CMB International Global Markets | Equity Research | Company Update

SenseTime (20 HK)

Focus on AlaaS plan in FY22

SenseTime delivered in-line FY21 revenue of RMB4.7bn (+36% YoY) and opex control was better than expected. Smart City/ Smart Business remained the core driving force (87% of FY21 revenue) and achieved strong revenue growth at +57%/+32% YoY respectively. Looking into FY22, as the Company plans to open up its SenseCore capabilities through AlaaS, this could potentially bring recurring revenue. Maintain BUY with lowered target price of HK\$7.84 (prior HK\$8.08) to reflect uncertainty in macro economy and that Al adoption pace could slow.

- FY21 revenue in-line, opex control better than expected. SenseTime delivered in-line revenue of RMB4,700mn (+36% YoY) in FY21. Gross margin slightly declined to 69.7% (vs. 70.6% YoY) but its operating loss was smaller than feared at RMB3,316mn. SenseTime remains committed in R&D. The Company spent RMB3,614mn R&D expense in FY21 (+47% YoY). Adjusting for share-based compensation and listing expense, opex was up +32% YoY. Opex ratio declined -3.4 pct pts YoY to 103.7%.
- Smart City and Smart Business growth remained strong. In FY21, Smart City delivered robust growth of +57% YoY to RMB2.14bn, largely driven by expanding cities coverage to 140 (+49% YoY). Meanwhile, Smart Business grew strongly at +32% YoY to RMB1.96bn. We are encouraged to see increase in both no. of customers (+9% YoY to 922) and avg. revenue per customer (+21% YoY to RMB2.1mn). Smart City + Smart Business revenue contribution increased to 87% in FY21 (vs. 83% in FY20) as new business segments (Smart Life + Smart Auto) are still in early monetization stage.
- Focus on AlaaS plan in FY22. In Jan 2022, SenseTime AIDC in Lingang, Shanghai was officially launched. With a designed peak computing power of 3.74 exaflops, SenseTime plans to further open up its SenseCore capabilities through AI-as-a-Service (AlaaS) in FY22. The Company has tested out on several large customers in Smart City and Smart Auto and targets to penetrate into scientific research institutions and city managers. We think it takes time to scale up the AlaaS business given competition with existing cloud service providers. AlaaS could provide recurring revenue to SenseTime but this may result in a lower gross margin in the medium term.
- Maintain BUY. We revised down FY22-23E revenue by 8-9% mainly to reflect uncertainty in macro economy and AI adoption pace could be slower than expected. Maintain BUY with lowered target price of HK\$7.84 (prior HK\$8.08).

Earnings Summary

(YE 31 Dec)	FY20A	FY21A	FY22E	FY23E	FY24E
Revenue (RMB mn)	3,446	4,700	5,815	8,131	10,601
YoY (%)	14%	36%	24%	40%	30%
Adj. Op. profit (RMB mn)	(2,148)	(3,316)	(2,033)	(2,067)	(2,006)
YoY (%)	n.a.	n.a.	n.a.	n.a.	n.a.
Net profit att. (RMB mn)	(12,158)	(17,140)	(1,376)	(1,495)	(1,568)
YoY (%)	n.a.	n.a.	n.a.	n.a.	n.a.
Adj. net profit att. (RMB mn)	(878)	(1,381)	(930)	(969)	(750)
YoY (%)	n.a.	n.a.	n.a.	n.a.	n.a.
EV/sales (x)	46.0	32.7	26.7	19.3	14.9
FCF margin (%)	-74%	-80%	-25%	-24%	-13%
ROE (%)	n.a.	n.a.	n.a.	n.a.	n.a.
Net gearing (%) *	net cash				

Source: Company data, Bloomberg, CMBIGM estimates, *excl. preferred shares liabilities



BUY (Maintain)

Target Price	HK\$7.84
(Previous TP	HK\$8.08)
Up/Downside	+24.4%
Current Price	HK\$6.30

China Software & IT Services

Marley Ngan (852) 3916 3719 marleyngan@cmbi.com.hk

Bowen Li

(852) 3761 8957 libowen@cmbi.com.hk

Stock Data

F

Ś

E

5

Mkt Cap (HK\$ mn)	211,097
Avg 3 mths t/o (HK\$ mn)	N/A
52w High/Low (HK\$)	9.70/ 3.90
Total Issued Shares (mn)	25,979
Source: Bloomberg	

