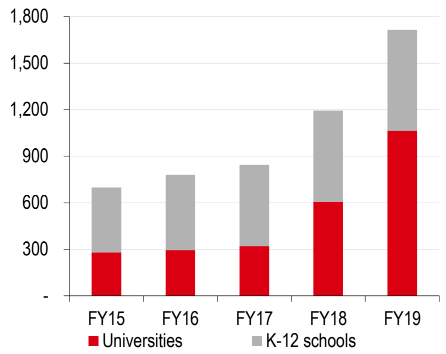
Snapshot of Yuhua Education (6169 HK)

Started in 2001, Yuhua Education is a leading private school operator headquartered in Zhengzhou, Henan Province. The company manages seven kindergartens, six primary schools, seven secondary schools, five high schools, and four universities located in Henan, Shandong, and Hunan provinces in mainland China, as well as in Bangkok. In 2020, total student enrolments exceeded 138,000. Zhengzhou Technology and Business University is the largest contributor to student enrolment (accounted for c25% in 2020) with computer science and business as its key majors. It was ranked No.7 by China University Alumni Association (CUAA) in 2020. Yuhua Education was listed on the main board of the HKEX on 28 February 2017. Mr. Li Guangyu is the largest shareholder with a c58% shareholding in the company.

Key senior management team includes:

- Mr. Li Guangyu, Chairman & Executive Director
- Ms. Li Hua, Vice Chairman, CEO & Executive Director
- Ms. Qiu Hongjun, Vice president & Executive Director
- Mr. Xu Bin, CFO & Joint Company Secretary

Revenue by segment (RMBm)



Source: Company data, HSBC

Forecasts and valuation

(RMBm)	FY19a	FY20e	FY21e	FY22e
Revenue	1,714	2,473	2,939	3,433
Adjusted EBITDA	1,045	1,385	1,646	1,960
Core net profit	793	1,014	1,236	1,480
Core EPS (RMB)	0.24	0.30	0.36	0.43
DPS (RMB)	0.12	0.15	0.19	0.22

- Our target price of HKD8.50 for Yuhua Education, is derived from a DCF approach and implies a 20x PE for FY21e

Source: Company data, HSBC estimates

Peer comparison

Company	BBG Ticker	PE (x) FY19a	FY20e	FY21e
CEG	839.HK	34.2	28.0	19.6
Hope Education	1765.HK	28.5	22.3	17.1
Kepei Education	1890.HK	24.3	17.8	15.0
New Higher Education	2001.HK	18.2	13.5	11.1
Edvantage Group	382.HK	19.7	18.0	14.0
Minsheng Education	1569.HK	11.9	9.4	8.0
Yuhua Education	6169.HK	24.8	20.0	16.4
Weighted avg		**26.7**	**21.4**	**16.3**

Note: Priced as of 17 September 2020
Source: HSBC estimates for CEG, Hope, Kepei and Yuhua, Bloomberg consensus for other stocks

Do you know?

- The company's fundamental education objectives are to foster modern talent with leadership and lifelong learning capabilities, and to nurture great minds to contribute to the future development of China ("培养具有领导才能和自主学习能力的现代化人才，为中华民族的伟大复兴贡献力量").
- Two of the company's in the university portfolio, Hunan International Economics University and Stamford International University, were both bought from Laureate – a US-listed education group.
- Established in 2002, Zhengzhou Technology and Business University, previously known as Henan Polytechnic University Wanfang College, was the first independent college that provided undergraduate degree programmes in Henan Province.

Key risks and challenges

- Slower-than-expected pace of M&A may fail to meet the high market expectations and impact the company's reputation.
- Poor integration of the newly-acquired schools may affect student enrolment growth and margin expansion.
- Worse-than-expected synergies amongst the K-12 schools may affect student retention and admissions.
- Worse-than-expected academic results (i.e. the college entrance exam) could affect high school reputations.
- Capacity expansion within the existing school portfolio (especially universities) may require large capex.

Financials & valuation: Yuhua Education

Buy

Financial statements

Year to	08/2019a	08/2020e	08/2021e	08/2022e
Profit & loss summary (RMBm)				
Revenue	1,714	2,473	2,939	3,433
Gross profit	1,000	1,440	1,727	2,040
Other income and gains	-211	-275	13	16
Operating expenses	-222	-317	-355	-387
Adjusted EBITDA	1,045	1,385	1,646	1,960
Depreciation & amortisation	-170	-221	-245	-279
Operating profit	567	849	1,386	1,669
Finance costs, net	-25	-45	-39	-49
PBT	542	804	1,347	1,619
Taxation, net	14	0	0	0
Reported net profit	485	699	1,221	1,468
Core net profit	793	1,014	1,236	1,480
Cash flow summary (RMBm)				
Cash flow from operations	1,250	1,676	1,720	1,814
Capex	-182	-455	-777	-702
Cash flow from investment	-1,728	-63	-873	-603
Dividend paid	-364	-451	-565	-691
Cash flow from financing	1,013	-1,315	335	432
Balance sheet summary (RMBm)				
PP&E	3,706	3,843	4,392	4,890
Intangible fixed assets	1,570	1,548	1,958	2,359
Cash & cash equivalents	2,751	2,717	3,898	5,541
Total assets	9,783	9,981	12,155	14,679
Contract liabilities	1,301	1,913	2,659	3,137
Interest-bearing debt	2,849	2,247	3,147	4,270
Net debt	98	-470	-751	-1,271
Shareholders' fund	3,661	3,937	4,619	5,423

Ratio, growth and per share analysis

Year to	08/2019a	08/2020e	08/2021e	08/2022e
Y-o-y % change				
Revenue	43.5	44.3	18.8	16.8
Gross profit	49.1	44.0	20.0	18.1
Adjusted EBITDA	33.9	32.5	18.9	19.1
Operating profit	-2.2	49.7	63.2	20.4
Reported net profit	-8.6	44.1	74.7	20.2
Core net profit	30.1	27.9	21.9	19.7
Core EPS	28.9	24.2	21.9	19.7
Ratios (%)				
ROE	22.2	26.7	28.9	29.5
ROA	10.0	10.3	11.2	11.0
Gross profit margin	58.3	58.2	58.8	59.4
Adjusted EBITDA margin	60.9	56.0	56.0	57.1
Operating profit margin	33.1	34.3	47.1	48.6
Core net profit margin	46.2	41.0	42.1	43.1
Gross gearing	68.8	49.7	60.9	69.7
Per share data (RMB)				
EPS	0.15	0.20	0.36	0.43
Core EPS	0.24	0.30	0.36	0.43
DPS	0.12	0.15	0.19	0.22
Book value	1.10	1.18	1.38	1.62

Key forecast drivers

Year to	08/2019a	08/2020e	08/2021e	08/2022e
No .of student enrolled	98,840	138,234	157,266	177,295
Average pricing*	17,913	18,565	19,399	20,023

*Represents average tuition and boarding fees per student

Valuation data

Year to	08/2019a	08/2020e	08/2021e	08/2022e
EV/EBITDA*	19.4	14.3	11.9	9.8
PE**	24.8	20.0	16.4	13.7
PEG	1.1	0.9	0.7	0.7
Dividend yield (%)	2.1	2.6	3.1	3.8

* Based on adjusted EBITDA; **based on HSBC EPS (diluted)

ESG metrics

Environmental Indicators	08/2019a
GHG emission intensity*	196
Energy intensity*	218
CO_2 reduction policy	Yes
33Social Indicators	**08/2019a**
Employee costs as % of revenues	28
Employee turnover (%)	9
Diversity policy	Yes

Governance Indicators	08/2020a
No. of board members	6
Average board tenure (years)	4
Female board members (%)	33
Board members independence (%)	50

Source: Company data, HSBC

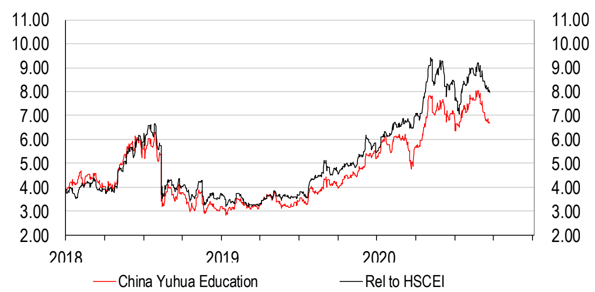
* GHG intensity and energy intensity are measured in kg and kWh respectively against revenue in USD '000s

Issuer information

Share price (HKD)	6.70
Target price (HKD)	8.50
RIC (Equity)	6169.HK
Bloomberg (Equity)	6169 HK
Market cap (USDm)	2,887

Free float	42%
Sector	Discovery Research
Country	China
Analyst	York Pun, CFA
Contact	+852 2822 4396

Price relative



Source: HSBC

Note: Priced at close of 17 Sep 2020

Business analysis

Yuhua Education's schools cover all areas from kindergartens to universities

Yuhua Education has a diverse business presence in China, operating 28 schools across three provinces, including Henan, Hunan and Shandong, as well as one university in Thailand. The schools cover all the educational stages.

Henan Province is the key business region with the largest student enrolment

Henan is the key business region and made up c90% of the school portfolio, and c50% of student enrolment in school year 2019/20. The company operated its first school, Zhengzhou Yuhua Elite School, in 2001 under the name "The Affiliated High School of Peking University, Henan Branch", which pays RMB1.3m per annum to Peking University for the use of the brand. Subsequently, the company established 16 schools across eight campuses using the same brand. However, in 2014, the company rebranded all of these schools under "Yuhua", and terminated the brand license with Peking University (for an aggregate fee of RMB12m). To further expand its business scope, Yuhua operated its first university – Henan Polytechnic University Wanfang College – in 2009 and initially paid 18% of its tuition income per annum to the associated public university; the cooperation agreement was terminated in 2015 and the school was then converted into a private university, which is now well known and called Zhengzhou Technology and Business University.

The contribution of the higher education segment has been increasing

In recent years, Yuhua has been shifting its business focus from K-12 schools to universities. After the establishment of Zhengzhou Technology and Business University, Yuhua acquired three more universities in 2017-19 for a total consideration of around RMB2.8bn, driving up student enrolment from around 24,000 to more than 106,000 in higher education (from school year 202014/15 to school year 2019/20). This drove up higher education's contribution to student enrolments from 52% to 77%. The contribution of higher education to core earnings increased from 45% to 63% (from FY16 to FY19). This, in our view, may reduce the policy risk which seems to be lower in higher education schools compared to K-12 schools.

Exhibit 195: Yuhua: Overview of the school portfolio

Type	Name	Region	Student enrolment*	% of student
University	Zhengzhou Technology and Business University	Henan, China	35,000	
	Hunan International Economics University	Hunan, China	33,000	
	Stamford International University	Bangkok, Thailand	4,692	
	Shandong Yingcai University	Shandong, China	34,000	
Sub total			**106,692**	**77%**
High schools	5 in Henan, mainland China	Henan, China	12,181	
Sub total			**12,181**	**9%**
Middle schools	7 in Henan, mainland China	Henan, China	N/A	
Primary schools	6 in Henan, mainland China	Henan, China	N/A	
Kindergartens	7 in Henan, mainland China	Henan, China	N/A	
Sub total			**19,361**	**14%**
Total			**138,234**	**100%**

