

AAC Technologies (2018 HK)

1Q22 miss; Margin pressure to continue into 2H

AAC's 1Q22 earnings decline of 61% YoY is 36%/15% below our/consensus expectations, mainly due to weaker product mix, optics destocking and gross margin pressure across the board. Revenue grew 14% YoY, above expectations, but blended GPM reached a historical low at 19.5% (vs 20.5% in 1Q21), given ASP pressure in acoustics/haptics/casings and higher mix of lower-margin CCM. Mgmt. guided 2Q22 revenue to decline QoQ on seasonality and GPM to improve gradually in 2H22E due to improving yield and better cost control, but we remain cautious on macro weakness and Covid-19 impact on smartphone demand. We cut FY22-24 EPS by 14-29% to factor in margin pressure and shipment downside. We estimate 2Q22E net profit will decline 62% YoY, and our FY22-24E EPS are 25-34% below consensus. Maintain HOLD and cut our SOTP-based TP to HK\$14.0, implying 15.3x FY22E P/E.

- 1Q22 GPM pressure across the board; optics destocking and CCM GPM drag.** By segment, 1Q22 acoustics grew 6.4% YoY on expansion into non-smartphone products, and haptics & casings grew 22% YoY given strong metal casing shipment (+39% YoY) and x-axis haptics motors (+21% YoY). However, we believe expansion into lower-margin business and optics destocking resulted in record-low gross margin in 1Q22. Acoustic GPM dropped to 26.6% (vs 37.4% in 1Q21) and ED&PM GPM declined to 19.6% (vs 25.5% in 1Q21). Blended optics GPM recovered QoQ to 3.5% in 1Q22 (vs -2.1% in 4Q21), mainly due to higher mix of lower-margin CCM revenue (75% of optics), but plastic lens shipment dropped 36% YoY to 93kk/m in 1Q (-36% YoY) and lower-margin HCM revenue grew three times YoY. Looking ahead, we remain conservative on optics ASP, continued destocking, WLG demand and overall profitability.
- More updates on diversification strategy in automotive and AR/VR.** AAC guided non-smartphone acoustics will account for 5% of Android acoustics in 2022, and automotive acoustics will start mass production in 2022. In addition, AAC's x-axis haptics motors achieved positive progress and entered AR/VR supply chain for a leading market player.
- Our FY22-24E EPS are 25-34% below consensus; too early to bottom-fish.** We believe optics competition will continue to intensify given ongoing weak smartphone demand and lack of upgrade. We trimmed FY22-24E EPS by 14-29% mainly for lower margin. Our FY22-24E EPS remain 25-34% below consensus. Our new SOTP-based TP is HK\$14.0, implying 15.3x FY22E P/E. Trading at 17.5x FY22E P/E, the stock is fairly valued in our view.

Earnings Summary

(YE 31 Dec)	FY20A	FY21A	FY22E	FY23E	FY24E
Revenue (RMB mn)	17,140	17,667	18,915	20,601	21,435
YoY growth (%)	(4.2)	3.1	7.1	8.9	4.0
Net income (RMB mn)	1,507	1,316	923	1,312	1,415
EPS (RMB)	1.25	1.09	0.76	1.09	1.17
YoY growth (%)	(32.1)	(12.6)	(29.9)	42.1	7.9
Consensus EPS (RMB)	1.27	1.09	1.11	1.46	0.00
P/E (x)	10.7	12.3	17.5	12.3	11.4
P/B (x)	0.7	0.7	0.7	0.7	0.7
Yield (%)	4.7	4.1	2.9	4.1	4.4
ROE (%)	6.9	5.8	4.0	5.6	5.9

Source: Company data, Bloomberg, CMBIGM estimates

HOLD (Maintain)

Target Price **HK\$14.0**
 (Previous TP **HK\$18.8**)
 Up/Downside **+12%**
 Current Price **HK\$18.46**

China Technology Sector

Alex Ng

(852) 3900 0881

alexng@cmbi.com.hk

Stock Data

Mkt. Cap. (HK\$m)	19,433
Avg. 3mths t/o (HK\$m)	171.08
52W High/Low (HK\$)	60.00/ 15.44
Total Issued Shares (mn)	1,209

Source: Bloomberg

Shareholding Structure

Chunyan Wu	21.80%
Zhengmin Pan	19.40%
JPMorgan Chase	11.87%

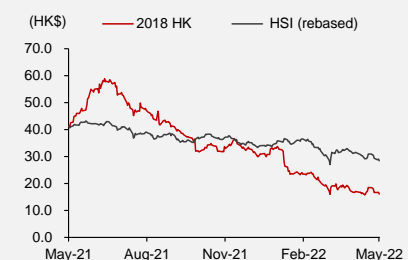
Source: HKEx

Share Performance

	Absolute	Relative
1-mth	0.0%	7.0%
3-mth	-28.9%	-10.6%
6-mth	-50.4%	-36.8%

Source: Bloomberg

12-mth Price Performance



Source: Bloomberg

Auditor: Deloitte Touche Tohmatsu

Related Reports:

- Not out of the woods yet; more downside to 2022 earnings – 24 Mar 2022
- 3Q21 in-line; Remain cautious on 4Q21 recovery - 12 Nov 2021
- 1Q21 in-line with better acoustics; Maintain HOLD on fair valuation – 17 May 2021

1Q22 Results Review

Figure 1: 1Q22 results review

RMB mn						CMBI		Consensus	
	1Q21	4Q21	1Q22	QoQ	YoY	1Q22E	Diff %	1Q22E	Diff %
Revenue	4,292	4,812	4,896	2%	14%	4,228	16%	4,261	15%
Gross profit	1,337	986	957	-3%	-28%	1,022	-6%	943	1%
Operating profit	640	261	239	-8%	-63%	363	-34%	271	-12%
Net profit	532	212	205	-3%	-61%	320	-36%	241	-15%
EPS (RMB)	0.44	0.18	0.17	-3%	-61%	0.26	-35%	0.19	-9%
Margin (%)									
Gross margin	31.1%	20.5%	19.5%	-0.9 ppt	-11.6 ppt	24.2%	-4.6 ppt	22.1%	-2.6 ppt
Operating margin	14.9%	5.4%	4.9%	-0.5 ppt	-10 ppt	8.6%	-3.7 ppt	6.4%	-1.5 ppt
Net margin	12.4%	4.4%	4.2%	-0.2 ppt	-8.2 ppt	7.6%	-3.4 ppt	5.7%	-1.5 ppt
Growth (%)									
Revenue (YoY)	21%	1%	14%			-1%		-1%	
Revenue (QoQ)	-10%	11%	0%			-12%		-11%	
Operating profit (YoY)	574%	-58%	-63%			-43%		-58%	
Net profit (YoY)	911%	-72%	-61%			-40%		-55%	

Source: Company data, Bloomberg, CMBIGM

Figure 2: Revenue breakdown

RMB mn	FY21	1Q22	2Q22E	3Q22E	4Q22E	FY22E	FY23E	FY24E
Revenue								
Dynamic components	8,582	2,230	2,052	2,228	2,202	8,712	8,878	9,348
MEMS components	1,013	237	262	279	262	1,041	1,145	1,259
Haptics & RF	5,639	1,501	1,153	1,209	1,952	5,815	7,241	7,321
Others (incl. optics)	2,433	928	822	741	856	3,347	3,337	3,507
Optics	2,389	924	812	739	837	3,311	3,301	3,471
Others	43	4	10	3	19	36	36	36
Total	17,667	4,896	4,289	4,457	5,272	18,915	20,601	21,435
Revenue mix								
Dynamic components	49%	46%	48%	50%	42%	46%	43%	44%
MEMS components	6%	5%	6%	6%	5%	6%	6%	6%
Haptics & RF	32%	31%	27%	27%	37%	31%	35%	34%
Others (incl. optics)	14%	19%	19%	17%	16%	18%	16%	16%
YoY Growth (%)								
Dynamic components	14%	6%	1%	1%	-2%	2%	2%	5%
MEMS components	-6%	-16%	10%	10%	10%	3%	10%	10%
Haptics & RF	-18%	22%	-5%	-13%	9%	3%	25%	1%
Others (incl. optics)	47%	35%	0%	87%	61%	38%	0%	5%
Optics	46%	36%	0%	87%	63%	39%	0%	5%
Total	3%	14%	-1%	5%	10%	7%	9%	4%
Gross profit margin								
Dynamic components	29.7%	26.6%	27.0%	28.0%	28.0%	27.4%	28.0%	28.0%
MEMS components	15.1%	14.1%	15.0%	15.0%	15.0%	14.8%	15.0%	15.5%
Haptics & RF	21.6%	19.6%	19.7%	19.8%	20.6%	20.0%	21.0%	21.1%
Others (incl. optics)	18.3%	3.9%	4.7%	6.5%	9.4%	6.1%	13.6%	14.2%
Optics	17.2%	3.5%	4.5%	6.5%	9.2%	22.0%	15.0%	14.2%
Total	24.7%	19.5%	20.0%	21.4%	21.6%	20.7%	22.5%	22.7%

Source: Company data, CMBIGM

Key takeaways from analyst call:

1Q22 review:

- Revenue came in at RMB 4.9bn, up 14% YoY. GPM was 19.5%, down 11.6pct YoY.
- Net profit was RMB 205mn, down 61.4% YoY.
- Business strategy shift to gain market share and diversify growth impacted ASP.
- Product mix and higher material & labor costs contributed to lower gross profit margin.