Shareholding Structure

onal cholaing ou dotaile	
Prof. Tang	26.3%
Softbank	14.1%
ESOP	8.2%
Alibaba	7.2%
Source: HKEx	

Share Performance

	Absolute	Relative
1-mth	-1.7%	2.6%
3-mth	NA	NA
6-mth	NA	NA
Source: Bloomberg	3	

12-mth Price Performance



Source: Bloomberg

Auditor: PwC

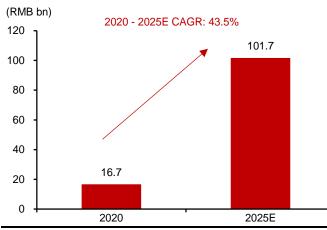
Related Reports:

- China AI "AI leaders taking different expansion paths" – 10 Feb 2022 (link)
- SenseTime (20 HK) "Unrivalled computer vision leader in China" – 2 Feb 2022 (link)



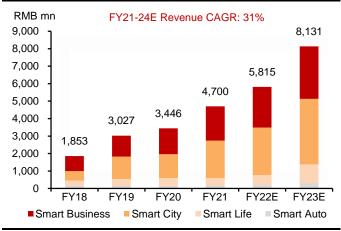
Focus Charts

Figure 1: China computer vision market to increase at 43.5% CAGR in FY20-25E



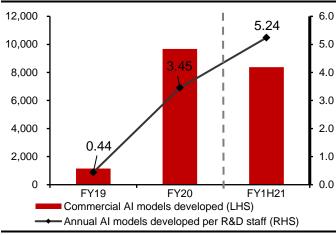
Source: Frost & Sullivan, CMBIGM

Figure 3: SenseTime revenue to grow at 31% CAGR in FY21-24E



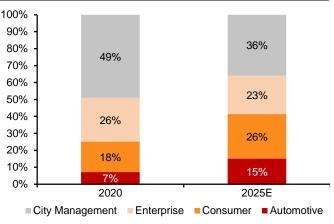
Source: Company data, CMBIGM estimates

Figure 5: SenseCore enables more efficient AI model development



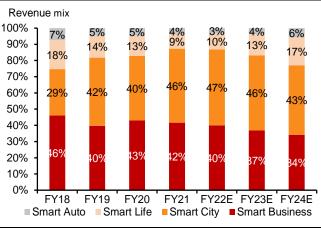
Source: Company data, CMBIGM

Figure 2: China CV software market mix will change on stronger Consumer and Automotive growth



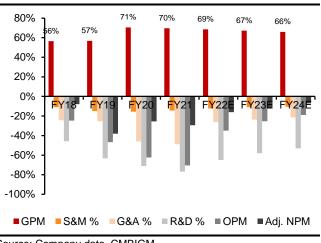
Source: Frost & Sullivan, CMBIGM

Figure 4: SenseTime AI are deployed in a wide range of scenarios



Source: Company data, CMBIGM estimates

Figure 6: SenseTime has high GPM (70% in FY21) due to its AI software-centric business model



Source: Company data, CMBIGM



FY21 results review

- **Revenue** was at RMB4,700mn (+36.4% YoY), in-line with our and consensus estimates.
 - Smart Business grew at +32% YoY to RMB1,958mn. No. of customers was up 9% YoY to 922. Avg. revenue per customer increased at +21% YoY to RMB2.1mn.
 - Smart City grew at +57% YoY to RMB2,143mn. No. of cities covered increased to 140 (+49% YoY). Avg. revenue from each city increased at +5% YoY to RMB15.3mn.
 - Smart Life declined at 4% YoY to RMB415mn. No. of customers increased at 9%
 YoY but avg. revenue per customer dropped 12% YoY to RMB1.6mn.
 - Smart Auto grew 16% YoY to RMB184mn. No. of customers increased at 36%
 YoY but avg. revenue per customer dropped 14% YoY to RMB5.4mn.
- **Gross margin** was at 69.7% (-0.8 pct pts YoY), above our estimates by 2.7 pct pts and consensus by 0.4 pct pts.
- Operating loss widened to RMB3,316mn, better than our and consensus estimates.
 - Adjusted for share-based compensation and listing expense, opex ratio declined to 103.7% in FY21 (-3.4 pct pts YoY).
- **Net loss** widened to RMB17,140mn.