Note: SY=School year. *As of SY19/20.
Source: Company data, HSBC

Exhibit 196: Yuhua: Summary of the school portfolio

Name	Region	Enrolment	Area*	Year of start with the group	Interests	Tuition fees	Ranking	Employment rate	Registration rate
University									
Zhengzhou Tech and Business University	Henan, China	35,000	>1.5m	Established in 2009	100%	Bachelor: RMB13,100-15,100 (SY16/17) Junior college: RMB8,900 (SY16/17)	7	95.3%	96%
Hunan Intl Economics University	Hunan, China	33,000	>950k	Acquired in 2018	70%	Bachelor: RMB22,000 (SY19/20) Junior college: RMB14,000 (SY19/20)	10	95.1%	96%
Stamford International University	Bangkok, Thailand	4,692	N/A	Acquired in 2019	100%	Bachelor: RMB17,000 (SY19/20) Junior college: RMB13,000 (SY19/20)	N/A	N/A	N/A
Shandong Yingcai University	Shandong, China	34,000	>1.2m	Acquired in 2020	90%	N/A	3	N/A	N/A
Sub total		**106,692**							
High school									
Zhengzhou YuHua Elite School	Henan, China	N/A	N/A	Established in 2001	100%	N/A	N/A	N/A	N/A
Jiaozuo YuHua Elite School	Henan, China	N/A	N/A	Established in 2011	100%	N/A	N/A	N/A	N/A
Luohe YuHua Elite School	Henan, China	N/A	N/A	Established in 2016	100%	N/A	N/A	N/A	N/A
Xuchang Yuhua Elite School	Henan, China	N/A	N/A	Established in 2017	100%	N/A	N/A	N/A	N/A
Kaifeng Yuhua Elite School	Henan, China	N/A	N/A	Acquired in 2018	100%	N/A	N/A	N/A	N/A
Sub total		**12,181**							
K-9 schools									
Middle school									
Zhengzhou YuHua Elite School	Henan, China	N/A	N/A	Established in 2001	100%	N/A	N/A	N/A	N/A
Xingyang YuHua Shengshi Elite School	Henan, China	N/A	N/A	Established in 2011	100%	N/A	N/A	N/A	N/A
Jiaozuo YuHua Elite School	Henan, China	N/A	N/A	Established in 2011	100%	N/A	N/A	N/A	N/A
Kaifeng YuHua Elite School	Henan, China	N/A	N/A	Established in 2012	100%	N/A	N/A	N/A	N/A
Luohe YuHua Elite School	Henan, China	N/A	N/A	Established in 2013	100%	N/A	N/A	N/A	N/A
Xuchang YuHua Elite School	Henan, China	N/A	N/A	Established in 2014	100%	N/A	N/A	N/A	N/A
Jiyuan YuHua Elite School	Henan, China	N/A	N/A	Established in 2014	100%	N/A	N/A	N/A	N/A
Primary school									
Zhengzhou YuHua Elite Primary School	Henan, China	N/A	N/A	Established in 2005	100%	N/A	N/A	N/A	N/A
Jiaozuo YuHua Elite School	Henan, China	N/A	N/A	Established in 2011	100%	N/A	N/A	N/A	N/A
Kaifeng YuHua Elite School	Henan, China	N/A	N/A	Established in 2012	100%	N/A	N/A	N/A	N/A
Luohe YuHua Elite School	Henan, China	N/A	N/A	Established in 2013	100%	N/A	N/A	N/A	N/A
Xuchang YuHua Elite School	Henan, China	N/A	N/A	Established in 2014	100%	N/A	N/A	N/A	N/A
Jiyuan YuHua Elite School	Henan, China	N/A	N/A	Established in 2014	100%	N/A	N/A	N/A	N/A
Kindergarten									
Zhengzhou YuHua Elite Bilingual Kindergarten	Henan, China	N/A	N/A	Established in 2005	100%	N/A	N/A	N/A	N/A
Xingyang YuHua Elite Kindergarten	Henan, China	N/A	N/A	Established in 2011	100%	N/A	N/A	N/A	N/A
Hebi Qibin District YuHua Elite Bilingual Kindergarten	Henan, China	N/A	N/A	Established in 2011	100%	N/A	N/A	N/A	N/A
Jiaozuo Urbanisation Pilot Zone YuHua Elite Kindergarten	Henan, China	N/A	N/A	Established in 2011	100%	N/A	N/A	N/A	N/A
Luohe YuHua Elite Bilingual Kindergarten	Henan, China	N/A	N/A	Established in 2013	100%	N/A	N/A	N/A	N/A
Xuchang Weidu District YuHua Elite Bilingual Kindergarten	Henan, China	N/A	N/A	Established in 2014	100%	N/A	N/A	N/A	N/A
Jiyuan YuHua Elite Bilingual Kindergarten	Henan, China	N/A	N/A	Established in 2014	100%	N/A	N/A	N/A	N/A
Sub total		**19,361**							
Total		**138,234**							

Note: SY=School year. *Unit: square meter; Note: Student enrolment is based on SY19/20; Rankings for the universities are based on the CUAA (China University Alumni Association) ranking in 2020; Enrolment figures are based on student enrolment of SY19/20; figures of registration rates and employment rates are based on figures as of 2019; Employment rate refers to the percentage of graduates who enter full-time employment contracts, were-self-employed or accepted an offer for graduate degree programmes before graduation; Registration rate refers to the percentage of the newly-registered student number to offer numbers of the same school year.
Source: Company data, HSBC

A high-quality school portfolio in higher education

All three private universities of Yuhua in China were ranked within the top 10 for private universities, according to the China University Alumni Association (CUAA) in 2020. This seems to reflect the schools' solid education quality and efficient management, as well as the sound graduate employment ratio, which supports student recruitment. The registration ratio (the number of students actually enrolled as a percentage to the total number of students who received the offers) reached c96% in both Zhengzhou Technology and Business University as well as the Hunan International Economics University in 2019, according to Yuhua itself. The high quality of education is also important for Yuhua in maintaining its competitive advantage in these provinces where the gross enrolment rates of higher education are above the national average.

Proven integration capability in the newly acquired universities

We believe Yuhua has demonstrated solid integration capability, given that both student enrolment and the average pricing at Hunan International Economics University grew following its acquisition (with 9% and 21% CAGR, respectively, in its undergraduate programmes); this has helped to deliver a nearly 100% profit CAGR in the school – despite coming from a low base – during the period. Moreover, Shandong Yingcai University registered a 6-8% and 8% growth in average pricing and student enrolment, respectively, after its consolidation in FY20. We believe this is probably attributable to enhanced student recruitment, cost savings from cost procurements, and more rigid cost controls. This demonstrates Yuhua's solid management capabilities.

Overseas expansion brings new opportunity

The acquisition of Stamford International University (in Bangkok) in 2019 for a consideration of RMB190m, in our view, will help to strengthen Yuhua's competitive position in the higher education industry in mainland China. We believe it provides opportunities for Yuhua's existing undergraduate students to access international teaching and overseas living experiences, which may then enhance their employment opportunities. This will also help to bolster the business benefit to Yuhua, as the tuition fees in overseas schools (including through the cooperation or exchange programmes) are markedly higher than in mainland China. Moreover, the school was ranked No. 4 in 2011-16 in Thailand's External Quality Assessment (from the company's disclosure), providing evidence that Yuhua focuses on high-quality schools.

Mixed experiences in the K-12 stage

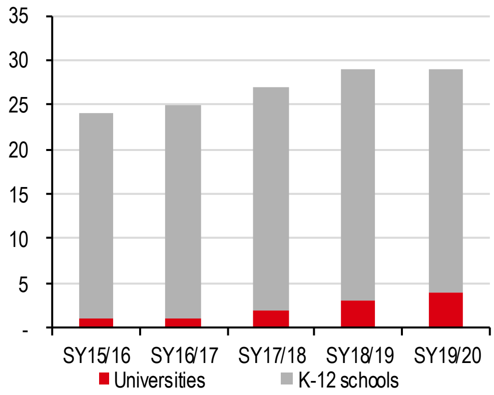
Still, there has been more of a mixed experience in Yuhua's K-12 schools. While the academic results of the Zhengzhou Yuhua Elite School (high school) has been strong – for one thing, the admission rate to first-tier universities (i.e., the 985 & 211 schools, see Annex) reached around 26% in school year 2017/18, far above the Henan Province average of 3%. In addition, we note the highest Gaokao scorer in Henan Province, in school year 2019/20, was a graduate from Jiaozuo Yuhua Elite High School and has been studying in Yuhua's schools since middle school.

However, despite the strong branding effect and the solid academic track record in the flagship schools, the number of student enrolments in its K9 schools dropped by c2% y-o-y in school year 2019/20 while growth in the high school segment was only 2%. This contrast with the universities performance and likely illustrates management's inclination towards the higher education segment.

Long-term growth depends on M&A opportunities

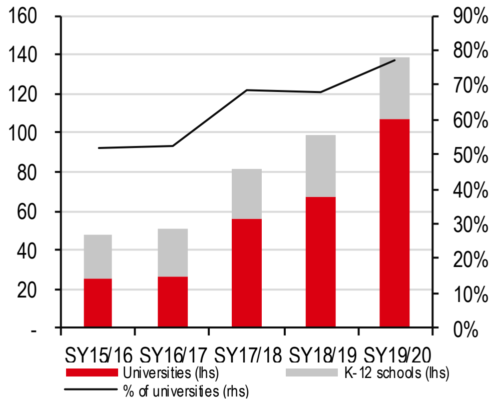
Over the near term, we believe consolidation of Shandong Yingcai will further bolster revenue growth of Yuhua in FY21e. Looking out further, as Yuhua steps into a "harvest period" there seems to be little room to further expand student numbers in its existing domestic universities (each with over 33,000 students). We believe Yuhua needs to more actively explore external acquisitions to fuel its growth. That being said, Yuhua's experience in acquiring the high school in 2018 also seems to suggest it is open-minded about consolidation opportunities in K-12 schools.

Exhibit 197: Yuhua: No. of schools grew amid the expansion in higher education



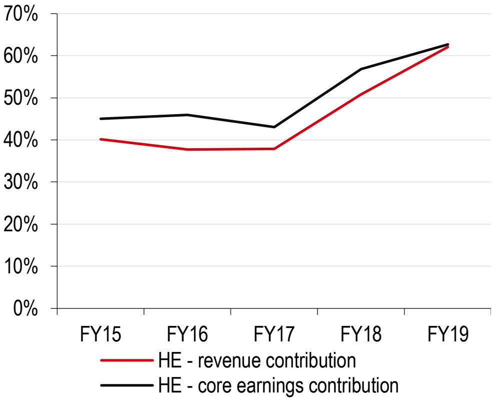
Note: SY=School year.
Source: Company data, HSBC

Exhibit 198: Yuhua: Student enrolment growth driven by universities ('000 persons)



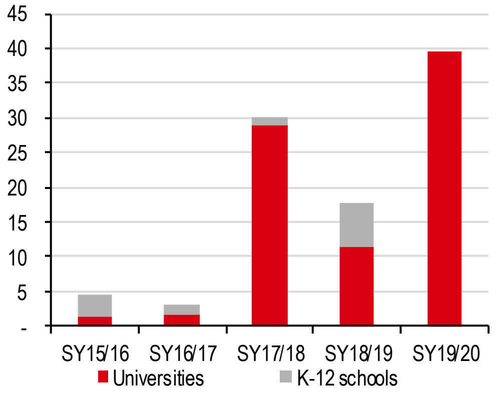
Note: SY=School year.
Source: Company data, HSBC

Exhibit 199: Yuhua: Revenue and core earnings contribution of universities



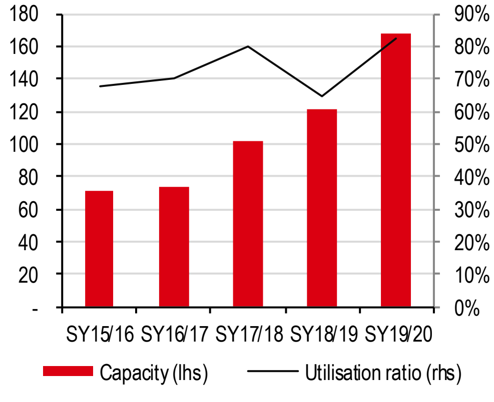
Source: Company data, HSBC

Exhibit 200: Yuhua: Growth in student enrolment by type ('000 persons)



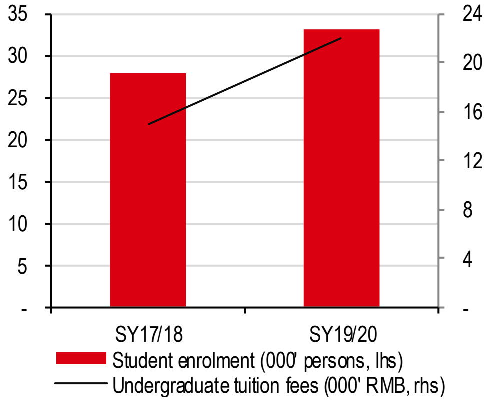
Note: SY=School year.
Source: Company data, HSBC

Exhibit 201: Yuhua: Total capacity ('000 person) and utilisation ratio



Note: SY=School year. Utilisation ratio declined significantly in SY18/19 largely due to the consolidation of Shandong Yingcai University, which had a lower capacity utilisation.
Source: Company data, HSBC

Exhibit 202: Yuhua: Solid growth of HIEU* after the acquisition



Note: *HIEU=Hunan International Economics University, (data in school year). SY=School year.
Source: Company data, HSBC

Financial analysis

Revenue and profit: The company registered a revenue CAGR of 42% in FY17-19, driven by both acquisition and organic growth. With faster cost increases, we estimate its core net profit grew more slowly at a CAGR of 36% during this period.

