

China AI

Smart city bidding to pick up in 2H22

2Q22 public security projects bidding was down -4% YoY due to Omicron spread across China but we expect bidding to accelerate in 2H22 as gov't focuses on boosting economy. Meanwhile, we think SenseTime's recent sell-off is not fundamental driven and China AI outlook remains promising. Among China AI, we like Hikvision most for its successful diversification in innovative businesses including Smart Home, Robotics etc. We think valuation gap between hikvision and Dahua will continue to widen. For SenseTime, we lower target price as the premium multiple driven by AI companies scarcity and free float is vanishing with 1) more AI companies listed on STAR board and 2) lock-up expiry.

- 2Q22 public security projects bidding was down -4% YoY but we expect acceleration in 2H.** We observed China public security projects bidding number growth remained weak in 2Q22 at -4% YoY, similar to -6% YoY in 1Q22, according to CCGP. We attribute the slowdown to Omicron spread in China and we expect bidding no. to pick up gradually in 2H as gov't aims to boost economy post lockdown in 2H22. In FY21, To-Gov't revenue accounted for 24%/ 18%/ 46% of Hikvision/ Dahua/ SenseTime revenue respectively.
- SenseTime's recent sell-off is not sector fundamentals driven, China AI outlook remains promising.** SenseTime share price corrected by more than 50% after the 6-month lock-up ended on 30 Jun. On the same day, SenseTime announced that 28.44% of issued shares will be subject to lock-up until 29 Dec 2022 (12-month lock-up). This includes all Class A shares and 52% of total Class B shares held by management. Despite recent profit-taking by pre-IPO investors, we believe SenseTime share price weakness does not imply any changes in AI sector fundamentals and that China remains committed in developing world-class AI technology. According to IDC, China AI market size will grow at 24.4% CAGR in 2020-2025 to reach US\$18.43bn.
- Pecking order: Hikvision (BUY) > SenseTime (BUY) > Dahua (HOLD).** We expect Hikvision/ Dahua FY2Q22 revenue to grow at +11%/ +7% YoY respectively. For SenseTime, given a high base in 1H21, we expect SenseTime's FY1H22 revenue to grow at 16% YoY. Hikvision remains our top pick in China AI (valuation is attractive at around 2-SD below 3-year mean) and we like its revenue diversification with strong growth in innovative businesses (smart home/ robotics/ thermal etc.). We maintained Hikvision earnings forecast but cut Dahua's FY22E net profit by 6% to reflect the impact from lockdown in 2Q22. For SenseTime, we revised down our target price mainly on lower target multiple. Our previous premium multiple took into the account the scarcity in no. of listed AI companies and free float but we think the premium is narrowing with free float increased from 5.1% after IPO to 71.6% after the 6-month lock-up expiry. (Hikvision TP RMB57.10, Dahua TP RMB20.89 → RMB17.06, SenseTime TP HK\$7.84 → HK\$4.50).

Valuation Table

Company	Ticker	Rating	Mkt Cap (US\$ mn)	Price (LC)	TP (LC)	Up/down-side (%)	P/E FY23E	EV/ sales			ROE
								FY23E	FY23E	FY22E	
Hikvision	002415 CH	BUY	51,068	36.29	57.10	57%	17.9	3.4	25.9	26.8	
Dahua	002236 CH	HOLD	7,215	16.15	17.06	6%	11.7	1.3	15.9	16.7	
SenseTime	20 HK	BUY	11,743	2.75	4.50	65%	n.a.	9.5	-2.3	-2.7	
AIInnovation	2121 HK	NR	1,354	19.00	n.a.	n.a.	n.a.	5.1	-26.8	-20.4	
Cambricon	688256 CH	NR	3,735	62.47	n.a.	n.a.	n.a.	22.7	-17.6	-15.0	
Arcsoft	688088 CH	NR	1,778	29.36	n.a.	n.a.	72.1	14.3	6.3	9.1	

Source: Company data, Bloomberg, CMBIGM estimates

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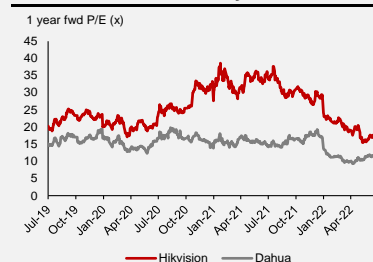
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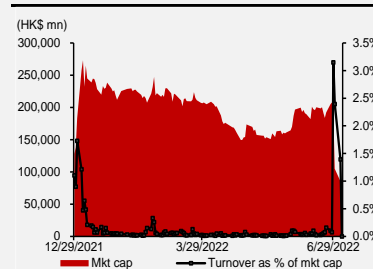


Hikvision vs. Dahua 1yr fwd P/E



Source: Bloomberg, CMBIGM

SenseTime turnover vs. mkt cap



Source: Bloomberg, CMBIGM

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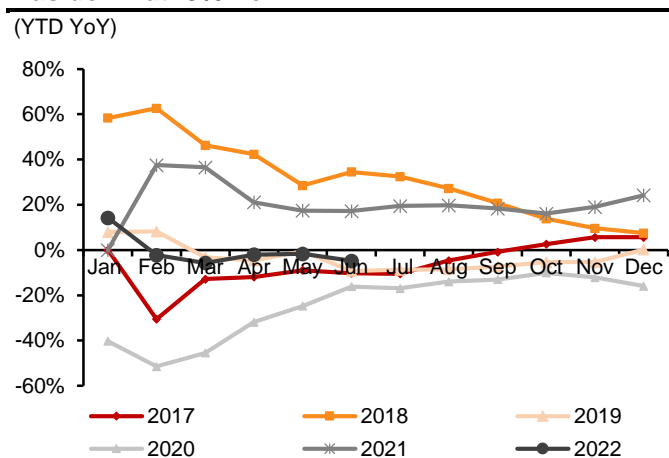
- Hikvision (002415 CH) - "Short term margin pain amid business transformation" – 17 Apr 2022 ([link](#))
- China AI - "AI leaders taking different expansion paths" – 10 Feb 2022 ([link](#))

Public security demand was slow in 2Q22, affected by Omicron spread in China

We observed that China public security projects tendering and bidding number remained weak in 2Q22 at -4% YoY, similar to -6% YoY in 1Q22. We believe the Omicron spread in 1H21 has affected government projects' bidding pace. With relieving restrictive measures, we expect public security projects bidding growth to pick up again in 2H22.