20 HK	FY20	FY21		FY21E		FY21E	
RMB mn	Actual	Actual	YoY	СМВІ	СМВІ	Consensus	Consensus
Revenue	3,446	4,700	36%	4,678	0%	4,691	0%
Gross profit	2,432	3,278	35%	3,134	5%	3,252	1%
Gross margin	70.6%	69.7%	-0.8 pct pts	67.0%	2.7 pct pts	69.3%	0.4 pct pts
Operating profit	-2,148	-3,316	-54%	-3,818	13%	-5,000	34%
Operating margin	-62.3%	-70.6%	-8.2 pct pts	-81.6%	11 pct pts	-106.6%	36 pct pts
Adj. EBITDA	-532	-879	-65%	-1,558	44%	-2,406	63%
Adj. EBITDA margin	-15.4%	-18.7%	-3.3 pct pts	-33.3%	14.6 pct pts	-51.3%	32.6 pct pts
Net non-op	-10,171	-13,825	-36%	-28,660	52%	-17,848	23%
PBT	-12,319	-17,142	-39%	-32,478	47%	-22,848	25%
Net income	-12,158	-17,140	-41%	-32,489	47%	-6,068	-182%
Net margin	-352.8%	-364.7%	-11.9 pct pts	-694.4%	329.8 pct pts	-129.4%	-235.3 pct pts
EPS RMB	-1.33	-1.74	-30%	-0.97	-79%	-1	-229%
Revenue by segment							
Smart Business	1,485	1,958	32%	1,977	-1%		
Smart City	1,369	2,143	57%	2,139	0%		
Smart Life	434	415	-4%	396	5%		
Smart Auto	158	184	16%	167	10%		

Figure 7: SenseTime FY21 results review

Source: Bloomberg, CMBIGM estimates



Earnings revision

Figure 8: Earnings revision

		FY22E			FY23E	
RMB mn	New	Old	%Diff	New	Old	%Diff
Sales	5,815	6,399	-9%	8,131	8,825	-8%
Gross profit	3,987	4,258	-6%	5,472	5,818	-6%
OP Profit	-2,033	-2,584	-21%	-2,067	-2,392	-14%
Adj. EBITDA	-100	-499	-80%	535	567	-6%
Net profit	-1,376	-1,812	-24%	-1,495	-1,547	-3%
EPS	-0	-0.05	-24%	-0	-0.05	-3%
Margins						
GM	68.6%	66.5%	201 bps	67.3%	65.9%	138 bps
OPM	-35.0%	-40.4%	543 bps	-25.4%	-27.1%	168 bps
Adj. EBITDA margin	-1.7%	-7.8%	607 bps	6.6%	6.4%	15 bps
Net margin	-23.7%	-28.3%	467 bps	-18.4%	-17.5%	-86 bps

Source: Company data, CMBIGM estimates

Figure 9: CMBI vs. consensus forecast

		FY22E			FY23E		
RMB mn	СМВІ	Street	Diff	CMBI	Street	Diff	
Sales	5,815	6,595	-12%	8,131	9,177	-11%	
Gross profit	3,987	4,587	-13%	5,472	6,380	-14%	
Operating profit	-2,033	-2,673	-24%	-2,067	-1,912	8%	
Adj. EBITDA	-100	-1,735	-94%	535	-819	-165%	
Net profit	-1,376	-1,782	-23%	-1,495	-1,338	12%	
EPS	-0.04	-0.12	-65%	-0.04	-0.04	4%	
Margins							
GM	68.6%	69.6%	-100 bps	67.3%	69.5%	-222 bps	
OPM	-35.0%	-40.5%	558 bps	-25.4%	-20.8%	-459 bps	
Adj. EBITDA margin	-1.7%	-26.3%	2458 bps	6.6%	-8.9%	1550 bps	
Net margin	-23.7%	-27.0%	336 bps	-18.4%	-14.6%	-382 bps	