Costs and margins: Cost of sales (COS) registered a CAGR of 32% in FY17-19 with teaching staff costs the largest component and accounting for over half of COS in FY19; this is followed by depreciation and amortisation, which contributed c20% to COS in FY19.

Gross profit margin (GPM) rose steadily from 51% to 58% in FY17-19 and we believe the margin expansion was mainly due to the company's efforts in implementing efficient cost controls as well as efforts to improve the newly acquired schools.

Selling expenses registered 240% y-o-y growth in FY19 after 70% y-o-y growth in FY18, which was largely attributed to higher marketing expenses for student recruitment. Administrative expenses registered a 17% CAGR in FY17-19. Overall, the operating expenses (including selling, general and administrative expenses) to revenue ratio declined from 18% to 13% in FY17-19. In a nutshell, core net profit margin (NPM) declined from 51% to 46% in FY17-19, despite the GPM expansion.

Balance sheet: Over 80% of its assets comprised properties, leases, and cash in FY19. Note that Yuhua also has significant exposure to intangible assets (contributing over 15% of assets in FY19) due to the acquisitions. On the liability side, debt is the key component and accounted for around 50% of total liabilities in FY19, followed by contract liabilities (23% in FY19). Contract liabilities reflect tuition and boarding fees received from students, which will be amortised in the coming fiscal/school year, and was up 36% y-o-y in FY19.

Debts and gearing ratio: The interest-bearing debt (including convertible bonds) increased sharply to over RMB2.8bn in FY19 (from cRMB500m in FY18). The gross gearing ratio, calculated as total debt to total equity, increased to c70% in FY19 (from 14% in FY18), a relatively high level compared to its peers. Nevertheless, given its high cash level, the net debt level is considered small.

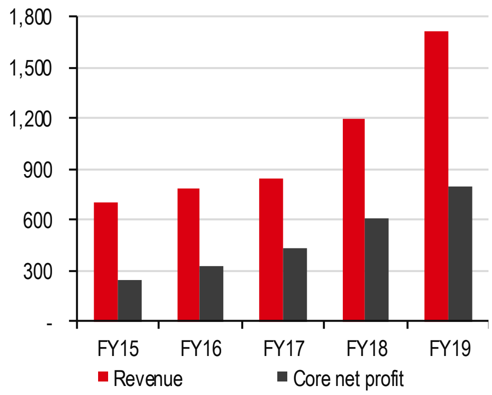
Cash flow: Yuhua had positive operating cash flow in FY17-19. It has recorded significant cash outflow in investments over FY17-19 comprising capital expenditure (cRMB330m), acquisitions (nearly RMB2.3bn), and financial investments (cRMB350m). This was funded by IPO proceeds and increased interest-bearing debt.
Dividends: Yuhua has maintained a stable dividend payout ratio (of c50% of its core earnings) over FY17-19.

Convertible bonds (CB): Yuhua has issued a number of CBs since its IPO, including:

- **Loan from the International Finance Corporation (IFC):** As part of the loan agreement that it entered in May 2018, Yuhua issued a convertible tranche with principal of USD25m to the IFC, which converted into c35m shares in February 2020.
- **Convertible bond due in 2020:** In January 2019, Yuhua issued another CB with a HKD940m principal amount due in 2020; a small portion of this was converted into shares and the remainder (of HKD928m) was repaid by the proceeds from a new CB (see below).
- **Convertible bond due in 2024:** In December 2019, Yuhua issued another CB with a principal amount of HKD2.088bn and an initial conversion price of nearly HKD7.1 plus an interest rate of 0.9%. We estimate Yuhua could issue around 300m new shares upon conversion, representing c8% of the enlarged shares. Also note that part of the proceeds from the CB were used to repay the remaining portion of the above-mentioned CB.

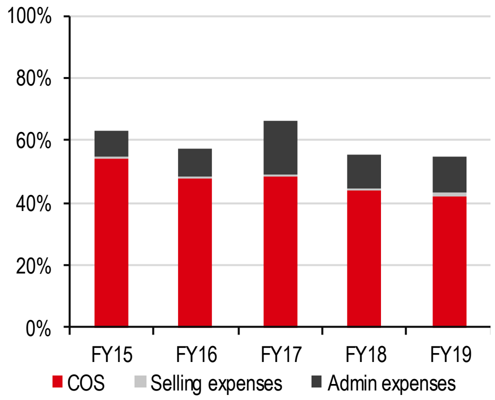
Given the large exposure of convertible bonds (c45% of total debt in FY19), the gains or losses from their revaluation could significantly affect Yuhua's reported profit; Yuhua recognised a loss of RMB250m on convertible bonds revaluation in FY19.

Exhibit 203: Yuhua: Revenue and core net profit (RMBm), FY15-19



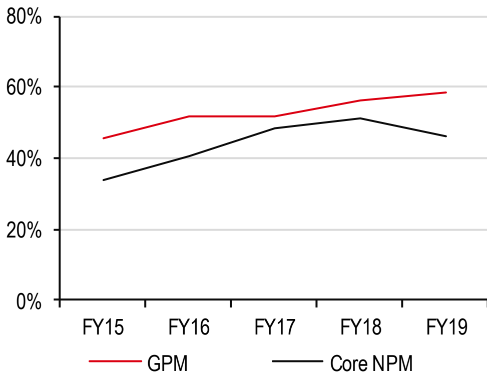
Source: Company data, HSBC

Exhibit 204: Yuhua: Operating costs as % of revenue, FY15-19



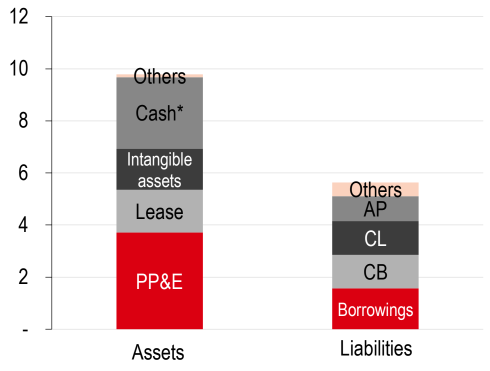
Source: Company data, HSBC

Exhibit 205: Yuhua: Margins, FY15-19



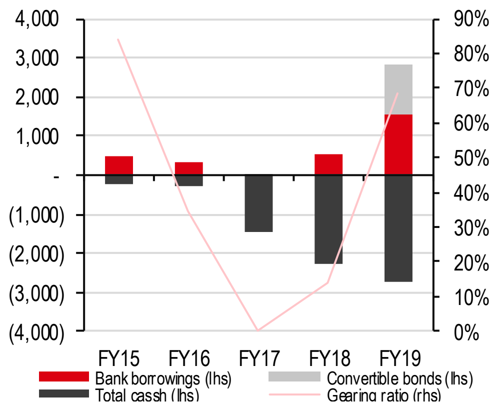
Source: Company data, HSBC

Exhibit 206: Yuhua: Balance sheet structure (RMBm), FY19



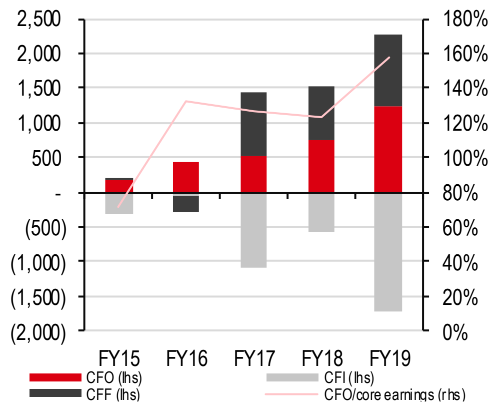
Note: *Include structured deposits. AP=Account payables, CL=Contracted liabilities, CB=Convertible bonds.
Source: Company data, HSBC

Exhibit 207: Yuhua: Debt structure (RMBm) and gearing ratio over FY15-19



Note: Gearing ratio is calculated as total interest-bearing debt to total equity.
Source: Company data, HSBC

Exhibit 208: Yuhua: Cash flow breakdown (RMBm), FY15-19



Source: Company data, HSBC

1HFY20 results

Yuhua recorded revenue growth of 57% y-o-y in 1H20, led mainly by the consolidation of Shandong Yingcai University (which contributed c80% of the growth, per our calculation). GPM edged up y-o-y to c58%, which, in our view, benefited from the implementation of cost control measures. SG&A expenses rose 55% y-o-y, in line with revenue growth. Core net profit was up at a slower rate of 45% y-o-y due to the higher finance cost. Meanwhile, gross gearing was down c13% h-o-h to c56%, due mainly to the significant decline in bank borrowings (while cash has also correspondingly declined). Yuhua declared an interim dividend of HKD0.082 per share, representing growth of 34% y-o-y.

Exhibit 209: Yuhua: Summary of financial results in 1HFY20 (RMBm, unless otherwise specified)

	1H19	2H19	1H20	y-o-y	h-o-h
Key income statement					
Revenue	801	913	1,260	57%	38%
-K-12 schools	331	319	350	6%	10%
-Universities	470	594	910	94%	53%
COS	(344)	(370)	(528)	53%	43%
Gross profit	457	543	732	60%	35%
Other income	17	7	14	-18%	107%
Other gains and losses, net	5	(239)	(457)	N/A	92%
Selling expenses	(10)	(12)	(36)	257%	188%
Administrative expenses	(92)	(108)	(123)	33%	13%
Operating profit	376	191	130	-65%	-32%
Finance costs, net	(17)	(8)	(50)	195%	491%
PBT	359	182	81	-78%	-56%
Taxation	5	9	4	-9%	-49%
PAT	364	191	85	-77%	-56%
-Net profit to shareholders	330	155	17	-95%	-89%
-Minority interests	34	37	68	102%	85%
Core net profit	340	452	495	45%	9%
EPS (RMB)	0.10	0.05	0.01	-95%	-89%
Core EPS (RMB)	0.11	0.14	0.15	41%	8%
DPS (HKD)	0.06	0.07	0.08	34%	12%
Key balance sheet					
PP&E	2,373	3,706	3,700	56%	0%
Cash and cash equivalents	2,559	2,751	1,868	-27%	-32%
Total assets	7,407	9,783	9,056	22%	-7%
Interest-bearing debts	1,481	2,849	2,330	57%	-18%
Contract liabilities	829	1,301	1,182	42%	-9%
Total liabilities	3,451	5,640	4,857	41%	-14%
Total equity	3,956	4,144	4,199	6%	1%
Key ratios and business driver					
GPM	57.0%	59.5%	58.1%	1.1ppt	-1.4ppt
Operating expenses to revenue	12.7%	13.2%	12.6%	-0.2ppt	-0.6ppt
OPM	46.9%	20.9%	10.3%	-36.6ppt	-10.6ppt
Core NPM	42.5%	49.5%	39.3%	-3.2ppt	-10.2ppt
Gross gearing	37.4%	68.8%	55.5%	18.1ppt	-13.2ppt
Net gearing	-27.2%	2.4%	11.0%	38.3ppt	8.7ppt
Student enrolment	98,840	138,234	138,234	40%	0%
Average pricing (RMB)	8,104	9,467	9,118	13%	-4%
No. of schools	29	29	29	0%	0%
-K-12 schools	26	25	25	-4%	0%
-Universities	3	4	4	33%	0%

Note: Our average pricing has adjusted for the student number affected by the M&A during the year.
Source: Company data, HSBC

Forecasts and valuation

Forecasts

We forecast the financial performance of Yuhua Education based on the following considerations:

- **Revenue:** We forecast 26% revenue CAGR for Yuhua in FY19-22e (comprising 22% student enrolment CAGR and 4% CAGR in average pricing), with the segments driven by:

University segment

  - **29% CAGR in student enrolments**: Driven by organic growth in its existing schools (c26% of increment), contribution from Shandong Yingcai University consolidation, which was mostly consolidated in FY20e (c43% of the increment) plus the impact of the newly acquired schools (c26% of increment) – for the latter, we have assumed one acquisition with 12,000 students for each of FY21e and FY22e; these acquisition assumptions have taken into account Yuhua's track record, its focus, as well as its funding capability.
  - **5% CAGR in average pricing** driven by the potential fee hike.

K-12 segment

  - **1% CAGR in student enrolments**, solely driven by organic growth.
  - **3% CAGR in average pricing**.

- **Margins:** We expect the GPM to increase by c1ppt during this period on the back of efficiency gains from existing and newly acquired schools. Nevertheless, we forecast its core NPM to drop c3ppt due to the lower profitability of newly acquired schools (notably Stamford in Thailand).

Overall, we forecast Yuhua's core net profit to grow at a CAGR of 23% during this period. Note we haven't assumed any potential impact from the conversion into "for-profit" schools.