Optics segment:

- Revenue was RMB 924mn, up 36.4% YoY. GPM was 3.5%, down 24.0 pct YoY.
- Revenue was up 80.1% QoQ due to strong shipment growth of camera module.
- 1Q22 GPM was 3.5%, down 24.0 pct YoY, up 5.6 pct QoQ. Plastic lens GPM was 4.4%, up 10.5 pct QoQ due to low base in 4Q21 with one-time adjustment.
- GPM bottomed out in 1Q22, expect optical GPM improvement from June 2022 with better yield, production cost control and improved production efficiency.
- **DOI:** 5-6 months in 1Q22. Current DOI 3-4 months. Target 2-3 months. Destocking continues; expect further improvements in June 2022.
- **Price:** lens ASP down ~10% QoQ in 1Q22. Current ASP down at single-digit vs 1Q22. Lens ASP to rebound moderately in 3Q22.
- **Capacity:** lens cap at 120-150kk/month, current utilization at 50%-60%. Module capacity 20kk/month, current utilization at 90-100% with no capacity expansion plan.
- **Shipments:**
 - Plastic lens shipment was up 15.9% QoQ to 135mn, incl. internal sales.
 - Camera module shipment of 42mn, up 129% QoQ, with more high-end products. Product mix to further optimize, leading to higher overall ASP.
- **WLG:** 1G6P project MP in 2H22. Annual shipment target cut from 10kk to ~5kk due to lower high-end product demand.
- **VCM:** 50M AF will enter MP in 2022.

Acoustics segment:

- Revenue reached RMB 2.23bn, up 6.4% YoY. GPM was 26.6%, down 10.8 pct YoY due to ASP pressure from overseas customers.
- **Product diversification:** revenue from non-smartphone to account for 5%+ Android acoustics in 2022.
- **Automotive acoustics:** Several projects to start MP in 2022, and tuning & software algorithm project under development. Car headrest speaker will enter MP in 2023.

ED & PM segment:

- 1Q22 revenue was RMB 1.5bn, up 22.2% YoY with strong precision mechanics.
- GPM stood at 19.6%, down 5.9pct YoY on ASP pressure from overseas customers.
- Android haptics shipment was up 20.5% YoY due to share gain.
- Successful penetration into leading AR/VR players with x-axis haptics motor
- **Metal casing:** shipment was up 38.9% YoY due to share gain from key customers and smooth progress on tablet projects with oversea Android customers.
- **PM:** revenue was up 52% YoY on share gain from overseas customers by leveraging Toyo Precision.

MEMS segment:

- 1Q22 revenue was RMB 238mn, down 16.1% YoY. GPM was 14.1%, down 2.6 pct YoY due to changes in product portfolio and delay in key customer's demand.
- MEMS microphone shipment grew 27.8% YoY with increasing market share.
- Future strategy: further penetration into price-for-value phone segment, TWS and notebook markets to strengthen the market position.

2Q22 Guidance:

- 2Q22 revenue will be lower QoQ due to seasonality.
- GPM bottomed out in 1Q22, expect GPM improvement from June 2022 onwards due to active production cost control and improving production yield.
- FY22 Capex targets at 20-30% lower than FY21.

Earnings Revision

Figure 3: CMBIGM earnings revisions

RMB mn	New			Old			Change (%)		
	FY22E	FY23E	FY24E	FY22E	FY23E	FY24E	FY22E	FY23E	FY24E
Revenue	18,915	20,601	21,435	18,216	20,739	21,532	4%	-1%	0%
Gross profit	3,914	4,638	4,861	4,289	4,911	5,125	-9%	-6%	-5%
Operating profit	1,032	1,399	1,491	1,443	1,650	1,740	-28%	-15%	-14%
Net profit	923	1,312	1,415	1,304	1,545	1,644	-29%	-15%	-14%
EPS (RMB)	0.76	1.09	1.17	1.08	1.28	1.36	-29%	-15%	-14%
Gross margin	20.7%	22.5%	22.7%	23.5%	23.7%	23.8%	-2.9 ppt	-1.2 ppt	-1.1 ppt
Operating margin	5.5%	6.8%	7.0%	7.9%	8.0%	8.1%	-2.5 ppt	-1.2 ppt	-1.1 ppt
Net margin	4.9%	6.4%	6.6%	7.2%	7.4%	7.6%	-2.3 ppt	-1.1 ppt	-1 ppt