Source: Company data, CMBIGM estimates

Operating model

Figure 10: SenseTime income statement



RMB mn	2018	2019	2020	2021	2022E	2023E	2024E
Revenues	1,853	3,027	3,446	4,700	5,815	8,131	10,601
Cost of sales	(807)	(1,307)	(1,014)	(1,423)	(1,829)	(2,659)	(3,608)
Gross Profit	1,047	1,719	2,432	3,278	3,987	5,472	6,993
Gross margin	56.5%	56.8%	70.6%	69.7%	68.6%	67.3%	66.0%
Selling & marketing expense	(205)	(453)	(537)	(682)	(713)	(889)	(1,109)
Administrative expense	(452)	(766)	(1,590)	(2,298)	(1,525)	(1,933)	(2,272)
Research & development expense	(849)	(1,916)	(2,454)	(3,614)	(3,781)	(4,717)	(5,618)
Operating Income	(459)	(1,416)	(2,148)	(3,316)	(2,033)	(2,067)	(2,006)
Operating margin	-24.8%	-46.8%	-62.3%	-70.6%	-35.0%	-25.4%	-18.9%
Non-Operating Income	(2,997)	(3,757)	(10,171)	(13,825)	526	473	352
Profit Before Tax	(3,456)	(5,173)	(12,319)	(17,142)	(1,507)	(1,594)	(1,654)
Income tax (expense) gain	23	205	161	(36)	128	96	83
Minorities	(5)	(5)	(0)	(37)	(3)	(3)	(3)
Net Income to Shareholders	(3,428)	(4,963)	(12,158)	(17,140)	(1,376)	(1,495)	(1,568)
Net margin	-184.9%	-164.0%	-352.8%	-364.7%	-23.7%	-18.4%	-14.8%
Net profit/ (losses)							
+Fair value losses of preferred shares and other financial liabilities	3,182	3,682	10,564	13,526	-	-	-
+Share-based compensation expenses	15	131	887	1,584	446	526	818
+Share-based compensation to a preferred shareholder	86	-	-	-	-	-	-
Adj. net profit	(150)	(1,155)	(878)	(1,418)	(933)	(973)	(753)
Adj. net margin	-8.1%	-38.2%	-25.5%	-30.2%	-16.0%	-12.0%	-7.1%

Source: Company Data, CMBIGM



Figure 11: Revenue and cost of sales breakdown

Figure 11: Revenue and c	FY18	FY19	FY20	FY21	FY22E	FY23E	FY24E
Revenue breakdown							
Smart Business	854	1,203	1,485	1,958	2,326	2,996	3,626
Smart City	530	1,271	1,369	2,143	2,722	3,757	4,546
Smart Life	330	414	434	415	572	1,068	1,821
Smart Auto	139	139	158	184	195	310	608
Total	1,853	3,027	3,446	4,700	5,815	8,131	10,601
Revenue mix							
Smart Business	46%	40%	43%	42%	40%	37%	34%
Smart City	29%	42%	40%	46%	47%	46%	43%
Smart Life	18%	14%	13%	9%	10%	13%	17%
Smart Auto	7%	5%	5%	4%	3%	4%	6%
Revenue YoY							
Smart Business		41%	23%	32%	19%	29%	21%
Smart City		140%	8%	57%	27%	38%	21%
Smart Life		25%	5%	-4%	38%	87%	71%
Smart Auto		0%	14%	16%	6%	59%	96%
Total		63%	14%	36%	24%	40%	30%
Cost of sales breakdown							
Hardware costs and subcontracting service fees	767	1,228	910	1,265	1,644	2,413	3,304
Server operation and cloud-based service fees	10	32	1	2	2	2	3
Employee benefit expenses	4	14	57	80	94	125	155
Other expenses	25	33	46	76	89	118	146
Total	807	1,307	1,014	1,423	1,829	2,659	3,608
Cost of sales mix							
Hardware costs and subcontracting service fees	95%	94%	90%	89%	90%	91%	92%
Server operation and cloud-based service fees	1%	2%	0%	0%	0%	0%	0%
Employee benefit expenses	1%	1%	6%	6%	5%	5%	4%
Other expenses	3%	3%	5%	5%	5%	4%	4%