Exhibit 210: Yuhua: Summary of financial forecasts (RMBm, unless otherwise specified)

	FY19a	FY20e	FY21e	FY22e	CAGR (FY19-22e)
Key income statement					
Revenue	1,714	2,473	2,939	3,433	26%
-Universities	1,064	1,824	2,226	2,692	36%
-K-12 schools	650	650	713	741	4%
COS	(715)	(1,034)	(1,211)	(1,394)	25%
Gross profit	1,000	1,440	1,727	2,040	27%
Operating expenses	(222)	(317)	(355)	(387)	20%
Operating profit	567	849	1,386	1,669	43%
Adjusted EBITDA	1,045	1,385	1,646	1,960	23%
Finance costs, net	(25)	(45)	(39)	(50)	25%
Taxation	14	-	-	-	N/A
Core net profit	793	1,014	1,236	1,480	23%
Core EPS (RMB)	0.24	0.30	0.36	0.43	22%
DPS (RMB)	0.12	0.15	0.19	0.22	22%
Key ratios and items					
GPM	58.3%	58.2%	58.8%	59.4%	1.1%
Operating expenses to revenue	13.0%	12.8%	12.1%	11.3%	-1.7%
Adjusted EBITDA margin	60.9%	56.0%	56.0%	57.1%	-3.9%
Core NPM	46.2%	41.0%	42.1%	43.1%	-3.1%
Gross gearing	68.8%	49.7%	60.9%	69.7%	1.0%
Student enrolment	98,840	138,234	157,266	177,295	22%
Average pricing per student (RMB)	17,913	18,565	19,399	20,023	4%

Source: Company data, HSBC estimates

Valuation

We use a discounted cash flow (DCF) methodology to value Yuhua Education as we believe this better captures its strong cash generating capabilities and long-term growth outlook. The key assumptions in our three-stage DCF model are as follows:

- Stage one – we use our explicit forecasts for FY21-22e.
- Stage two – we assume a FCFF CAGR of 8% over the medium term, lower than the growth in operating cash flow of 19% in FY22e, as we factor in the potential impact of adopting the "for-profit" school classification and the subsequent reduced growth opportunities. This is lower than its peer average of the higher educational players (at 10%), in view of its low growth rate in its K-12 segment.
- Stage three – we assume a terminal growth rate of 2%.

Our 11.2% cost of equity assumption is based on a beta of 1.7x, a risk-free rate of 2.5%, and a market risk premium of 5%. We also assume that interest-bearing debt contributes 30% to the capital structure over the long term, bearing an interest rate of 4%. Together, we derive a WACC of 8.7%. Overall, we derive a target price of HKD8.50 per share, which implies a 20x FY21e PE. With 27% upside from current levels, we initiate coverage on the stock with a Buy rating.

Exhibit 211: Yuhua: DCF assumptions

	FY21e	FY22e	CAGR (medium-term)	Terminal
FCFF (RMBm)	943	1,112	8%	2%
WACC				8.7%
Enterprise value (RMBm)				24,076
Equity value (RMBm)				24,279
Implied fair value (HKD/share)				**8.5**
TP implied PE (FY21e)				20x
TP implied PEG (FY21e, over FY19-21e)				0.9x
TP implied dividend yield (FY21e)				2.5%
TP implied EV/EBITDA (FY21e)				15x

Source: HSBC estimates

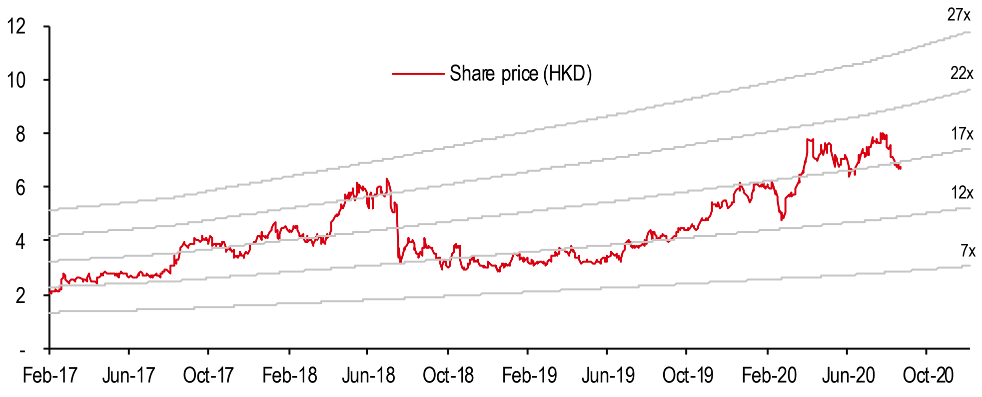
Meanwhile, we cross-check the implied PE against both Yuhua's historical average and its peers, and found that:

- The implied FY21e PE ratio of Yuhua is higher than its historical average, which, in our view, is justified by the company's solid M&A track record and the strong higher education school portfolio, as well as the strong integration capability. It is, however, lower than the implied average PE of its peers, reflecting a lower profit growth forecast.
- Yuhua's FY21e implied PEG multiple is in line with the average of its peers. This, in our view, is justified given its slower M&A track record (vs. CEG and Hope, in particular) and hence a lower potential growth rate over the medium term.

Key downside risks:

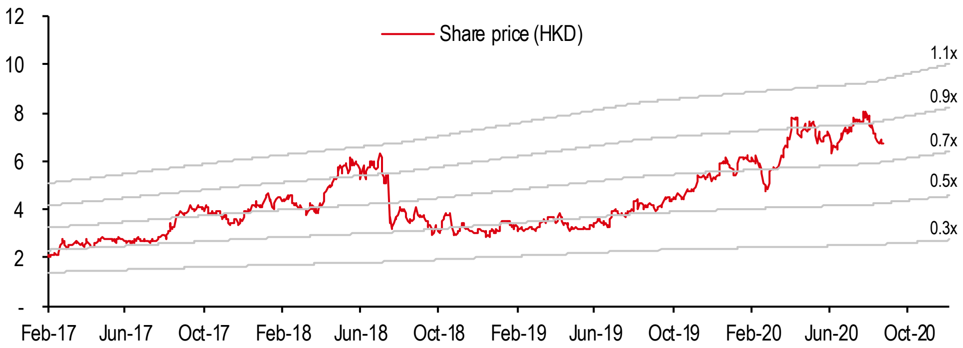
- Slower-than-expected pace of M&A may fail to meet the high market expectations and affect the company's reputation.
- Worse-than-expected integration of the newly-acquired schools may affect student enrolment and margin performance.
- Inadequate management of K-12 schools may affect student admissions and pricing.
- Worse-than-expected academic results (i.e., the college entrance exam) could affect the high schools' reputation and the financial performance.

Exhibit 212: Yuhua: 1-year forward PE band chart since listing



Source: Bloomberg, HSBC estimates

Exhibit 213: Yuhua: 1-year forward PEG band chart since listing



Source: Bloomberg, HSBC estimates

Exhibit 214: Yuhua: Valuation comparison

Company	BBG ticker	Price cur	Mkt cap USDm	PE (x) FY19a	PE (x) FY20e	PE (x) FY21e	PB (x) FY19a	PB (x) FY20e	PB (x) FY21e	Yield (%) FY19a	Yield (%) FY20e	Yield (%) FY21e	PEG (x) FY19a	PEG (x) FY20e	PEG (x) FY21e
CEG	839 HK	HKD	3,950	34.2	28.0	19.6	3.8	3.1	2.8	0.9	1.7	2.6	1.1	0.9	0.6
Hope	1765 HK	HKD	2,238	28.5	22.3	17.1	3.1	2.6	2.4	1.3	1.7	2.3	1.0	0.8	0.6
Kepei	1890 HK	HKD	1,638	24.3	17.8	15.0	4.0	3.4	3.0	1.6	2.2	2.6	0.9	0.7	0.6
NHE	2001 HK	HKD	1,068	18.2	13.5	11.1	3.0	2.4	2.1	1.4	2.1	2.5	0.7	0.5	0.4
Edvantage	382 HK	HKD	791	19.7	18.0	14.0	3.5	2.9	2.4	0.0	1.8	2.3	1.1	1.0	0.8
Minsheng	1569 HK	HKD	626	11.9	9.4	8.0	1.1	1.0	0.9	2.6	3.1	4.0	0.5	0.4	0.4
Yuhua	6169 HK	HKD	2,887	24.8	20.0	16.4	5.4	5.0	4.3	2.1	2.6	3.1	1.1	0.9	0.7
Weighted avg.				**26.7**	**21.4**	**16.3**	**3.9**	**3.3**	**2.9**	**1.4**	**2.1**	**2.7**	**1.0**	**0.8**	**0.6**

Note: HSBC estimates for CEG, Hope, Kepei and Yuhua, Bloomberg consensus for other stocks. Priced as of 17 September 2020.
Source: Bloomberg, HSBC

Appendix 1: Fee adjustments

- Tuition fees and boarding fees – despite being a key business driver and on an upward trajectory – showed no general pattern
- We see greater flexibility for higher education schools than K-12, and stronger pricing power in degree programmes than junior colleges
- The adjustment differs from one school operator to another; we provide some specific discussions on each school operator here

Flexible fees in some areas, less so in others

Tuition fees and boarding fees are the biggest revenue contributors to school operators. They are a function of student enrolment numbers and average pricing. The latter, despite also being on an upward trajectory in general, varies significantly between different schools, different educational stages, and different operators.

From a broad-based perspective, pricing is closely supervised by the local education bureaus and any adjustment (normally upward) must be endorsed by them. It is widely believed that flexibility in price-setting will be enhanced after the Implementation Regulations of Private Education Promotion Law, especially the "for-profit" schools – but this has not been confirmed.

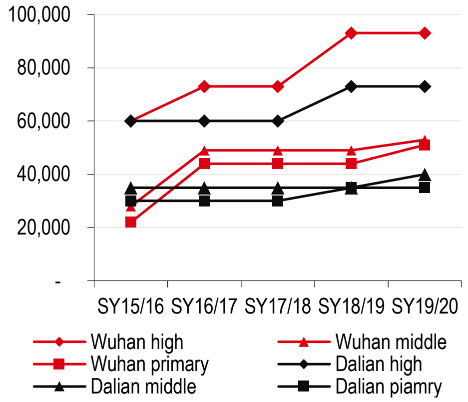
We have summarised and discussed the trends for each school operator in the following pages. We also make some high-level observations:

- The flexibility in fee adjustments seems to vary from one region to another, perhaps reflecting the attitude of the local education bureau, which itself is influenced by the availability of education resources in the region.
- The market dynamics also matter – for schools with substantial and/or frequent fee adjustments, they normally also have good growth records in student enrolments. Retrospectively, the extent of fee adjustments may also be referred to as an indication of the education quality and – for higher education schools – employment prospects.
- While there are exceptions, we note that higher education schools have generally seen more routine and bigger fee adjustments than K-12 schools. This probably reveals where the regulator's concerns are as they need to ensure the compulsory education stage remains affordable to match demand.
- Within higher education institutions, degree-programmes in the universities generally have greater price-setting power than junior colleges, probably reflecting differences around demand-supply dynamics.
- It appears less common for secondary vocational educational schools to adjust their fees, at least based on the observations of our sample schools.
- Fee adjustments seem more common for newly acquired schools, than existing ones.

Maple Leaf

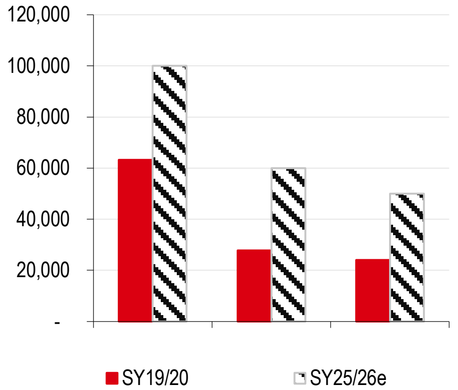
Some of its key and established schools, such as Wuhan and Dalian, have seen prices rising substantially in recent years. They have raised the pricing once or twice over the past five years, usually around the mid-teens percentage each time. Nevertheless, the group's average pricing, represented by the average pricing per student, has declined since FY17, due to the lower pricing in the newly acquired schools and the changing student structure. Moreover, Maple Leaf has set an aggressive plan to raise its tuition fees in high schools, middle schools, and primary schools to RMB100,000/school year, RMB60,000/school year, and RMB50,000/school year in school year 2025/26e, implying a CAGR of 8-14% over the next six years, on our estimates.