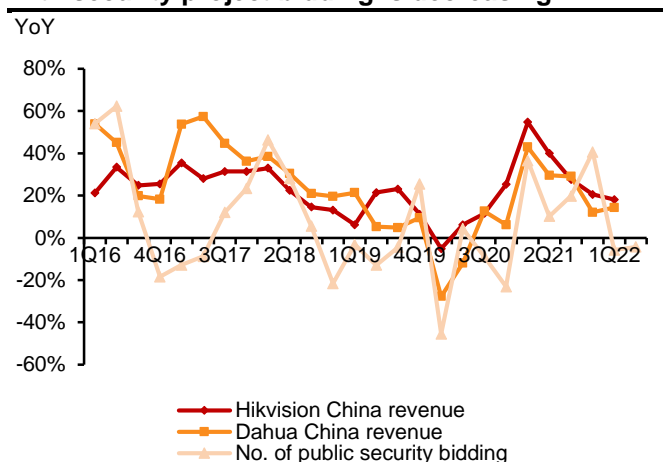
Hikvision and Dahua derived 24%/ 18% of FY21 revenue from To-Gov't projects as they continue to diversify with innovative businesses including smart home products, robotics, thermal camera etc. For SenseTime, 46% of revenue was from Smart City projects in FY21.

Figure 1: YTD no. of public security projects bidding was down at -5% YoY



Source: CCGP, CMBIGM

Figure 2: Hikvision and Dahua revenue fluctuation with security project bidding is decreasing



Source: CCGP, Company data, CMBIGM

Figure 3: SenseTime has larger exposure to To-Gov't projects than Hikvision and Dahua

	Hikvision	Dahua	SenseTime
FY21 (RMB mn)	002415 CH	002236 CH	20 HK
Revenue	81,420	32,835	4,700
- To G revenue ^	16,629	5,997	2,143
...as % of revenue	20%	18%	46%
No. of R&D staff	52,751	11,388	4,274
R&D spending	8,252	3,452	3,614
...as % of revenue	10.1%	10.5%	76.9%
Market share (1H21) *	7%	2%	21%

Source: IDC, CMBIGM

^ SenseTime includes Smart City business

* China computer vision software market share, IDC

SenseTime's recent sell-off is not fundamental driven

SenseTime share price corrected by more than 50% after the 6-month lock-up ended on 30 Jun. On the same day, SenseTime announced that 28.44% of all the issued shares will be subject to lock-up until 29 Dec 2022 (12-month lock-up). This includes shares owned by management in the form of,

- 1) All the issued Class A shares (lock-up was set at 12 months during IPO)
- 2) 2,002.2mn Class B shares (52% of total Class B shares held by mgmt.)

We think recent sell-off is driven by profit-taking by pre-IPO investors and it does not imply any changes in AI sector fundamentals. We believe that China remains committed in developing world-class AI technology. According to IDC, China AI market size will grow at 24.4% CAGR in 2020-2025 to reach US\$18.43bn.

Figure 4: SenseTime Shareholding structure

Shareholders	No. of Class A shares (mn)	No. of Class B shares (mn)	Shareholding % pre-IPO	Shareholding % post-IPO
Prof. Tang	6,906.1	1,891.8*	27.7%	26.3%
Dr. Xu Li	286.3	565.4	2.7%	2.5%
Dr. Wang	232.2	302.1	1.7%	1.6%
Mr. Xu Bing	104.2	252.2	1.1%	1.1%
Total owned by mgmt..	7,528.8	3,011.6		
Softbank		4,730.5	14.9%	14.1%
ESOP		2,749.5	8.7%	8.2%
Alibaba		2,411.0	7.6%	7.2%
Others		13,076.0	35.7%	33.9%
Shares outstanding	7,528.8	24,253.6		

Source: Company data, CMBIGM

* Prof. Tang is indirectly interested in and controls 1,891,820,000 Class B through SenseFancy. SenseFancy is the general partner of each of SenseSmart, SenseVision, SenseForest, SenseLight, SensePoint, SenseSpace and SenseBlue where each of their limited partners are Independent Third Parties.

Figure 5: Lock-up period

Shareholders	No. of shares (mn)	Shareholding %	Lock-up
- Class A owned by mgmt.	7,528.8	22.5%	12 months till 29 Dec 2022
- Class B owned by mgmt. *	3,869.3	11.5%	of which 2,002.2mn (52%) shares will be 12 months till 29 Dec 2022
- Class B owned by other pre-IPO investors	20,384.4	60.8%	6 months till 30 Jun 2022
	1,033.3	3.1%	6 months till 30 Jun 2022
- Class B owned by IPO cornerstone investors			
- Class B owned by other IPO investors	691.7	2.1%	
Total share outstanding (mn)	33,507.4		

Source: Company data, CMBIGM

* includes shares in ESOP but excludes Class B shares owned by Prof. Tang as Prof. Tang acted as general partner of the underlying entities and those shares are owned by independent third parties.