Source: Company data, CMBIGM estimates



Valuation

Maintain BUY with new target price of HK\$7.84

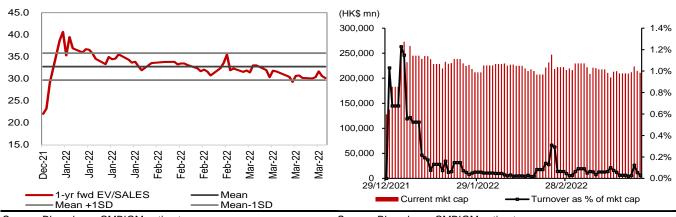
We maintain BUY on SenseTime with new target price of HK\$7.84 (prior HK\$8.08), based on 34x FY22E EV/sales. We use EV/sales as valuation methodology as AI deployment is still in an early stage that short term earnings are distorted by high R&D, marketing expense and depreciation related to heavy capex for computing infrastructure. Our target multiple takes into account the AI company scarcity and free float.

Figure 12: Peers comparison

			Market Cap	Price	EV/sa	les (x)	P/	/S	Sales CAGR	EPS CAGR	GPM	FCF margin
Company	Ticker	Rating	(US\$ mn)	(LC)	FY21E	FY22E	FY21E	FY22E	FY20- 23E	FY20- 23E	FY20	FY20
Global Al cor												
Palantir	PLTR US	NR	27,183	13.39	16.3	12.5	17.8	13.6	33%	49%	68%	-28%
UiPath	PATH US	NR	15,746	29.98	15.7	11.8	17.8	13.4	52%	n.a.	82%	3%
C3.ai	AI US	NR	2,498	23.48	8.6	6.2	13.8	9.9	29%	n.a.	75%	-41%
Nvidia	NVDA US	NR	706,565	281.50	42.3	26.1	42.8	26.5	47%	60%	62%	39%
Ambarella	AMBA US	NR	3,644	98.49	15.9	10.5	16.6	11.0	19%	38%	58%	16%
				Mean	19.8	13.4	21.8	14.9	36%	49%	69%	-2%
				Median	15.9	11.8	17.8	13.4	33%	49%	68%	3%
China Al com	npanies											
Cambricon	688256 CH	NR	4,011	63.68	30.7	21.9	35.9	25.6	45%	n.a.	65%	-55%
Arcsoft	688088 CH	NR	1,867	29.26	15.7	11.7	19.3	14.3	21%	10%	90%	11%
				Mean	23.2	16.8	27.6	20.0	33%	10%	77%	-22%
				Median	23.2	16.8	27.6	20.0	33%	10%	77%	-22%
Global SaaS												
Microsoft	MSFT US	NR	2,279,797	304.10	13.4	11.2	13.7	11.5	17%	24%	68%	32%
Adobe	ADBE US	NR	204,122	432.14	12.9	11.4	12.9	11.4	17%	17%	87%	41%
Autodesk	ADSK US	NR	46,297	213.05	12.6	10.9	12.3	10.6	16%	34%	90%	42%
Salesforce	CRM US	NR	211,840	213.98	10.2	8.2	10.0	8.0	23%	17%	75%	22%
Atlassian	TEAM US	NR	74,558	294.13	36.5	27.8	36.3	27.7	28%	22%	83%	33%
Datadog	DDOG US	NR	47,780	152.21	47.3	30.7	48.1	31.2	52%	71%	78%	14%
Docusign	DOCU US	NR	20,688	104.55	14.5	9.9	14.5	9.9	36%	100%	75%	4%
Intuit	INTU US	NR	131,686	465.63	14.6	11.1	14.0	10.7	23%	25%	82%	30%
Okta	OKTA US	NR	22,643	144.50	26.9	17.4	27.5	17.7	45%	n.a.	73%	7%
ServiceNow	NOW US	NR	116,218	581.09	19.6	15.5	19.7	15.7	27%	28%	78%	30%
Shopify	SHOP US	NR	88,570	705.00	17.9	13.6	19.4	14.7	40%	11%	53%	13%
Workday	WDAY US	NR	61,031	241.23	13.8	11.6	14.2	11.9	20%	26%	71%	17%
Veeva System	VEEV US	NR	30,407	197.75	19.4	15.2	21.0	16.5	25%	23%	73%	39%
				Mean	20.0	15.0	20.3	15.2	28%	33%	76%	25%
				Median	14.6	11.6	14.5	11.9	25%	24%	75%	30%