Exhibit 215: Maple Leaf: Pricing for selected schools has continued to rise (RMB)



Note: SY=School year.
Source: Company data, HSBC

Exhibit 216: Maple Leaf: Pricing by student grade plans to exceed sharply (RMB)

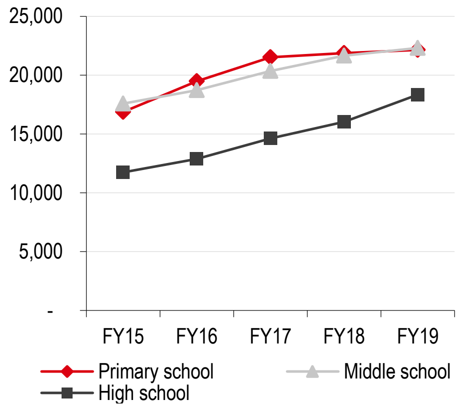


Note: SY=School year.
Source: Company data, HSBC

Tianli

While there doesn't seem to be a fixed pattern, the average pricing of Tianli has continued to rise. In FY15-FY19, the average pricing across the different segments rose by a CAGR of 6-22%. This, in our view, is mainly driven by some new schools – which seem to set higher pricing than existing schools – and fee hikes in some existing schools. As shown in Exhibit 218, Tianli's schools in Guangyuan, Luzhou, and Yibin raised tuition fees by 9-14% in school year 2017/18 and 2018/19.

Exhibit 217: Tianli: Pricing has continued to rise in recent years (RMB)



Source: Company data, HSBC

Exhibit 218: Tianli: Tuition fee hike in selected schools, in SY17/18-SY18/19

		High school	Middle school	Primary school
Luzhou	SY17/18	+14%	+10%	+9%
	SY18/19			+4%
Yibin	SY17/18	+10%	+10%	
	SY18/19			
Guangyuan	SY17/18			
	SY18/19	+14%		

Note: SY=School year.
Source: Company data, HSBC

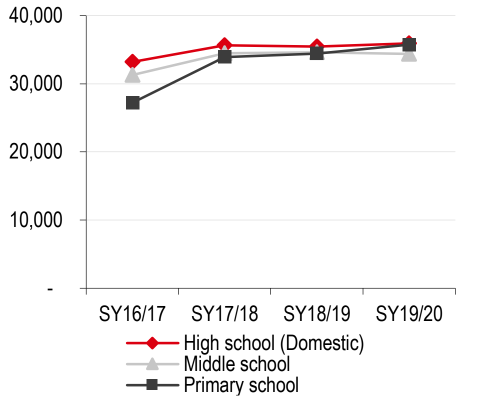
Before 2015, degree-granting private schools in Chengdu could only charge tuition at approved prices…

…but in July 2015 Chengdu's government enabled private school operators to charge tuition at up to 1.2x of approved prices

Virscend

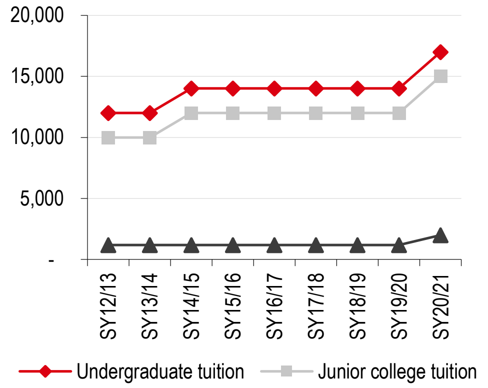
Virscend has a relatively high tuition fee rate amongst our coverage, probably reflecting the concentration of its schools in Chengdu, the capital city of Sichuan Province, and its solid academic results. That being said, its average pricing in K-12 has remained steady in recent years and its three flagship K-12 schools have not raised fees since school year 2015/16. Similarly, the average pricing of its Chengdu Institute remained unchanged between school year 2014/15 and school year 2019/20, but has announced a raise in the coming school year (i.e., school year 2020/21, when the new Yibin campus comes into operation).

Exhibit 219: Virscend: Average pricing has been flat in recent years (RMB)



Note: SY=School year. SY19 stands for SY19/20.
Source: Company data, HSBC

Exhibit 220: Chengdu Institute: Tuition and boarding fees (RMB), SY11/12-SY20/21



Note: SY=School year. SY19 stands for SY19/20.
Source: Company website, HSBC

Wisdom

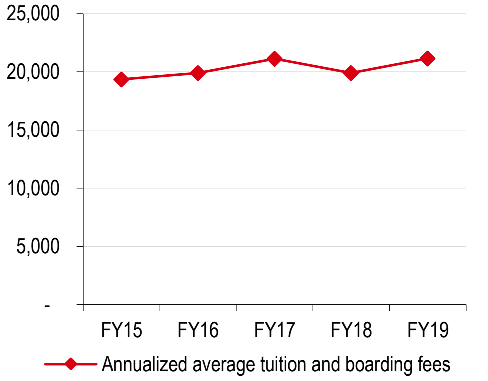
Wisdom's schools in Guangdong Province have enjoyed sustained and significant fee rises in the past and this, in our view, probably reflects the more flexible attitude of the local education bureau and the solid academic achievements of Wisdom. Wisdom recently announced a fee hike of 9-38% for some of its schools in school year 2020/21e. That being said, the sustained fee rise in some schools has not translated to an increase in average pricing, which has been volatile between FY17 and FY19 – we believe this is attributable to the lower fees in some of its newly acquired schools.

Exhibit 221: Wisdom: Steady and sharp tuition fee hikes in some of its schools

		High school	Middle school	Primary school
Dongguan Guangming	SY18/19	+20%	+20%	+28%
	SY19/20	+19%		
Dongguan Guangzheng	SY18/19	+18%	+21%	+23%
	SY19/20	+42%		
Huizhou Guangzheng	SY18/19	+13%		
	SY19/20	+2%		
Jieyang Guangzheng	SY18/19	+23%	+5%	+4%
	SY19/20	+31%	+32%	+29%
Weifang Guangzheng	SY18/19	+8%	+7%	+10%
	SY19/20	+24%	+22%	+16%

Note: SY=School year.
Source: Company data, HSBC

Exhibit 222: Wisdom: Average pricing (RMB), FY16-FY19

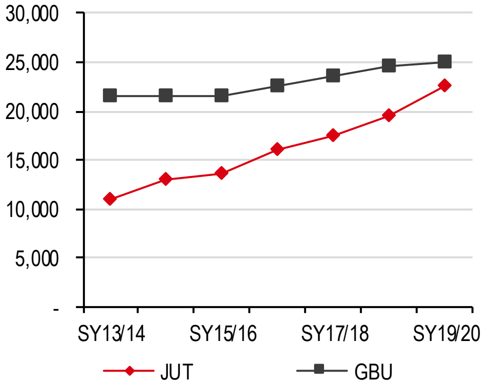


Source: Company data, HSBC

China Education (CEG)

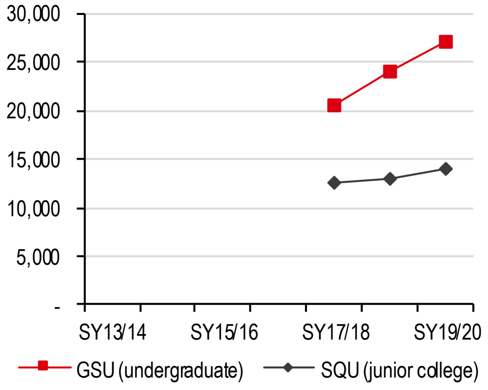
CEG's schools have registered constant price hikes in the past. In particular, we look at the longer track record of its two self-established universities and note that Jiangxi University of Technology registered a 13% CAGR in tuition fees over the past six school years, outpacing the 3% CAGR in Guangdong Baiyun University. The lower magnitude of fee hikes (and less frequent price adjustments too) of the latter perhaps reflects its already high pricing vs. peers. Meanwhile, the newly acquired schools have seen regular price hikes with both Guangzhou University Songtian College (undergraduate programmes) and University of Jinan Quancheng College (junior college programmes) registering a double-digital CAGR in tuition fees after being acquired.

Exhibit 223: CEG: Tuition fee trends for JUT and GBU (undergraduate programmes, RMB)



Note: JUT=Jiangxi University of Technology, GBU=Guangdong Baiyun University. SY=School year. Source: Company data, HSBC

Exhibit 224: CEG: Tuition fee trends of GSU and SQU (RMB)

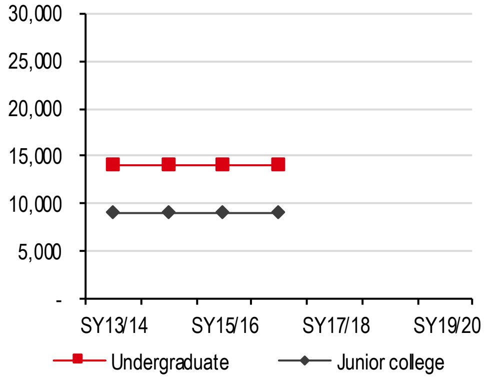


Note: GSU=Guangzhou University Songtian College; SQU=University of Jinan. Quancheng College. SY=School year.
Source: Company data, HSBC

Yuhua

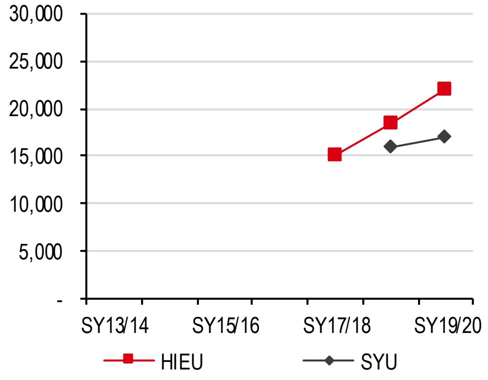
Our analysis of Yuhua is limited by its disclosures. Nevertheless, based on the information available, its schools have seen diverse pricing trends. Its self-established school – Zhengzhou Technology and Business University – did not adjust its pricing between school year 2013/14 and school year 2016/17; conversely, the two newly acquired schools have registered fee hikes after being acquired, though by different magnitudes.

Exhibit 225: Yuhua: Tuition fee trends of ZTBU (RMB)



Note: SY=School year. ZTBU=Zhengzhou Technology and Business University.
Source: Company data, HSBC

Exhibit 226: Yuhua: Tuition fee trends of HIEU and SYU (undergraduate, RMB)

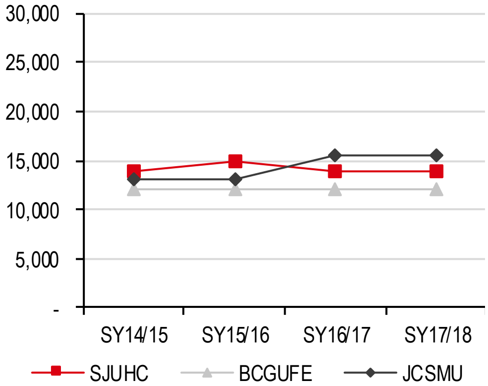


Note: SY=School year. HIEU Hunan International Economics University; SYU=Shandong Yingcai University.
Source: Company data, HSBC

Hope

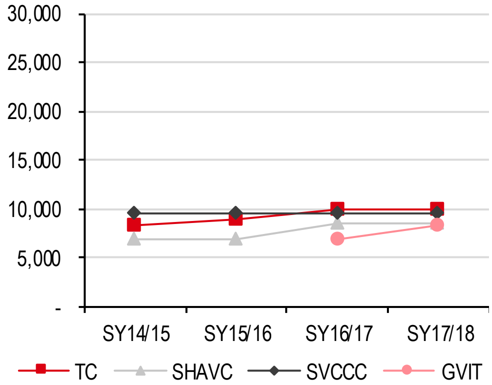
Given Hope Education has only disclosed tuition fees for its schools prior to its IPO in 2018, our analysis is limited. Nevertheless, based on the information disclosed, we understand that fee adjustments have been limited in the past. Moreover, unsurprisingly, the undergraduate degree programmes generally have higher pricing than junior college programmes. The fee hikes could partly reflect the schools' rising operating costs and facility improvements.