Figure 6: Trading volume vs. free float since lock-up expired

Date	Total shares outstanding (mn)	Free float shares (mn)	Trading volume (mn)	as % of free float
30-Jun-22	33,507	23,976.4	1,902.7	7.9%
4-Jul-22	33,507	23,976.4	942.3	3.9%

Source: Company data, CMBIGM

Figure 7: SenseTime financing history

Series	Shares issued (mn)	Cost per share paid to the Company		Discount to IPO price
		US\$	HK\$	
Series A-1	475	0.0200	0.16	96%
Series A-2	55	0.0769	0.60	85%
Series B-1	301	0.0999	0.77	80%
Series B-2	2,358	0.1152	0.89	77%
Series B-3	243	0.1212	0.94	76%
Series C-1	603	0.1212	0.94	76%
Series C-2	2,895	0.1840	1.43	63%
Series C+	2,761	0.2331	1.81	53%
Series C++	2,307	0.2836	2.20	43%
Series C-prime	1,825	0.3150	2.44	37%
Series D	4,525	0.3536	2.74	29%
Series D+	1,717	0.4094	3.17	18%
IPO price			3.85	0%

Source: Company data, CMBIGM (forex assumption: US\$ 1 = HK\$7.75, HK\$1 = RMB0.83)

* as of 31 Dec 2021

Hikvision 2Q22 preview

Figure 8: Hikvision CMBI estimates vs. consensus

RMB mn	FY2Q22			2022			2023		
	CMBI	Street	Diff	CMBI	Street	Diff	CMBI	Street	Diff
Sales	22,093	22,776	-3%	93,872	95,448	-2%	109,644	113,573	-3%
Gross profit	10,029	10,211	-2%	41,724	42,326	-1%	49,008	50,459	-3%
OP Profit	3,928	4,317	-9%	19,363	21,001	-8%	23,325	25,128	-7%
PBT	4,407	5,161	-15%	21,404	21,647	-1%	25,459	25,912	-2%
Net profit	3,937	4,233	-7%	18,574	19,015	-2%	21,982	22,783	-4%
EPS	0.42	0.41	2%	1.97	2.02	-3%	2.33	2.44	-4%
Margins									
GM	45.4%	44.8%	56 bps	44.4%	44.3%	10 bps	44.7%	44.4%	27 bps
OPM	17.8%	19.0%	-117 bps	20.6%	22.0%	-138 bps	21.3%	22.1%	-85 bps
PBT margin	19.9%	22.7%	-271 bps	22.8%	22.7%	12 bps	23.2%	22.8%	40 bps
Net margin	17.8%	18.6%	-76 bps	19.8%	19.9%	-14 bps	20.0%	20.1%	-1 bps

Source: Company data, Bloomberg, CMBIGM estimates

Figure 9: Hikvision quarterly operating model

RMB mn	4Q20	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22E	3Q22E	4Q22E
Revenues	21,482	13,988	19,914	21,727	25,791	16,522	22,093	24,767	30,491
Gross Profit	9,495	6,549	9,148	10,078	10,316	7,224	10,029	10,959	13,513
Operating profit	5,126	2,569	3,899	4,826	5,266	2,548	3,928	5,286	7,601
Net profit (loss)	4,947	2,169	4,312	4,484	5,835	2,284	3,937	5,173	7,174
EPS (RMB)	0.53	0.23	0.46	0.48	0.62	0.24	0.42	0.55	0.76
Margins									
Gross margin	44.2%	46.8%	45.9%	46.4%	40.0%	43.7%	45.4%	44.2%	44.3%
Operating margin	23.9%	18.4%	19.6%	22.2%	20.4%	15.4%	17.8%	21.3%	24.9%
Net margin	23.0%	15.5%	21.7%	20.6%	22.6%	13.8%	17.8%	20.9%	23.5%
Growth (QoQ)									
Revenues	21%	-35%	42%	9%	19%	-36%	34%	12%	23%
Gross Profit	19%	-31%	40%	10%	2%	-30%	39%	9%	23%
Operating profit	32%	-50%	52%	24%	9%	-52%	54%	35%	44%
Net profit (loss)	30%	-56%	99%	4%	30%	-61%	72%	31%	39%
Growth (YoY)									
Revenues	21%	48%	34%	22%	20%	18%	11%	14%	18%
Gross Profit	18%	47%	20%	26%	9%	10%	10%	9%	31%
Operating profit	41%	74%	26%	24%	3%	-1%	1%	10%	44%
Net profit (loss)	13%	45%	38%	18%	18%	5%	-10%	14%	22%

Source: Company data, CMBIGM estimates

Dahua 2Q22 preview

Figure 10: Earnings revision

RMB mn	2022E			2023E		
	New	Old	%Diff	New	Old	%Diff
Sales	37,486	37,728	-1%	43,837	43,016	2%
Gross profit	14,388	15,344	-6%	17,233	17,079	1%
OP Profit	3,935	4,336	-9%	4,776	4,758	0%
PBT	4,329	4,676	-7%	5,175	5,104	1%
Net profit	3,929	4,171	-6%	4,662	4,597	1%
EPS	1.31	1.39	-6%	1.56	1.54	1%
Margins						
GM	38.4%	39.3%	-87 bps	39.3%	39.7%	-39 bps
OPM	10.5%	10.6%	-8 bps	10.9%	11.1%	-17 bps
PBT margin	11.5%	10.9%	65 bps	11.8%	11.9%	-6 bps
Net margin	10.5%	9.9%	58 bps	10.6%	10.7%	-5 bps

Source: Company data, CMBIGM

Figure 11: Dahua CMBI estimates vs. consensus

RMB mn	FY2Q22			2022			2023		
	CMBI	Street	Diff	CMBI	Street	Diff	CMBI	Street	Diff
Sales	8,997	9,033	-0%	37,486	38,098	-2%	43,837	44,267	-1%
Gross profit	3,691	3,480	6%	14,388	15,071	-5%	17,233	17,667	-2%
OP Profit	1,234	854	45%	3,935	4,596	-14%	4,776	5,600	-15%
PBT	1,383	871	59%	4,329	4,467	-3%	5,175	5,465	-5%
Net profit	1,238	878	41%	3,929	4,126	-5%	4,662	5,017	-7%
EPS	0.4	0.3	30%	1.3	1.4	-6%	1.6	1.7	-8%
Margins									
GM	41.0%	38.5%	250 bps	38.4%	39.6%	-118 bps	39.3%	39.9%	-60 bps
OPM	13.7%	9.4%	427 bps	10.5%	12.1%	-157 bps	10.9%	12.7%	-175 bps
PBT margin	15.4%	9.6%	574 bps	11.5%	11.7%	-18 bps	11.8%	12.3%	-54 bps
Net margin	13.8%	9.7%	404 bps	10.5%	10.8%	-35 bps	10.6%	11.3%	-70 bps