Source: Bloomberg, CMBIGM, closing price as of 3 Mar 2022





Source: Bloomberg, CMBIGM estimates

Source: Bloomberg, CMBIGM estimates

Figure 14: SenseTime trading volume vs. mkt cap



Financial Summary

ncome statement						Cash flow summary					
YE 31 Dec (RMB mn)	FY20A	FY21A	FY22E	FY23E	FY24E	YE 31 Dec (RMB mn)	FY20A	FY21A	FY22E	FY23E	FY24E
Revenue	3,446	4,700	5,815	8,131	10,601	Net Income	(12,319)	(17,142)	-1,507	-1,594	-1,654
Cost of sales	(1,014)	(1,423)	(1,829)	(2,659)	(3,608)	Depre. and amortization	570	769	1,125	1,728	1,91
Gross profit	2,432	3,278	3,987	5,472	6,993	Change In working capital	(1,290)	(2,448)	357	(622)	37
						Others	11,810	16,334	(36)	(29)	(22
S&M	(537)	(682)	(713)	(889)	(1,109)	Net cash from operating act.	(1,229)	(2,485)	(61)	(518)	273
G&A	(1,590)	(2,298)	(1,525)	(1,933)	(2,272)						
R&D	(2,454)	(3,614)	(3,781)	(4,717)	(5,618)	Capex	(1,306)	(1,266)	(1,372)	(1,405)	(1,699
Adj. op. profit/ (loss)	(2,148)	(3,316)	(2,033)	(2,067)	(2,006)	Others	(5,765)	(283)	187	174	15
						Net cash from investing act.	(7,070)	(1,548)	(1,185)	(1,231)	(1,548
Finance income	175	188	187	175	151						
Finance expense	(113)	(34)	(23)	(50)	(47)	Equity financing	-	4,643	-	-	
Other non-ops	(10,234)	(13,979)	362	349	247	Change of debts	13,327	4,769	860	(75)	(79
Profit before tax	(12,319)	(17,142)	(1,507)	(1,594)	(1,654)	Dividend paid	-	-	-	-	
Income tax	161	(36)	128	96	83	Others	(141)	(34)	(23)	(50)	(47
						Net cash from financing act.	13,186	9,378	836	(125)	(125
Profit after tax	(12,158)	(17,177)	(1,379)	(1,499)	(1,571)						
Non controlling Interest	(0)	(37)	(3)	(3)	(3)	Net change in cash	4,886	5,345	(409)	(1,873)	(1,400
Net profit	(12,158)	(17,140)	(1,376)	(1,495)	(1,568)	Cash at the beg. of the year	6,673	11,428	16,530	16,120	14,24
Adj. net profit	(878)	(1,381)	(930)	(969)	(750)	Cash at the end of the year	11,428	16,530	16,120	14,247	12,84