Exhibit 227: Hope: Tuition fee trends of undergraduate programmes (RMB)



Note: SJUHC=Southwest Jiaotong University Hope College; BCGUFE=Business College of Guizhou University of Finance & Economics; JCSMU=Shanxi Medical University Jinci College. SY=School year.
Source: Company data, HSBC

Exhibit 228: Hope: Tuition fee trends of junior college programmes (RMB)

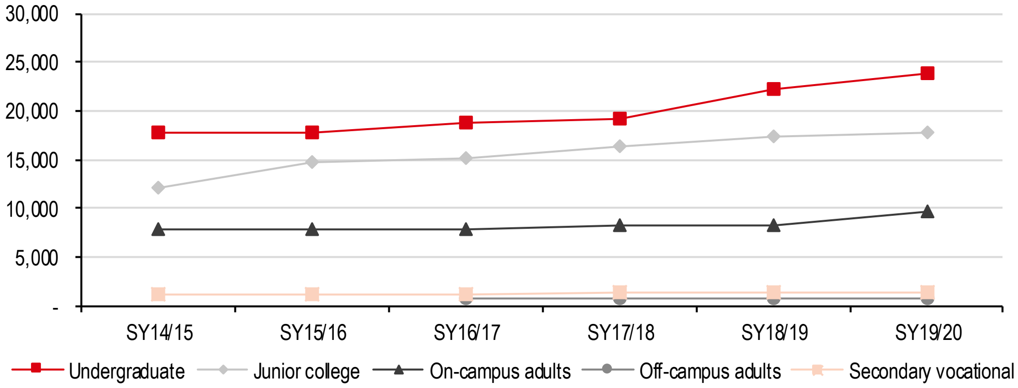


Note: TC=Tianyi College; SHAVC=Sichuan Hope Automotive Vocational College; SVCCC=Sichuan Vocational College of Culture & Communication; GVIT=Guizhou Vocational Institute of Technology. SY=School year.
Source: Company data, HSBC

Kepei

Kepei has been raising tuition fees for both undergraduate and junior college programmes regularly over the past few years, although this is probably attributable to the upgrades to its university. Still, even after the adjustments, the tuition fee at Guangdong Polytechnic College was still lower than that of Guangdong Baiyun University, in school year 2019/20.

Exhibit 229: Kepei: Tuition fee trends by programme (RMB)



Note: SY=School year.
Source: Company data, HSBC

Appendix 2: Chronicle of key corporate developments

Exhibit 230: Chronicle of key corporate development

Date	Company	Event
Sep-95	Maple Leaf	Established the Dalian Maple Leaf High School
Mar-99	CEG	Guangdong Baiyun University obtained approval for its establishment as a higher vocational college
Jul-99	CEG	Jiangxi University of Technology obtained approval for its establishment as a higher vocational college
Sep-00	Virscend	Chengdu Foreign Languages School was reformed from public school to public support private school
Sep-00	Kepei	Established the Zhaoqing School
Sep-01	Maple Leaf	Established the first elementary school and foreign national school in Dalian
Sep-01	Yuhua	The first school began operation under the name “the Affiliated High School of Peking University, Henan Branch” which was terminated in 2014
Jan-02	Tianli	Established the first school named Luzhou Tianli School
Sep-02	Virscend	Chengdu Experimental Foreign Languages School was reformed to public support private school
May-03	Virscend	Established the first primary school named Primary School Attached to CFLS
Jun-03	Virscend	Chengdu Experimental Foreign Languages School (Western Campus) was established
Aug-03	Wisdom	Established the Dongguan Guangming School
Sep-03	Maple Leaf	Established the first Maple Leaf Middle School in Dalian
Apr-04	Wisdom	Established the Dongguan Guangming Primary School
Sep-04	Virscend	Entered into higher education by co-sponsoring Chengdu Institute
Sep-04	Maple Leaf	Established the first Maple Leaf Pre-School, marking the start of a full K-12 coverage
Sep-05	Kepei	Established the Guangdong Polytechnic College (changed to an undergraduate institution in 2014)
Sep-05	Yuhua	The first primary and kindergarten began operation
Jul-07	Virscend	Established the first kindergarten named Chengdu Foreign Languages Kindergarten
Sep-07	Maple Leaf	Expanded business footprint to Wuhan
Jul-09	Hope	Established the first university named Southwest Jiaotong University Hope College
Sep-09	Yuhua	Wanfang College started operation, marking complete K-12 coverage and higher education
Sep-09	Tianli	Established its first self-owned primary school, Luzhou Longmatan Tianli Elementary School
Sep-10	Tianli	Established the first tutorial centre, Luzhou Longmatan District Tianli Culture and Arts Tutoring School
Sep-11	Hope	Completed the company’s first acquisition, named Sichuan Tianyi College
Jun-13	Hope	Established the first vocational college named Sichuan Hope Automotive Vocational College
Jul-13	Wisdom	Acquired the Dongguan Guangzheng Preparatory School
Sep-13	Tianli	Established the first school outside Luzhou named Yibin Cuiping District Tianli School
Sep-13	Tianli	Established the first kindergarten named Affiliated Kindergarten of Luzhou Tianli School
Apr-14	Hope	Expanded outside Sichuan Province by acquiring the Business College of Guizhou University of Finance and Economics
Aug-14	Wisdom	Expanded to Liaoning by establishing Panjin Guangzheng Preparatory School
Nov-14	Maple Leaf	Listed on the main board of Hong Kong Exchange
Jan-16	Virscend	Listed on the main board of the Hong Kong Stock Exchange
Jul-16	Hope	Established the first technician college named Sichuan Hope Automotive Technical College
Sep-16	Maple Leaf	Established its first overseas school Maple Leaf School – TRU in Canada
Jan-17	Wisdom	Listed on the main board of Hong Kong Exchange
Feb-17	Yuhua	Listed on the main board of Hong Kong Exchange
Aug-17	CEG	Acquired Baiyun Technician College
Sep-17	Virscend	Virscend University commenced its first school year in the US, marking its overseas expansion
Dec-17	CEG	Listed on the main board of the Hong Kong Exchange
Dec-17	Yuhua	Expanded to Henan by acquiring Hunan International Economics University
Jul-18	Tianli	Listed on the main board of Hong Kong Exchange
Aug-18	Hope	Listed on the main board of Hong Kong Exchange
Sep-18	Tianli	Expanded the business scope outside Sichuan by establishing the Ulanqab Tianli School
Feb-19	Yuhua	Expanded overseas by acquiring Stamford International University
Sep-19	CEG	Expanded overseas by acquiring Australian Institute of Business and Management Pty Ltd
Mar-20	Hope	Entered into an agreement to acquire the Inti Group, marking the first overseas expansion
Jun-20	Maple Leaf	Acquired Canadian International School in Singapore

Source: Company data, HSBC

Appendix 3: M&A summary

Exhibit 231: Summary of education M&A of our coverage

Date of initial announcement	Acquirer	Target school	Consideration (RMBm)	Implied PE (x)	Implied price per student (RMB)
Feb-17	Maple Leaf	100% of Hainan National Science Park Experimental School	142	13.5	44,243
Jun-17	Wisdom	70% of Huanan Shida Yuedong Preparatory School	224	44.9	100,000
Aug-17	CEG	100% of Guangzhou Baiyun Senior Technical School of Business and Technology	750	NA	55,424
Nov-17	Tian Li	100% of Chengdu Wuhou District Kinderworld Kindergarten	15	NA	69,611
Dec-17	Hope	100% of Sichuan TOP IT Vocational Institute	1,000	NA	79,643
Dec-17	Maple Leaf	55% of Shenzhen Yisidun Longgang School	89	NA	NA
Dec-17	Yuhua	70% of Hunan International Economics University, Hunan Lie Ying Mechanic School	1,165	18.4	57,389
Jan-18	Maple Leaf	100% of 4 schools and a youth service center in Hainan	145	NA	44,479
Aug-19	Hope	100% of Yinchuan University of Energy, 2 schools, a training center, an auto repair factory and a car driving training center	956	31.8	63,043
Mar-18	CEG	62% of Xi'an Railway Technician Institute	577	NA	46,500
Mar-18	CEG	100% of Zhengzhou Urban Railway Transit School	1,093	28.4	43,807
Apr-18	Wisdom	100% of Weifang Weizhou Foreign Language School	111	NA	54,146
Apr-18	Yuhua	70% of Kaifeng City Xiangfu District Bowang High School	107	12.8	38,250
Jun-18	CEG	100% of Guangzhou University Songtian College, Guangzhou Songtian Polytechnic College	538	7.3	44,825
Aug-18	Maple Leaf	100% of 7 kindergartens in Xiangyang	130	NA	94,072
Nov-18	Wisdom	100% of Zhang Pu Longcheng School, Zhang Pu Longcheng Primary School	183	NA	63,103
Dec-18	Maple Leaf	75% of Luzhou No. 7 Jiade International School	178	13.6	74,193
Jan-19	CEG	100% of University of Jinan Quancheng College	455	NA	53,289
Feb-19	Yuhua	100% of Stamford International University	190	NA	47,379
Mar-19	Hope	100% of The College of Science and Technology of Guizhou University	148	9.6	16,444
Jun-19	CEG	100% of Chongqing Nanfang Translators College of SISU	1,010	NA	77,692
Jul-19	Yuhua	90% of Shandong Yingcai University	1,492	18.2	52,612
Jul-19	Hope	95% of Hebi Automotive Engineering Professional College	160	NA	37,394
Aug-19	Hope	99% of Suzhou Top Institute of Information Technology, Kunshan Technical School and Business School	376	65.9	69,007
Sep-19	CEG	100% of Australian Institute of Business and Management Pty Ltd	645	15.2	313,236
Jan-20	Kepei	100% of Harbin Institute of Petroleum	1,450	21.2	154,815
Jan-20	Maple Leaf	Kingsley Edugroup Limited, 1 K-12 school and three higher education schools	372	97.0	372,399
Mar-20	Hope	100% of 1 Inti university and 5 Inti colleges in Malaysia	966	29.7	58,545
Jun-20	Maple Leaf	90% of Canadian International School (Singapore)	2,247	21.5	713,341
Aug-20	CEG	60% interest in Haikou University of Economics and Affiliated Art School of Haikou University of Economics	1,356	50.5	53,810
Average				**29.4**	**103,196**

Source: Company data, HSBC

Appendix 4: Expansion pipeline of our coverage

Exhibit 232: School expansion pipelines

School operator	Newly established school/school with expansion	Time of completion	Additional capacity	% to existing capacity
K-12				
Maple Leaf	New school in 2020	2020	6,370	10%
	Expansion in 2020 (Wuhan Campus)	2020	1,500	2%
	New school in 2021	2021	4,000	6%
	New school in 2022	2022	4,000	6%
Virscend	New school in 2020	2020	29,620	42%
	New school in 2021	2021	25,650	36%
	New school: Middle school for CFLS Meinian	2020	N/A	N/A
	New school: Primary school for CEFLS West	2020	N/A	N/A
	New school: Primary school for CFLS Panzhihua	2020	N/A	N/A
	New school: Primary school for CEFLS Ya'an	2020	N/A	N/A
Tianli	New school in 2020	2020	30,725	52%
	New school in 2021	2021	24,620	42%
	New school in 2022	2022	12,680	14%
Wisdom	New school: Dongguan / Foshan School	2020	N/A	N/A
	New school: Chaozhou School	2020	8,000	11%
	New school: Jiangmen School	2021	7,500	11%
	New school: Guangzhou School	N/A	N/A	N/A
	New school: Zhaoqing School	N/A	N/A	N/A
	New school: Zhongshan School	N/A	10,000	14%
	New school: Dongguan Guangzheng Technology Institute	N/A	10,000	14%
	New school: Bazhong Guangzheng Technology Institute	N/A	18,000	26%
	New school: Yibin Guangzheng Technology Institute	N/A	N/A	N/A
Higher Education				
CEG	Expansion: Guangdong Baiyun University (new campus phase 2)	2020	18,000	10%
	Expansion: Guangzhou Songtian University (Zhaoqing)	N/A	30,000	16%
Hope	New school: Chongqing Digital Industry Vocational College	2021	N/A	N/A
	New school: Jiangxi Zhangshu Vocational College of Traditional Chinese Medicine	2021	N/A	N/A
	New school: Gansu Mingde Vocational Education College	2021	N/A	N/A
Kepei	Expansion: Guangdong Polytechnic College (Dinghu phase 3)	2020	3,000	5%
	Expansion: Guangdong Polytechnic College (Gaoyao campus)	2021	7,000	12%
	Expansion: Harbin Institute of Petroleum	2020	N/A	N/A
Yuhua	Expansion: Zhengzhou Technology and Business University	N/A	N/A	N/A