Source: Company data, Bloomberg, CMBIGM estimates

Figure 12: Dahua quarterly operating model

RMB mn	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22E	3Q22E	4Q22E
Revenues	5,114	8,391	7,980	11,350	5,848	8,997	8,809	13,832
Gross Profit	2,092	3,502	3,123	4,060	2,282	3,691	3,516	4,899
Operating profit	370	1,266	607	1,281	379	1,234	741	1,581
Net profit (loss)	348	1,296	756	979	356	1,238	888	1,447
EPS (RMB)	0.43	0.25	0.33	0.12	0.41	0.30	0.48	0.15
Margins								
Gross margin	40.9%	41.7%	39.1%	35.8%	39.0%	41.0%	39.9%	35.4%
Operating margin	7.2%	15.1%	7.6%	11.3%	6.5%	13.7%	8.4%	11.4%
Net margin	6.8%	15.4%	9.5%	8.6%	6.1%	13.8%	10.1%	10.5%
Growth (QoQ)								
Revenues	-50%	64%	-5%	42%	-48%	54%	-2%	57%
Gross Profit	-48%	67%	-11%	30%	-44%	62%	-5%	39%
Operating profit	-72%	242%	-52%	111%	-70%	226%	-40%	114%
Net profit (loss)	-68%	273%	-42%	30%	-64%	248%	-28%	63%
Growth (YoY)								
Revenues	46%	32%	26%	10%	14%	7%	10%	22%
Gross Profit	21%	16%	23%	1%	9%	5%	13%	21%
Operating profit	109%	23%	18%	-5%	2%	-3%	22%	23%
Net profit (loss)	10%	24%	-48%	-9%	2%	-4%	18%	48%

Source: Company data, Bloomberg, CMBIGM estimates

SenseTime 1H22 preview

Figure 13: Earnings revision

RMB mn	FY22E			FY23E			FY24E		
	New	Old	%Diff	New	Old	%Diff	New	Old	%Diff
Sales	5,639	5,815	-3%	7,880	8,131	-3%	10,297	10,601	-3%
Gross profit	3,862	3,987	-3%	5,301	5,472	-3%	6,789	6,993	-3%
OP Profit	-2,107	-2,033	4%	-2,187	-2,067	6%	-2,154	-2,006	7%
Adj. EBITDA	-598	-100	496%	89	535	-83%	493	971	-49%
Net profit	-1,646	-1,376	20%	-1,675	-1,495	12%	-1,796	-1,568	15%
EPS	-0	-0.04	20%	-0	-0.04	12%	-0	-0.05	15%
Margins									
GM	68.5%	68.6%	-6 bps	67.3%	67.3%	-3 bps	65.9%	66.0%	-4 bps
OPM	-37.4%	-35.0%	-242 bps	-27.8%	-25.4%	-233 bps	-20.9%	-18.9%	-200 bps
Adj. EBITDA margin	-10.6%	-1.7%	-887 bps	1.1%	6.6%	-545 bps	4.8%	9.2%	-437 bps
Net margin	-29.2%	-23.7%	-553 bps	-21.2%	-18.4%	-286 bps	-17.4%	-14.8%	-265 bps

Source: Company data, Bloomberg, CMBIGM estimates

Figure 14: SenseTime CMBI estimates vs. consensus

RMB mn	2022			2023		
	CMBI	Street	Diff	CMBI	Street	Diff
Sales	5,639	6,200	-9%	7,880	8,605	-8%
Gross profit	3,862	4,310	-10%	5,301	5,960	-11%
Operating profit	-2,107	-2,582	-18%	-2,187	-2,046	7%
Adj. EBITDA	-598	-1,904	-69%	89	-1,726	-105%
Net profit	-1,646	-3,057	-46%	-1,675	-2,643	-37%
EPS	-0.05	-0.09	-47%	-0.05	-0.08	-37%
Margins						
GM	68.5%	69.5%	-102 bps	67.3%	69.3%	-199 bps
OPM	-37.4%	-41.6%	428 bps	-27.8%	-23.8%	-398 bps
Adj. EBITDA margin	-10.6%	-30.7%	2011 bps	1.1%	-20.1%	2118 bps
Net margin	-29.2%	-49.3%	2012 bps	-21.2%	-30.7%	946 bps

Source: Company data, Bloomberg, CMBIGM estimates

Figure 15: SenseTime semi-annual operating model

RMB mn	1H20	2H20	1H21	2H21	1H22E	2H22E
Revenues	861	2,585	1,652	3,048	1,914	3,725
Gross Profit	621	1,811	1,205	2,073	1,378	2,484
Operating profit	(1,874)	(274)	(2,302)	(1,014)	(1,034)	(1,073)
Net profit (loss)	(5,324)	(6,834)	(3,703)	(13,437)	(803)	(843)
EPS (RMB)	(0.60)	(0.75)	(0.39)	(0.40)	(0.02)	(0.03)
Margins						
Gross margin	72.1%	70.1%	73.0%	68.0%	72.0%	66.7%
Operating margin	-217.6%	-10.6%	-139.4%	-33.3%	-54.0%	-28.8%
Net margin	-618.2%	-264.4%	-224.2%	-440.8%	-42.0%	-22.6%
Growth (QoQ)						
Revenues		200.2%	-36.1%	84.6%	-37.2%	94.6%
Gross Profit		191.7%	-33.5%	72.0%	-33.5%	80.3%
Operating profit		n.a.	n.a.	n.a.	n.a.	n.a.
Net profit (loss)		n.a.	n.a.	n.a.	n.a.	n.a.
Growth (YoY)						
Revenues			91.8%	17.9%	15.9%	22.2%
Gross Profit			94.1%	14.4%	14.3%	19.9%
Operating profit			n.a.	n.a.	n.a.	n.a.
Net profit (loss)			n.a.	n.a.	n.a.	n.a.