Balance sheet						Key ratios					
YE 31 Dec (RMB mn)	FY20A	FY21A	FY22E	FY23E	FY24E	YE 31 Dec	FY20A	FY21A	FY22E	FY23E	FY24E
Non-current assets	6,753	8,860	9,108	8,785	8,573	Sales mix (%)					
PPE, net	1,906	2,909	3,162	2,849	2,656	Smart Business	43%	42%	40%	37%	34%
Intangible assets	108	225	220	210	191	Smart City	40%	46%	47%	46%	43%
Right-of-use assets	336	432	432	432	432	Smart Life	13%	9%	10%	13%	17%
Others	4,402	5,294	5,294	5,294	5,294	Smart Auto	5%	4%	3%	4%	6%
						Total	100%	100%	100%	100%	100%
Current assets	31,726	28,084	28,406	28,055	28,446						
Cash & equivalents	11,428	16,530	16,120	14,247	12,847	Growth (YoY)					
Trade and other receivables	4,584	5,776	6,278	7,432	8,859	Revenue	14%	36%	24%	40%	30%
Inventories	716	496	725	1,093	1,456	Gross profit	41%	35%	22%	37%	28%
Financial investments	-	273	273	273	273	Operating profit	52%	54%	-39%	2%	-3%
Contract assets	22	19	19	19	19	Net profit	145%	41%	-92%	9%	5%
Others	14,977	4,991	4,991	4,991	4,991	Adj. net profit	-24%	57%	-33%	4%	-23%
Current liabilities	9,822	2,795	3,877	4,766	6,566	Margins					
Trade and other payables	1,724	2,290	3,329	4,125	5,843	Gross margin	71%	70%	69%	67%	66%
Contract liabilities	244	172	213	298	388	Adj. Operating margin	-62%	-71%	-35%	-25%	-19%
Lease liabilities	110	155	155	155	155	Net profit margin	-353%	-365%	-24%	-18%	-15%
Others	7,744	177	180	187	179	Adj. net profit margin	-25%	-29%	-16%	-12%	-7%
Non-current liabilities	49,589	2,162	1,956	1,892	1,841	Balance sheet ratio					
Lease liabilities	184	229	229	229	229	Net debt / equity ratio (%)	net cash				
Deferred tax liabilities	8	43	43	43	43	Current ratio	3.2	10.0	7.3	5.9	4.3
Contract liabilities	9	38	46	65	85						
Others	49,388	1,852	1,637	1,555	1,485	Returns (%)					
						ROE	n.a.	n.a.	n.a.	n.a.	n.a.
Share capital	0	0	0	0	0	ROIC	n.a.	n.a.	n.a.	n.a.	n.a.
Reserves	(433)	70,078	71,150	71,150	71,150						
Accumulated losses	(21,713)	(40,149)	(41,525)	(43,020)	(44,588)	Per share					
Others	1,214	2,059	2,056	2,052	2,049	EPS (RMB)	(1.33)	(1.74)	(0.04)	(0.04)	(0.05)
Total equity	(20,933)	31,987	31,681	30,182	28,611	BVPS (RMB)	(2.29)	0.95	0.95	0.90	0.85
		-	-	-	-		()				

Source: Company data, CMBIGM estimates



Disclosures & Disclaimers

Analyst Certification

The research analyst who is primary responsible for the content of this research report, in whole or in part, certifies that with respect to the securities or issuer that the analyst covered in this report: (1) all of the views expressed accurately reflect his or her personal views about the subject securities or issuer; and (2) no part of his or her compensation was, is, or will be, directly or indirectly, related to the specific views expressed by that analyst in this report.

Besides, the analyst confirms that neither the analyst nor his/her associates (as defined in the code of conduct issued by The Hong Kong Securities and Futures Commission) (1) have dealt in or traded in the stock(s) covered in this research report within 30 calendar days prior to the date of issue of this report; (2) will deal in or trade in the stock(s) covered in this research report 3 business days after the date of issue of this report; (3) serve as an officer of any of the Hong Kong listed companies covered in this report; and (4) have any financial interests in the Hong Kong listed companies covered in this report.

CMBIGM or its affiliate(s) have investment banking relationship with the issuers covered in this report in preceding 12 months.

CMBIGM Ratings BUY HOLD SELL NOT RATED	: Stock with potential return of over 15% over next 12 months : Stock with potential return of +15% to -10% over next 12 months : Stock with potential loss of over 10% over next 12 months : Stock is not rated by CMBIGM
OUTPERFORM	: Industry expected to outperform the relevant broad market benchmark over next 12 months
MARKET-PERFORM	: Industry expected to perform in-line with the relevant broad market benchmark over next 12 months
UNDERPERFORM	: Industry expected to underperform the relevant broad market benchmark over next 12 months

CMB International Global Markets Limited

Address: 45/F, Champion Tower, 3 Garden Road, Hong Kong, Tel: (852) 3900 0888 Fax: (852) 3900 0800

CMB International Global Markets Limited ("CMBIGM") is a wholly owned subsidiary of CMB International Capital Corporation Limited (a wholly owned subsidiary of China Merchants Bank)

Important Disclosures

There are risks involved in transacting in any securities. The information contained in this report may not be suitable for the purposes of all investors. CMBIGM does not provide individually tailored investment advice. This report has been prepared without regard to the individual investment objectives, financial position or special requirements. Past performance has no indication of future performance, and actual events may differ materially from that which is contained in the report. The value of, and returns from, any investments are uncertain and are not guaranteed and may fluctuate as a result of their dependence on the performance of underlying assets or other variable market factors. CMBIGM recommends that investors should independently evaluate particular investments and strategies, and encourages investors to consult with a professional financial advisor in order to make their own investment decisions.