Source: Company data, Company website, HSBC

Appendix 5: Past capital-raising activities

Exhibit 233: Summary of past capital-raising activities of coverage universe

Company	Date	Event	Amount (HKDm)	Remarks
CEG	Dec-17	IPO	3,355	NA
	Mar-19	CB issuance	2,355	Conversion price: HKD14.69 No. of convertible shares: 160,313,138 Coupon rate: 2% c7.4% of enlarged shareholding upon conversion
	Aug-20	Share placement	2,015	No. of shares: 130,000,000 Issuance price: HKD15.50 c6.1% of enlarged shareholding
Hope	Jul-18	IPO	3,200	NA
	Aug-20	Share placement	1,186	No. of shares: 465,000,000 Issuance price: HKD2.55 c6.4% of enlarged shareholding
Kepei	Jan-19	IPO	878	NA
Yuhua	Feb-17	IPO	1,768	NA
	Nov-17	Share placement	937	No. of shares: 253,150,000 Issuance price: HKD3.70 c7.8% of enlarged shareholding
	May-18	CB issuance	195	Conversion price: HKD5.75 No. of convertible shares: 33,913,044 Interest rate: LIBOR+1.70% c1.0% of enlarged shareholding upon conversion
	Jan-19	CB issuance	940	Conversion price: HKD3.336 No. of convertible shares: 281,774,580 Coupon rate: 3% c7.9% of enlarged shareholding upon conversion
	Dec-19	CB repurchase, CB issuance	2,088	CB repurchase amount: HKD928m Conversion price: HKD7.1303 No. of convertible shares: 292,834,803 Coupon rate: 0.90% c8.2% of enlarged shareholding upon conversion
Maple Leaf	Nov-14	IPO	962	NA
	Jan-18	Share placement	1,001	No. of shares: 110,000,000 Issuance price: HKD 9.1 c7.4% of enlarged shareholding
Virscend	Dec-15	IPO	2,013	NA
Tianli	Jun-18	IPO	1,530	NA
Wisdom	Jan-17	IPO	913	NA
	Jul-18	CB issuance	500	Up to HKD300 can be converted to Wisdom's shares Coupon rate: 6.8% Conversion price: 90-day closing price average preceding the conversion
	Aug-20	Share placement	551	No. of shares: 130,000,000 Issuance price: HKD 4.24 c6.0% of enlarged shareholding

Note: CB=Convertible bonds/loans.
Source: Company data, HSBC

Appendix 6: Senior management biography

- Here we summarise the biography of the senior management team of each of the key school operators in our coverage universe

Exhibit 234: China Education: Senior management profiles

Name	Position	Age	Major responsibilities, experience, and qualifications
Mr. Yu Guo	Director, Co-chairman	57	Founder and chairman of the board of directors of Jiangxi University of Technology. Served as a director of Jiangxi Fashion TV Shopping Co., Ltd. from August 2012 to May 2018, and a director of China Science & Merchants Investment Management Group from September 2014 to September 2017. Completed a Master's programme in Business and Economics from the Graduate School of Chinese Academy of Social Sciences in 1998 and completed the China Europe International Business School-Harvard Business School-IESE Business School Global CEO Programme for China in 2006. Father of Dr. Yu Kai, an executive director and CEO of the Company.
Mr. Xie Ketao	Director, Co-chairman	55	Founder, chairman of the board of directors of Guangdong Baiyun University and Baiyun Technician College. Has been serving as vice chairman of China Association for Private Education since May 2008. Former supervisor of CSM Investment Group from September 2014 to September 2017. Completed a Master's programme in Vocational and Technical Education from East China Normal University in 1999. Brother of Ms. Xie Shaohua, an Executive Director.
Dr. Yu Kai	Director, CEO	34	Director of Jiangxi University of Technology. Served as an educational consultant to the World Bank. Provided research services to government departments. Adviser for PhD students and Post-docs at Shanghai Jiao Tong University in the field of Economics and Administration of Education. Obtained the Doctor of Philosophy degree in Educational Studies from the University of Oxford. Holds Corporate Director Certificate from Harvard Business School. Son of Mr. Yu Guo, an Executive Director and co-chairman of the Board.
Ms. Xie Shaohua	Director	56	Vice chairman of the board of both Guangdong Baiyun University and Baiyun Technician College, and vice principal of Guangdong Baiyun University. Completed a Master's programme in Vocational and Technical Education from the East China Normal University in 1999. Sister of Mr. Xie Ketao, an Executive Director and co-chairman of the Board.
Mr. Mok Kwai Pui Bill	CFO, Company Secretary	58	Joined the Group in May 2017 as CFO. Former CFO of Fortune Oil PLC from November 2011 to May 2017. Former CFO of Far East Consortium International Limited from April 2004 to October 2010. Currently an INED of Grand Ming Group Holdings Limited and PF Group Holdings Limited. Obtained a Master's degree in Business Administration from Seattle University in 1987. Member of AICPA and HKICPA.
Mr. Li Renyi	Vice President for Strategic Investments	34	Worked as VP of investments at Prax Capital from June 2013 to April 2017 and as an investment manager at Shenzhen Oriental Fortune Capital from March 2012 to May 2013. Served China Renaissance as a financing manager and analyst from June 2008 to May 2011. Obtained the Master of Business Administration degree in Finance from China Europe International Business School in 2017.

Source: Company data

Exhibit 235: Hope Education: Senior management profiles

Name	Position	Age	Major responsibilities, experience, and qualifications
Mr. Xu Changjun	Chairman, Director	63	Responsible for overseeing the affairs of the Board. Has been a director of Hope Education since April 2012, the chairman of Hope Education since September 2016, and a council member of Southwest Jiaotong University Hope College since June 2016. Served as the director of the finance department, the supervision and audit department, and the investment department of East Hope Group from March 1997 to June 2010. Received a Master of Education in Statistics from the Southwestern University of Finance and Economics in June 1989 and was qualified as a certified accountant in June 2000.
Mr. Wang Huiwu	Director, CEO, President	47	Responsible for implementing board resolutions, overall strategic planning, and operational management of the Group. Has been the chairman of Sichuan Mayflower Professional College since December 2004. Has served as director and the president of Hope Education since October 2007. Has worked as chairman of the council for Sichuan Hope Automotive Vocational College since May 2013 and Sichuan Hope Automotive Technical College since January 2017. Graduated from Sichuan Normal University with a Bachelor's degree in Education in June 2013.
Mr. Li Tao	Director, Chief Strategy Officer	50	Responsible for business development and mergers and acquisitions of the Group. Has worked as a senior vice president of Hope Education since October 2014. Has served as director of Tianyi College since September 2011, Business College of Guizhou University of Finance and Economics since August 2014 and Jinci College of Shanxi Medical University since December 2014. Has been enrolled in the executive Master of Business Administration distance learning programme at China Europe International Business School in Beijing since May 2016.
Mr. Jiang Lin	COO, Executive Vice President	53	Responsible for overseeing the day-to-day operations of the Group. Has served as a standing vice president of Hope Education since February 2016. Previously was deputy director at People's Telecommunication Office of Information and Industry Bureau from December 2001 to July 2007. Once served as deputy mayor of Sichuan Ziyang Municipal from July 2007 to September 2012. Obtained a Bachelor's degree in Economics and Management from the Party School of the Central Committee of the Communist Party of China from August 2002 to December 2004.
Ms. Lou Qunwei	Senior Vice President	51	Responsible for the teaching and management of students. Has been the senior vice president of Hope Education since October 2014. Has served as director for Tianyi College since September 2011, Sichuan Hope Automotive Vocational College since May 2013, and Sichuan Guojian Investment Limited since May 2017. Previously served as the head of the HR department, and a manager of the administration department from January 2005 to October 2014. Obtained a Bachelor's degree in Administrative Management from China Central Radio and Television University in July 2010.
Mr. He Xuan	CFO	50	Responsible for finance management of the Group. Has served as the chief financial director of Hope Education since June 2017. Previously worked as manager of the finance department of Huaxi Hope Luohe Wanqian Feed from January 2003 to April 2008. Obtained a college education in accounting at Southwestern University of Finance and Economic in October 1997.
Mr. Huang Zhongcai	Vice President, Joint Company Secretary	35	Responsible for capital operations and investor relations. Has been the vice president of Hope Education since July 2014. Once served as head of the finance department at Chengdu Mayflower Computer Science Professional College from December 2012 to July 2014. Graduated from Sichuan Agriculture University with a Bachelor's degree in Finance management in June 2007.
Ms. Ma Jialing	Vice President	36	Responsible for the administrative management of the Group. Has served as the vice president of the company since November 2018. Has been the director of security management department and member of presidents' meeting of Hope Education since October 2014. Obtained a Bachelor's degree in Music Education from Mianyang Teachers' College in Sichuan in June 2006.

Source: Company data, HSBC

Exhibit 236: Kepei Education: Senior management profiles

Name	Position	Age	Major responsibilities, experience, and qualifications
Mr. Ye Nianqiao	Founder, Director, Chairman, General Manager, CEO	56	Responsible for overall management, strategic planning, business development and cooperation. Founded Zhaoqing School and served as the chairman of its board from May 2000 to July 2010. Founded Guangdong Polytechnic College and has been serving as the chairman of its board since May 2004. Has been the chairman of the board of Zhaoqing Kepei Education Investment Development since September 2016. Obtained a Master's degree in Business Management from Sun Yat-Sen University in December 2008. Father of Mr. Ye Xun, one of the Directors and brother of Mr. Ye Nianjiu, one of the senior management.
Dr. Zhang Xiangwei	Director, COO	69	Responsible for the daily management and overall operations. Served as the principal at Shantou University from February 1997 to May 2001 and the principal of Guangdong University of Technology from June 2001 to November 2010. Has held various positions at Guangdong Polytechnic College, including a director since December 2011, the dean since September 2013 and the vice chairman of the board since September 2016. Obtained a Doctor's degree in Engineering from University of Tokyo in March 1987.
Mr. Zha Donghui	Director, Deputy General Manager	51	Responsible for the designing, planning, development, and construction of buildings and infrastructure. Served as the vice president of Zhaoqing School from September 2001 to August 2004 and a director of Zhaoqing School from June 2005 to September 2016. Has been serving as a director and an associate dean of Guangdong Polytechnic College since September 2004. Obtained a Master's degree in Computer Science from Guangzhou University of Technology in June 2009.
Ms. Li Yan	Director, Deputy General Manager, CFO	39	Responsible for financial management and budgets. Has been appointed as the head of the Department of Accounting of Guangdong Polytechnic College since June 2014 and a director of Guangdong Polytechnic College since November 2015. Has been appointed as a director and the financial manager of Zhaoqing Kepei since September 2016. Obtained a Master's degree in Accounting from Sun Yat-Sen University in June 2011 and obtained the qualification of associate professor of accounting in December 2014.
Mr. Ye Xun	Director, Deputy General Manager	30	Responsible for the day-to-day procurement and logistic services and operations. Served as an assistant to the dean of Guangdong Polytechnic College from September 2011 to July 2012. Has been a director and the head of procurement and logistic services of Guangdong Polytechnic College since October 2016. Obtained a Master's degree in Business Administration from Northwestern Polytechnic University in April 2015. Son of Mr. Ye Nianqiao, the founder.
Mr. Ye Nianjiu	Chairman of Board of Zhaoqing School, Dean of Zhaoqing School, Director of Guangdong Polytechnic College, Director of Zhaoqing Kepei	46	Responsible for the day-to-day management of student affairs relating to student admission and graduate employment. Served as the head of student admission and graduate employment of Zhaoqing Technology Training School from July 1995 to June 2001. Served as the vice chairman of the board of Guangdong Polytechnic College from March 2004 to May 2014. Has been serving as the dean of the College of Continuing Education, within Guangdong Polytechnic College since June 2014. Obtained an undergraduate diploma in human resource management from Zhaoqing College in January 2015. Brother of Mr. Ye Nianqiao, the founder.