Source: Company data, CMBIGM estimates

Valuation

Hikvision (002145 CH, BUY, TP RMB57.10)

Maintain BUY with unchanged target price of RMB57.10. We derived our target price from 29x FY22E P/E, 1-SD above its three-year mean. We believe Hikvision deserves a re-rating as supply chain risk is mitigated and new growth drivers (innovative businesses) are emerging. Also, Hikvision announced plan to spin off its smart home and robotics businesses on STAR board. We believe the spin-off could provide new financing channel to support IoT/ AI R&D.

Dahua (002236 CH, HOLD, Trim TP RMB20.89 → RMB17.06)

Maintain HOLD with new target price of RMB17.06 (prior RMB20.89), based on lowered 13x (prior 15x) FY22 P/E, 1-SD below its three year mean. We are less positive on Dahua than Hikvision given weaker R&D and lower revenue exposure in non-public security innovative business (only 9% of FY21 revenue vs. 15% for Hikvision). We expect valuation gap between Hikvision and Dahua to widen.

SenseTime (20 HK, BUY, Trim TP HK\$7.84 → HK\$4.50)

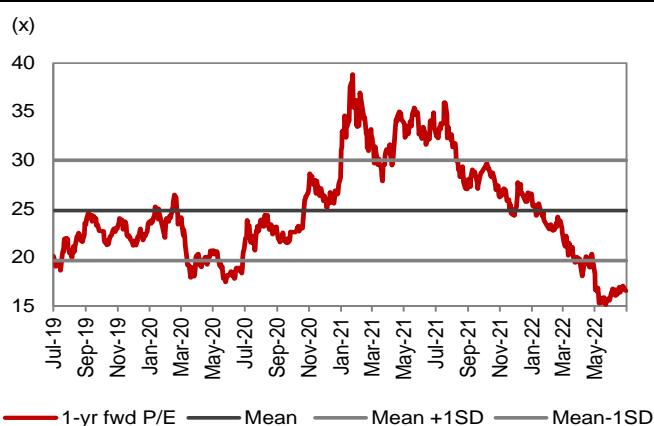
Maintain BUY with new target price of HK\$4.50, based on 19x (prior 34x) FY22E EV/Sales. Our target multiple is derived from the average of SenseTime closest peers including Cambricon Tech (AI chip leadership) and ArcSoft (pure AI software company). Our previous premium multiple took into account the business scale, scarcity in number of listed AI companies in China and free float. However, we think the premium is narrowing as 1) number of AI companies listed on HKEx and STAR board are increasing and 2) SenseTime lock-up period for pre-IPO investors has expired. Total free float (unlocked shares) rose from 2.1% after IPO to 71.6% after 6-month lock-up.

Figure 16: Peers' valuation

Company	Ticker	Rating	Mkt Cap (US\$ mn)	Price (LC)	TP (LC)	P/E FY23E	EV/sales FY23E	ROE FY22E	ROE FY23E	Sales CAGR FY21-24E	EPS CAGR FY21-24E
Hikvision	002415 CH	BUY	51,068	36.29	57.10	17.9	3.4	25.9	26.8	16%	13%
Dahua	002236 CH	HOLD	7,215	16.15	17.06	11.7	1.3	15.9	16.7	15%	23%
SenseTime	20 HK	BUY	11,743	2.75	4.50	n.a.	9.5	-2.3	-2.7	30%	n.a.
AlInnovation	2121 HK	NR	1,354	19.00	n.a.	n.a.	5.1	-26.8	-20.4	62%	-48%
Cambricon Tech	688256 CH	NR	3,735	62.47	n.a.	n.a.	22.7	-17.6	-15.0	43%	-14%
Arcsoft	688088 CH	NR	1,778	29.36	n.a.	72.1	14.3	6.3	9.1	29%	37%
					Mean	33.9	9.4	0.2	2.4	33%	2%
					Median	25.1	17.9	7.3	2.0	3.2	29%