This report or any information contained herein, have been prepared by the CMBIGM, solely for the purpose of supplying information to the clients of CMBIGM or its affiliate(s) to whom it is distributed. This report is not and should not be construed as an offer or solicitation to buy or sell any security or any interest in securities or enter into any transaction. Neither CMBIGM nor any of its affiliates, shareholders, agents, consultants, directors, officers or employees shall be liable for any loss, damage or expense whatsoever, whether direct or consequential, incurred in relying on the information contained in this report. Anyone making use of the information contained in this report.

The information and contents contained in this report are based on the analyses and interpretations of information believed to be publicly available and reliable. CMBIGM has exerted every effort in its capacity to ensure, but not to guarantee, their accuracy, completeness, timeliness or correctness. CMBIGM provides the information, advices and forecasts on an "AS IS" basis. The information and contents are subject to change without notice. CMBIGM may issue other publications having information and/ or conclusions different from this report. These publications reflect different assumption, point-of-view and analytical methods when compiling. CMBIGM may make investment decisions or take proprietary positions that are inconsistent with the recommendations or views in this report.

CMBIGM may have a position, make markets or act as principal or engage in transactions in securities of companies referred to in this report for itself and/or on behalf of its clients from time to time. Investors should assume that CMBIGM does or seeks to have investment banking or other business relationships with the companies in this report. As a result, recipients should be aware that CMBIGM may have a conflict of interest that could affect the objectivity of this report and CMBIGM will not assume any responsibility in respect thereof. This report is for the use of intended recipients only and this publication, may not be reproduced, reprinted, sold, redistributed or published in whole or in part for any purpose without prior written consent of CMBIGM. Additional information on recommended securities is available upon request.

For recipients of this document in the United Kingdom

This report has been provided only to persons (I)falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended from time to time)("The Order") or (II) are persons falling within Article 49(2) (a) to (d) ("High Net Worth Companies, Unincorporated Associations, etc.,) of the Order, and may not be provided to any other person without the prior written consent of CMBIGM.

For recipients of this document in the United States

CMBIGM is not a registered broker-dealer in the United States. As a result, CMBIGM is not subject to U.S. rules regarding the preparation of research reports and the independence of research analysts. The research analyst who is primary responsible for the content of this research report is not registered or qualified as a research analyst with the Financial Industry Regulatory Authority ("FINRA"). The analyst is not subject to applicable restrictions under FINRA Rules intended to ensure that the analyst is not affected by potential conflicts of interest that could bear upon the reliability of the research report. This report is intended for distribution in the United States solely to "major US institutional investors", as defined in Rule 15a-6 under the US, Securities Exchange Act of 1934, as amended, and may not be furnished to any other person in the United States. Each major US institutional investor that receives a copy of this report by its acceptance hereof represents and agrees that it shall not distribute or provide this report to any other person. Any U.S. recipient of this report wishing to effect any transaction to buy or sell securities based on the information provided in this report should do so only through a U.S.-registered broker-dealer.

For recipients of this document in Singapore

This report is distributed in Singapore by CMBI (Singapore) Pte. Limited (CMBISG) (Company Regn. No. 201731928D), an Exempt Financial Adviser as defined in the Financial Advisers Act (Cap. 110) of Singapore and regulated by the Monetary Authority of Singapore. CMBISG may distribute reports produced by its respective foreign entities, affiliates or other foreign research houses pursuant to an arrangement under Regulation 32C of the Financial Advisers Regulations. Where the report is distributed in Singapore, CMBISG accepts legal responsibility for the contents of the report or an Institutional Investor, as defined in the Securities and Futures Act (Cap. 289) of Singapore, CMBISG accepts legal responsibility for the contents of the report to such persons only to the extent required by law. Singapore recipients should contact CMBISG at +65 6350 4400 for matters arising from, or in connection with the report.