Source: Company data

Exhibit 237: Maple Leaf Education: Senior management profiles

Name	Position	Age	Major responsibilities, experience, and qualifications
Mr. Jen Shuliang	Founder, Chairman, CEO, Chairman of the nomination and corporate governance committee, President of China operations	65	Responsible for overall business and strategy. Has been chairman of the board and CEO since 2007. Has served as the president of Dalian Maple Leaf International School since 1995 and as the chairman of Dalian Maple Leaf Educational Group Co., Ltd. since 2003. Has been director of multiple group's subsidiaries. Received an Honorary Doctor of Law degree from Royal Roads University in BC, Canada, in June 2013.
Ms. Zhang Jingxia	Senior Vice President, CFO, Director	62	Joined the Group in April 1995. Was appointed CFO in June 2015. Currently responsible for the overall management and financial operations of schools. Served as the director of finance of Jilin Province Dunhua City Pharmaceutical Factory prior to joining the Group. Received the Financial Accounting Diploma from Jilin Accounting School (distance learning) in July 1991.
Mr. James William Beeke	Director, Vice President, Superintendent of global education (other than PRC) of the Group	69	Responsible for overseeing the development of the Group's educational programmes outside mainland China. Previously served as the vice chairman of the board and the superintendent of the BC Program of the Group from 2005 to 2009 and again from 2014 to 2016. Later appointed as the superintendent of global education (other than mainland China) of the Group in August 2016. Has been the president of Signum International Educational Services Inc., since September 2009. Received a Master of Arts degree from Western Michigan University in August 1973.
Mr. Chen Linsheng	Vice President, Chinese Program Superintendent	60	Primarily responsible for the management of the Chinese curriculum and evaluation of schools. Served as the head of the educational affairs department of Dalian Maple Leaf High School from August 2000 to April 2006. Later served as the Chinese programme superintendent of Shenyang Maple Leaf International School from May 2006 to March 2007 and as the headmaster of Wuhan Maple Leaf International School from April 2007 to August 2012. Received a Bachelor's degree in Chinese from Hunan Normal University in December 1981.
Mr. Cao Xiaofeng	Vice President	46	Primarily responsible for school construction projects and general affairs of the school campus. Previously served as a vice president for Etonkids Educational Group. Received a Doctoral degree in Educational Management from Beijing Normal University in 2014.
Mr. Bao Fang	Vice President	43	Primarily responsible for supervising winter and summer programmes, talent training programmes, and overseeing the marketing centre of the Group. Has served as the vice president of Dalian Maple Leaf Science and Education Industrial Group Co., Ltd (a member of the Group) since September 2015. Graduated with a Bachelor's degree in Science, majoring in computer science, from The University of Auckland (New Zealand) in 2009.
Mr. Ren Hongge	Vice President	35	Responsible for overseeing three departments: Maple Leaf Education Systems Research Institute (MLESRI), ESL Teaching Centre, and Graduation Service Centre. Has served as the principal of MLESRI and vice chairman of the Global Alumni Association of Maple Leaf International Schools since August 2015. Obtained a Master's degree in Education, majoring in technology, innovation and education, from Harvard University in 2013.

Source: Company data

Exhibit 238: Tianli Education: Senior management profiles

Name	Position	Age	Major responsibilities, experience, and qualifications
Mr. Luo Shi	Founder, Chairman, CEO, Member of the Nomination Committee	47	Has been the CEO and chairman of Shenzhou Tianli Education Investment since September 2013 and the chairman and president of Shenzhou Tianli Holdings Group since March 2004. Founder, former chairman, and president of Sichuan Tianli Properties Development from April 1994 and March 2004. Obtained a Master's degree in Business Administration from University of Electronic Science and Technology of China in June 2005 and completed the CEO Program of Cheung Kong Graduate School of Business in November 2015.
Ms. Yang Zhaotao	Director, Deputy General Principal, Principal of Chengdu District	47	Served as a committee member and deputy director of Chengdu Qingyang Bureau of Education from March 2009 to August 2012. Became the general manager of Chengdu Golden Apple Education Investment from September 2012 to December 2013. Obtained a Bachelor's degree in Education Management from Sichuan College of Education in June 2001 and completed the professional postgraduate degree in curriculum and teaching at Sichuan Normal University in July 2003.
Mr. Wang Rui	Director, CFO, Joint Company Secretary, Member of the Remuneration Committee	38	Prior to joining the Group, served as a senior financial manager of New Hope Properties Development from June 2007 to June 2008. Then worked as the project financial manager for Longfor Properties, risk and audit manager of the group and CFO of Dalian branch company from June 2008 to April 2014. Later joined Xi'an Titan Holdings as the general manager of the finance department from June 2014 to February 2015. Obtained a Bachelor's degree in Accounting from Southwestern University of Finance and Economics in July 2004.
Mr. Su Yuandong	Deputy General Principal, Director of Teaching Management Centre	57	Once served as a vice-principal of the No. 1 Middle School affiliated to Central China Normal University from 2016 to June 2019 and principal of the No. 1 Middle School affiliated to Central China Normal University, Chaoyang School (campus school of Chaoyang District, Beijing) from 2011 to 2016. Completed postgraduate courses in educational principles in East China Normal University in December 1998.

Source: Company data

Exhibit 239: Virscend Education: Senior management profiles

Name	Position	Age	Major responsibilities, experience and qualifications
Ms. Wang Xiaoying	Chairwoman, Director	57	Responsible for the overall management and strategic development of the Group. Has been a director of some PRC Operating Entities since joining the Group in April 2004. Has served as the general manager of the education sector of Sichuan Derui since January 2008. Spouse of Mr. Yan Yude, the chief executive officer and an executive Director of the company and one of the controlling shareholders.
Mr. Ye Jiayu	Director	60	Responsible for campus safety management of all schools. Joined the Group as a director of some PRC Operating entities since September 2000. Currently serves as an executive director of Sichuan Derui and also as a supervisor of Tibet Huatai. Obtained a Diploma in mechanics from Sichuan Radio and TV University in mainland China in August 1985.
Mr. Yan Yude	Director, CEO	58	Responsible for the overall strategic development of the Group. Is one of the controlling shareholders and has been a director of the PRC Operating entities since September 2000. Joined Sichuan Derui in 1993 and was involved in the overall management and strategic development. Obtained a graduation certificate for postgraduate studies in criminology from Sichuan University in mainland China in July 1999. Husband of Ms. Wang Xiaoying, an executive director.
Mr. Deng Bangkai	Director, COO	38	Responsible for day-to-day operations and external communications and publications. Worked at Ernst & Young Hua Ming LLP from August 2005 to October 2018. Obtained the Master of Science degree with commendation in management science from University of Hertfordshire in October 2004. Member of the HKICPA and CICPA.
Mr. Gu Daili	Vice President	47	Responsible for supervising the overall performance on the teaching quality of all schools. Served as the director of Ningnan County Education Bureau from March 2012 to May 2015. Also, served as the principal at Ningnan High School and dean of education supervision department of Ningnan county government over the same period. Later worked as the dean of the education supervision department of Ningnan county government from May 2015 to November 2016. Obtained a Bachelor's degree in Administration Management from Party College of Sichuan Provincial Party Committee in December 2002.
Dr. Yan Hongjia	Vice President	33	In charge of the international business and preschool business departments of the company and is also responsible for providing guidance for the company's business development, mergers & acquisitions, and comprehensive education solutions tailored to customers. Obtained her Doctor's degree in Statistics from York University. Currently serves as an associate researcher of Chengdu Institute Sichuan International Studies University and a guest professor of Southwestern University of Finance and Economics. Daughter of Mr. Yan Yude, the executive director and CEO of the company.
Mr. Li Jun	Financial Controller	33	Responsible for financial management and providing financial analysis for investment and mergers & acquisition of the Group to the board. Worked at Ernst & Young Hua Ming LLP from October 2012 to August 2018. Obtained a Master's degree in Economics from Southwestern University of Finance and Economics in June 2012. Is a non-practising member of CICPA.

Source: Company data

Exhibit 240: Wisdom Education: Senior management profiles

Name	Position	Age	Major responsibilities, experience, and qualifications
Ms. Li Suwen	Co-founder, Chairperson, CEO	46	Responsible for overall management and business development. Co-founded the Group by establishing Guangdong Guangzheng Educational Group with Mr. Liu in October 2002. Later founded a number of educational institutions within the Group. Completed a graduate programme on project management from the Economics Department of Peking University in March 2004.
Mr. Liu Xuebin	Co-founder, Director	47	Primarily responsible for the overall formulation, supervision, and guidance of business strategies, planning and development. Co-founded Guangdong Guangzheng with Ms. Li Suwen in October 2002. Has acted as the chairman of Dongguan Chinese Real Estate Development. Completed a graduate programme on project management from the Economics Department of Peking University in March 2004.
Mr. Li Jiuchang	Director, COO	40	Responsible for overall management of the school's operations. Has acted as deputy general manager of Guangdong Guangzheng since September 2012. Obtained a Bachelor's degree in History from Shaanxi Normal University.
Mr. Wang Yongchun	Director, Principal of Dongguan Guangming School	38	Responsible for overseeing daily operations of Dongguan Guangming School. Joined the Group in August 2003. Acted as the vice principal of Dongguan Guangzheng Preparatory School. Holds a Bachelor's degree in Science from the Tourism and Environment College of Shaanxi Normal. Obtained the qualification of First Grade Middle School Teacher in Geography Education, Senior High School Teacher.
Mr. Du Shuangxi	Principal of Dongguan Guangming Primary School	49	Responsible for overseeing daily operations of Dongguan Guangming Primary School. Joined the Group in August 2006. Recognised as a Core Teacher in Chinese Language Education in Primary Schools of Hunan Province and one of the Top 100 Leading Scholars of Primary and Middle Schools in China. Obtained a Bachelor's degree in Public Administration from the Central China Normal University through distance learning.
Mr. Lau Chi Hung	Vice President, Chief Investor Relations Officer	49	Previously served as the vice president, head of investor relations, and company secretary of China Maple Leaf Educational Systems Limited before joining the company in March 2017. Is a practising member of HKICPA and a fellow member of The Association of Chartered Certified Accountants. Obtained a Master's degree in Business Administration from Hong Kong Polytechnic University.
Ms. Chen Xi	Principal of Jieyang Jiedong Guangzheng Preparatory School	53	Responsible for overseeing daily operations of Jieyang Jiedong Guangzheng Preparatory School. Appointed as the principal of the middle school section of each of Dongguan Guangming School and Dongguan Guangzheng Preparatory School in August 2012 and July 2015, respectively. Obtained a Bachelor's degree in Education Management from Guangdong University of Education.
Mr. Zhang Jingfeng	Principal of Huizhou Guangzheng Preparatory School	40	Responsible for overseeing the daily operations of the Huizhou Guangzheng Preparatory School. Joined the Group in March 2006 and served successively on various positions, including teacher, officer in charge of the supervision and guidance office, and the vice principal of Dongguan Guangming School. Obtained a Bachelor's degree in Chinese language and literature from Hubei University.
Mr. He Shan	Principal of Panjin Guangzheng Preparatory School	40	Primarily responsible for overseeing the daily operations of Panjin Guangzheng Preparatory School. Joined the Group in July 2003 and served successively in various positions in Dongguan Guangming School, including class teacher, grade leader, human resources officer, and assistant to the principal. Obtained a Bachelor's degree of arts in Chinese Language and Literature from Guangxi Normal University and the qualification of First Grade Middle School Teacher.

Source: Company data

Exhibit 241: Yuhua Education: Senior management profiles

Name	Position	Age	Major responsibilities, experience, and qualifications
Mr. Li Guangyu	Director, Chairman, Chairman of the Nomination Committee	56	Currently serves as the chairman of the board of directors of Zhengzhou Technology and Business University and Hunan International Economics University, and all of the Group's 25 private schools for grades K-12. Has been a director of YuHua Investment Management since February 2000, director of Zhengzhou YuHua Education Investments since April 2004, and the chairman of the board of directors of Zhengzhou Zhongmei Education Investments since July 2011. Obtained a Master's degree in Business Administration from the Guanghua School of Management, Peking University, in June 2007. Father of Ms. Li Hua, the CEO and executive director.
Ms. Li Hua	Director, Vice Chairman, CEO	32	Currently a director of Zhengzhou Technology and Business University and Hunan International Economics University, and all of the Group's 25 private schools of grades K-12. Has been a director of Zhengzhou Zhongmei Education Investments since July 2011 and director of Zhengzhou YuHua Education Investments since April 2016. Obtained a Bachelor's degree in Philosophy from Peking University in July 2010. Daughter of Mr. Li Guangyu, the chairman and executive director.
Ms. Qiu Hongjun	Director, Financial Controller, Vice President	53	Responsible for overseeing the Group's financial affairs. Currently the director of all the Group's 25 private schools of grades K-12. Has been a director of Zhengzhou Zhongmei Education Investments since July 2011, director of Zhengzhou YuHua Education Investments since April 2016, and director of Hunan International Economics University since December 2017. Worked as deputy branch president of Shenzhen Development Bank from 2002 to 2004. Received a Diploma in finance from the Central Radio and Television University (distance learning) in October 2003.
Mr. Xu Bin	CFO, Joint Company Secretary	36	Responsible for overseeing the company's financial affairs. Previously he was the vice president and co-CFO of China Maple Leaf Education Systems Limited from February 2013 to June 2015. Worked as an investment banking associate at Essence Securities from November 2011 to February 2013. Obtained a Master's degree in Finance from the University of Cambridge in May 2012.

Source: Company data

Notes

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Disclosure appendix

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