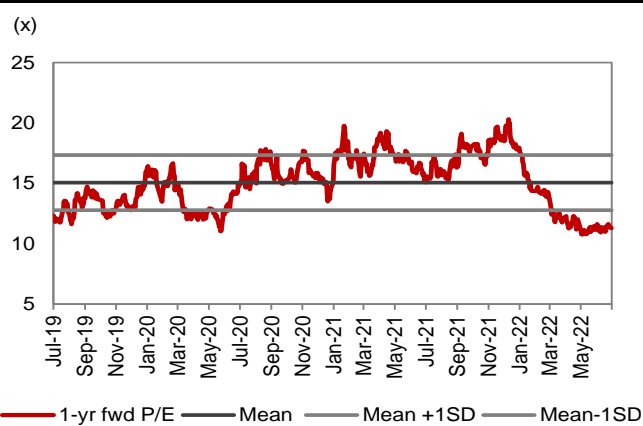
Source: Bloomberg, CMBIGM estimates

Figure 17: Hikvision 12M forward P/E chart



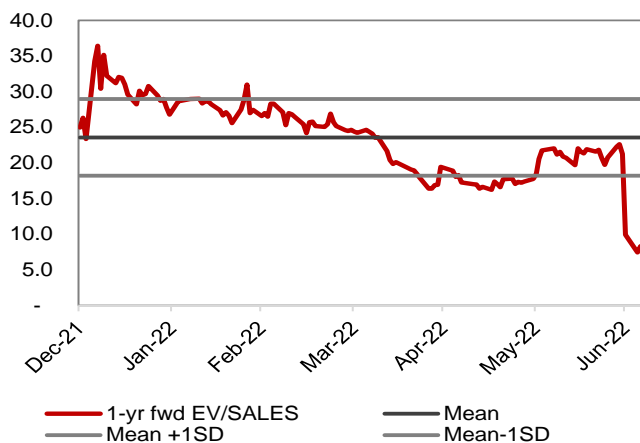
Source: Company data, CMBIGM, Bloomberg

Figure 18: Dahua 12M forward P/E chart



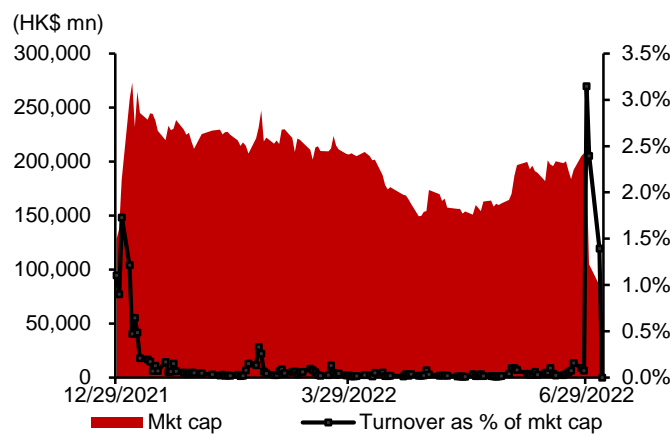
Source: Company data, CMBIGM, Bloomberg

Figure 19: SenseTime forward EV/sales



Source: Company data, CMBIGM, Bloomberg

Figure 20: SenseTime trading volume vs. mkt cap



Source: Company data, CMBIGM, Bloomberg

Financial Summary – Hikvision (002415 CH)

Income statement

YE 31 Dec (RMB mn)	FY20A	FY21A	FY22E	FY23E	FY24E
Revenue	63,503	81,420	93,872	109,644	126,871
Cost of sales	(33,958)	(45,329)	(52,148)	(60,636)	(69,731)
Gross profit	29,546	36,091	41,724	49,008	57,140
Selling exp	(7,378)	(8,586)	(9,757)	(11,013)	(12,452)
Admin exp	(1,790)	(2,132)	(2,453)	(2,868)	(3,317)
R&D exp	(6,379)	(8,252)	(9,528)	(11,070)	(12,848)
Other operating exp.	(416)	(561)	(624)	(733)	(838)
Operating profit	13,583	16,559	19,363	23,325	27,684
Finance costs	(396)	133	91	289	369
Other non-oper exp.	2,086	1,776	1,950	1,846	(47)
Pre-tax profit	15,273	18,468	21,404	25,459	28,005
Income tax expense	(1,595)	(957)	(2,211)	(2,546)	(2,801)
Minority interests	(293)	(710)	(619)	(931)	(986)
Net profit to S/H	13,386	16,800	18,574	21,982	24,218

Cash flow summary

YE 31 Dec (RMB mn)	FY20A	FY21A	FY22E	FY23E	FY24E
Net profit	13,386	16,800	18,569	21,982	24,218
Depreciation/amortization	845	892	1,690	1,900	2,081
Change in working capital	597	(7,081)	(4,974)	12,642	(3,246)
Others	1,260	2,097	810	931	986
Net cash from operating	16,088	12,709	16,095	37,455	24,040
Capex	(2,004)	(3,098)	(2,976)	(3,114)	(3,014)
Other	(551)	(58)	116	0	0
Net cash from investing	(2,555)	(3,156)	(2,860)	(3,114)	(3,014)
Net borrowings	2,049	(1,842)	1,151	(1,587)	459
Dividend paid	(6,542)	(7,475)	(8,490)	(9,384)	(11,108)
Other	(189)	(791)	2,273	(931)	(986)
Net cash from financing	(4,681)	(10,108)	(5,066)	(11,90)	(11,635)
Net change in cash	8,852	(556)	8,169	22,440	9,390
Cash at beginning of the year	27,072	35,460	34,722	42,856	65,296
Exchange difference	(464)	(182)	(35)	0	0
Cash at the end of the year	35,460	34,722	42,856	65,296	74,686

Balance sheet

YE 31 Dec (RMB mn)	FY20A	FY21A	FY22E	FY23E	FY24E
Current assets	74,763	86,019	102,598	133,778	155,100
Cash & equivalents	35,460	34,722	42,856	65,296	74,686
Account receivables	24,098	28,563	36,132	40,497	46,916
Inventory	11,478	17,974	18,671	21,982	26,650
Other current assets	3,727	4,760	4,939	6,003	6,848
Non-current assets	13,939	17,845	19,197	20,411	21,344
PPE	7,301	9,019	10,427	11,641	12,575
Intangible assets	1,634	1,665	1,658	1,658	1,658
Other non-current assets	5,003	7,162	7,112	7,112	7,112
Total assets	88,702	103,864	121,795	154,189	176,444
Current liabilities	31,225	33,292	37,934	58,392	67,399
ST borrowings	7,507	4,672	5,849	4,925	5,246
Account payables	14,631	17,230	19,044	37,934	44,126
Accrued expense	6,173	7,888	8,802	10,019	12,181
Other current liabilities	2,914	3,502	4,238	5,514	5,847
Non-current liabilities	2,997	5,178	8,036	7,374	7,512
LT borrowings	1,961	3,284	3,225	2,563	2,701
Other non-current liabilities	1,036	1,894	4,811	4,811	4,811
Total liabilities	34,222	38,470	45,970	65,766	74,911
Share capital	9,343	9,336	9,433	9,433	9,433
Capital surplus	5,179	5,404	8,411	8,411	8,411
Retained earnings	40,479	49,821	59,901	72,499	85,609
Other reserves	(1,207)	(1,100)	(4,014)	(4,014)	(4,014)
Minority interest	685	1,934	2,094	2,094	2,094
Total equity	53,794	63,461	73,731	86,329	99,439
Total liab. and equity	88,016	101,931	119,701	152,095	174,350

Key ratios

YE 31 Dec	FY20A	FY21A	FY22E	FY23E	FY24E
Revenue mix					
Core camera solution	88%	80%	77%	74%	71%
Construction	3%	5%	5%	5%	4%
Innovative business	10%	15%	18%	22%	24%
Growth (%)					
Revenue	10%	28%	15%	17%	16%
Operating profit	18%	22%	17%	20%	19%
Net profit	8%	26%	11%	18%	10%
EPS	8%	26%	9%	18%	10%
Margin (%)					
Gross margin	46.5%	44.3%	44.4%	44.7%	45.0%
Operating margin	21.4%	20.3%	20.6%	21.3%	21.8%
Net profit margin	21.1%	20.6%	19.8%	20.0%	19.1%
Balance sheet ratio					
Current ratio (x)	2.39	2.58	2.70	2.29	2.30
Receivable turnover days	136	118	126	128	126
Inventory turnover days	65	66	71	68	70
Payable turnover days	157	139	133	126	127
Net debt to equity	net cash	net cash	net cash	net cash	net cash
Profitability (%)					
ROE	27.1%	28.7%	27.1%	27.5%	26.1%
ROIC	42.7%	44.9%	39.8%	51.1%	66.5%
Per share data (RMB)					
EPS (RMB)	1.43	1.80	1.97	2.33	2.57
DPS (RMB)	0.70	0.80	0.90	0.99	1.18
BVPS (RMB)	5.76	6.80	7.82	9.15	10.54

Source: Company data, CMBIS estimates

Financial Summary – Dahua (002236 CH)

Income statement

YE 31 Dec (RMB mn)	FY20A	FY21A	FY22E	FY23E	FY24E
Revenue	26,466	32,835	37,486	43,837	50,435
Cost of sales	(15,164)	(20,059)	(23,098)	(26,604)	(30,519)
Gross profit	11,302	12,777	14,388	17,233	19,917
Selling exp	(4,291)	(4,664)	(5,340)	(6,253)	(6,699)
Admin exp	(785)	(955)	(1,034)	(1,215)	(1,401)
R&D exp	(2,998)	(3,452)	(3,865)	(4,758)	(5,089)
Other operating exp.	(162)	(183)	(215)	(230)	(277)
Operating profit	3,066	3,523	3,935	4,776	6,452
Finance costs	58	57	(62)	43	(130)
Other non-oper exp.	1,125	(111)	457	356	419
Pre-tax profit	4,249	3,470	4,329	5,175	6,741
Income tax expense	(314)	(58)	(392)	(518)	(472)
Minority interests	(32)	(33)	(9)	4	5
Net profit to S/H	3,903	3,378	3,929	4,662	6,274

Cash flow summary

YE 31 Dec (RMB mn)	FY20A	FY21A	FY22E	FY23E	FY24E
Net profit	3,903	3,378	3,929	4,662	6,274
Depreciation/amortization	331	393	785	785	785
Change in working capital	(186)	(2,128)	(7,411)	449	(4,743)
Others	354	85	183	(4)	(5)
Net cash from operating	4,402	1,728	(2,514)	5,892	2,312
Capex	(642)	(1,227)	(794)	(658)	(757)
Other	452	(627)	544	0	0
Net cash from investing	(190)	(1,855)	(250)	(658)	(757)
Net borrowings	715	1,374	1,961	338	268
Dividend paid	(399)	(803)	(809)	(940)	(1,116)
Other	53	(77)	(161)	4	5
Net cash from financing	369	494	991	(599)	(842)
Net change in cash	4,580	367	(1,772)	4,636	713
Cash at beginning of the year	3,084	7,472	7,731	5,937	10,573
Exchange difference	(193)	(107)	(22)	0	0
Cash at the end of the year	7,472	7,731	5,937	10,573	11,287

Balance sheet

YE 31 Dec (RMB mn)	FY20A	FY21A	FY22E	FY23E	FY24E
Current assets	29,112	33,505	39,568	45,053	54,059
Cash & equivalents	7,472	7,731	5,937	10,573	11,287
Account receivables	13,090	15,494	23,041	22,613	28,554
Inventory	4,928	6,810	7,579	8,775	10,946
Other current assets	3,622	3,469	3,011	3,091	3,272
Non-current assets	7,483	10,551	10,482	10,354	10,325
PPE	2,680	4,180	4,411	4,432	4,552
Intangible assets	482	673	558	409	260
Other non-current assets	4,321	5,698	5,514	5,514	5,514
Total assets	36,595	44,056	50,050	55,407	64,384
Current liabilities	14,662	17,412	19,938	21,236	24,786
ST borrowings	402	1,216	2,716	2,716	2,716
Account payables	9,703	11,803	12,127	13,518	16,371
Accrued expense	3,676	3,319	4,051	3,958	4,655
Other current liabilities	881	1,074	1,045	1,045	1,045
Non-current liabilities	1,729	2,473	2,880	3,218	3,486
LT borrowings	878	1,553	2,059	2,397	2,666
Other non-current liabilities	851	921	820	820	820
Total liabilities	16,391	19,886	22,818	24,454	28,272
Share capital	2,996	2,995	2,995	2,995	2,995
Capital surplus	1,990	2,940	2,948	2,948	2,948
Retained earnings	15,309	17,885	21,005	24,726	29,885
Other reserve	(521)	(201)	(190)	(190)	(190)
Minority interest	431	553	474	474	474
Total equity	19,773	23,618	26,758	30,479	35,638
Total liab. and equity	36,164	43,503	49,576	54,933	63,910

Key ratios

YE 31 Dec	FY20A	FY21A	FY22E	FY23E	FY24E
Revenue mix					
Domestic	60%	60%	61%	62%	63%
Overseas	40%	40%	39%	38%	37%
Growth (%)					
Domestic	-3%	24%	16%	18%	18%
Overseas	8%	24%	12%	15%	10%
Revenue	1%	24%	14%	17%	15%
Gross profit	5%	13%	13%	20%	16%
Operating profit	-1%	15%	12%	21%	35%
EPS	23%	-13%	16%	19%	35%
Profit & loss ratio (%)					
Gross margin	43%	39%	38%	39%	39%
Operating margin	11.6%	10.7%	10.5%	10.9%	12.8%
Net profit margin	14.7%	10.3%	10.5%	10.6%	12.4%
Balance sheet ratio					
Current ratio (x)	1.99	1.92	1.98	2.12	2.18
Receivable turnover days	182	159	188	190	185
Inventory turnover days	60	65	70	68	71
Payable turnover days	123	120	117	107	108
Net debt to equity	net cash	net cash	net cash	net cash	net cash
Profitability (%)					
ROE	22.0%	15.6%	15.6%	16.3%	19.0%
ROIC	24.0%	23.1%	16.8%	17.4%	22.4%
Per share data (RMB)					
EPS (RMB)	1.30	1.13	1.31	1.56	2.10
DPS (RMB)	0.13	0.27	0.27	0.31	0.37
BVPS (RMB)	6.60	7.89	8.94	10.18	11.90

Source: Company data, CMBIS estimates

Financial Summary – SenseTime (20 HK)

Income statement

YE 31 Dec (RMB mn)	FY20A	FY21A	FY22E	FY23E	FY24E
Revenue	3,446	4,700	5,639	7,880	10,297
Cost of sales	(1,014)	(1,423)	(1,777)	(2,579)	(3,508)
Gross profit	2,432	3,278	3,862	5,301	6,789
S&M	(537)	(682)	(693)	(879)	(1,096)
G&A	(1,590)	(2,298)	(1,638)	(2,014)	(2,379)
R&D	(2,454)	(3,614)	(3,639)	(4,596)	(5,467)
Adj. op. profit/ (loss)	(2,148)	(3,316)	(2,107)	(2,187)	(2,154)
Finance income	175	188	187	171	144
Finance expense	(113)	(34)	(23)	(50)	(46)
Other non-ops	(10,234)	(13,979)	141	281	162
Profit before tax	(12,319)	(17,142)	(1,802)	(1,785)	(1,894)
Income tax	161	(36)	153	107	95
Profit after tax	(12,158)	(17,177)	(1,649)	(1,678)	(1,800)
Non controlling Interest	(0)	(37)	(4)	(4)	(4)
Net profit	(12,158)	(17,140)	(1,646)	(1,675)	(1,796)
Adj. net profit	(878)	(1,381)	(1,204)	(1,152)	(983)

Cash flow summary

YE 31 Dec (RMB mn)	FY20A	FY21A	FY22E	FY23E	FY24E
Net Income	(12,319)	(17,142)	(1,802)	(1,785)	(1,894)
Depre. and amortization	570	658	927	1,473	1,672
Change In working capital	(1,290)	(2,026)	466	(604)	30
Others	11,810	16,024	(11)	(14)	(3)
Net cash from operating act.	(1,229)	(2,485)	(420)	(931)	(195)
Capex	(1,306)	(1,266)	(1,415)	(1,455)	(1,748)
Others	(5,765)	(283)	187	171	144
Net cash from investing act.	(7,070)	(1,548)	(1,227)	(1,284)	(1,604)
Equity financing	-	4,643	-	-	-
Change of debts	13,327	4,769	846	(84)	(90)
Dividend paid	-	-	-	-	-
Others	(141)	(34)	(23)	(50)	(46)
Net cash from financing act.	13,186	9,378	823	(134)	(136)
Net change in cash	4,886	5,345	(825)	(2,349)	(1,935)
Cash at the beg. of the year	6,673	11,428	16,530	15,705	13,356
Cash at the end of the year	11,428	16,530	15,705	13,356	11,421

Balance sheet

YE 31 Dec (RMB mn)	FY20A	FY21A	FY22E	FY23E	FY24E
Non-current assets	6,753	8,860	9,348	9,331	9,406
PPE, net	1,906	2,909	3,309	3,203	3,199
Intangible assets	108	225	313	401	481
Right-of-use assets	336	432	432	432	432
Others	4,402	5,294	5,294	5,294	5,294
Current assets	31,726	28,084	27,779	26,902	26,725
Cash & equivalents	11,428	16,530	15,705	13,356	11,421
Trade and other receivables	4,584	5,776	6,088	7,203	8,605
Inventories	716	496	704	1,060	1,416
Financial investments	-	273	273	273	273
Contract assets	22	19	19	19	19
Others	14,977	4,991	4,991	4,991	4,991
Current liabilities	9,822	2,795	3,775	4,631	6,390
Trade and other payables	1,724	2,290	3,234	4,002	5,682
Contract liabilities	244	172	207	289	377
Lease liabilities	110	155	155	155	155
Others	7,744	177	179	185	175
Non-current liabilities	49,589	2,162	1,942	1,870	1,809
Lease liabilities	184	229	229	229	229
Deferred tax liabilities	8	43	43	43	43
Contract liabilities	9	38	45	63	82
Others	49,388	1,852	1,625	1,535	1,454
Share capital	0	0	0	0	0
Reserves	(433)	70,078	71,150	71,150	71,150
Accumulated losses	(21,713)	(40,149)	(41,795)	(43,469)	(45,265)
Others	1,214	2,059	2,055	2,052	2,048
Total equity	(20,933)	31,987	31,410	29,732	27,933

Key ratios

YE 31 Dec	FY20A	FY21A	FY22E	FY23E	FY24E
Sales mix (%)					
Smart Business	43%	42%	41%	38%	35%
Smart City	40%	46%	46%	45%	42%
Smart Life	13%	9%	9%	13%	17%
Smart Auto	5%	4%	4%	4%	6%
Total	100%	100%	100%	100%	100%
Growth (YoY)					
Revenue	14%	36%	20%	40%	31%
Gross profit	41%	35%	18%	37%	28%
Operating profit	n.a.	n.a.	n.a.	n.a.	n.a.
Net profit	n.a.	n.a.	n.a.	n.a.	n.a.
Adj. net profit	n.a.	n.a.	n.a.	n.a.	n.a.
Margins					
Gross margin	71%	70%	68%	67%	66%
Adj. Operating margin	-62%	-71%	-37%	-28%	-21%
Net profit margin	-353%	-365%	-29%	-21%	-17%
Adj. net profit margin	-25%	-29%	-21%	-15%	-10%
Balance sheet ratio					
Net debt / equity ratio (%)	net cash	net cash	net cash	net cash	net cash
Current ratio	3.2	10.0	7.4	5.8	4.2
Returns (%)					
ROE	n.a.	n.a.	n.a.	n.a.	n.a.
ROIC	n.a.	n.a.	n.a.	n.a.	n.a.
Per share					
EPS (RMB)	(1.33)	(1.74)	(0.05)	(0.05)	(0.05)
BVPS (RMB)	(2.29)	0.95	0.94	0.89	0.83

Source: Company data, CMBIGM estimates

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