Source: Company data, CMBIGM estimates

Figure 4: CMBIGM estimates vs consensus

RMB mn	CMBIGM			Consensus			Diff (%)		
	FY22E	FY23E	FY24E	FY22E	FY23E	FY24E	FY22E	FY23E	FY24E
Revenue	18,915	20,601	21,435	19,688	22,063	25,216	-4%	-7%	-15%
Gross profit	3,914	4,638	4,861	4,695	5,334	6,141	-17%	-13%	-21%
Operating profit	1,032	1,399	1,491	1,575	1,957	2,410	-34%	-28%	-38%
Net profit	923	1,312	1,415	1,348	1,661	2,119	-31%	-21%	-33%
EPS (RMB)	0.76	1.09	1.17	1.11	1.46	1.79	-31%	-25%	-34%
Gross margin	20.7%	22.5%	22.7%	23.8%	24.2%	24.4%	-3.2 ppt	-1.7 ppt	-1.7 ppt
Operating margin	5.5%	6.8%	7.0%	8.0%	8.9%	9.6%	-2.5 ppt	-2.1 ppt	-2.6 ppt
Net margin	4.9%	6.4%	6.6%	6.8%	7.5%	8.4%	-2 ppt	-1.2 ppt	-1.8 ppt

Source: Bloomberg, CMBIGM estimates

Figure 5: P&L forecast

RMB mn	FY21	1Q22	2Q22E	3Q22E	4Q22E	FY22E	FY23E	FY24E
Revenue	17,667	4,896	4,289	4,457	5,272	18,915	20,601	21,435
...YoY	3.1%	14.1%	-0.6%	5.0%	9.6%	7.1%	8.9%	4.0%
Cost of sales	(13,302)	(3,939)	(3,430)	(3,503)	(4,133)	(15,005)	(15,967)	(16,579)
Gross profit	4,365	957	859	954	1,140	3,910	4,634	4,856
GPM (%)	24.7%	19.5%	20.0%	21.4%	21.6%	20.7%	22.5%	22.7%
...YoY	3.3%	-28.4%	-20.3%	-1.1%	15.6%	-10.4%	18.5%	4.8%
SG&A	(1,156)	(331)	(266)	(267)	(322)	(1,186)	(1,215)	(1,265)
...% of rev	-6.5%	-6.8%	-6.2%	-6.0%	-6.1%	-6.3%	-5.9%	-5.9%
R&D	(1,726)	(387)	(407)	(423)	(475)	(1,692)	(2,019)	(2,101)
...% of rev	-9.8%	-7.9%	-9.5%	-9.5%	-9.0%	-8.9%	-9.8%	-9.8%
Operating profit	1,483	239	186	263	343	1,032	1,399	1,491
OPM (%)	8.4%	4.9%	4.3%	5.9%	6.5%	5.5%	6.8%	7.0%
...YoY	9.8%	-62.6%	-45.7%	9.8%	31.4%	-30.4%	35.7%	6.5%
Income tax	(120)	(54)	(17)	(22)	(36)	(128)	(137)	(148)
Effective tax rate	8.5%	21.6%	10.0%	10.0%	10.0%	12.9%	10.0%	10.0%
Net profit	1,316	205	150	216	352	923	1,312	1,415
NPM (%)	7.5%	4.2%	3.5%	4.9%	6.7%	4.9%	6.4%	6.6%
...YoY	-12.6%	-61.4%	-61.5%	18.1%	65.9%	-29.9%	42.1%	7.9%

Source: Company data, CMBIGM estimates

Valuation

Maintain HOLD with new TP HK\$14.0

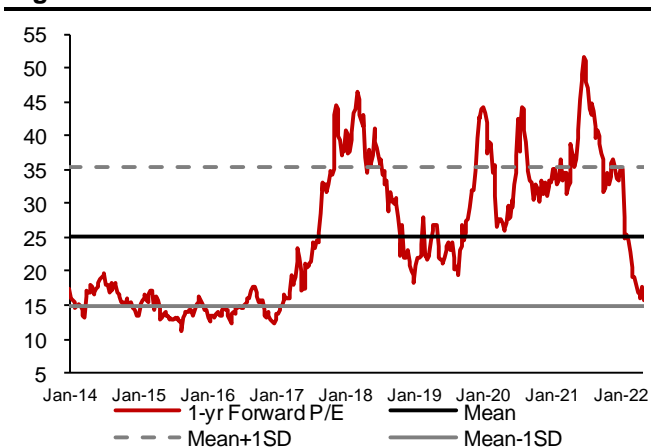
We derived our new TP of HK\$ 14.0 based on SOTP to reflect business diversification with different growth profiles and visibility. Our new TP is based on weighted-average target P/E multiple of 15.3x FY22E P/E. We assign 15x P/E to AAC's acoustics/MEMS, 15x P/E to haptics & mechanical RF, and 20x P/E to optics, in-line with HK-listed peers.

Figure 6: AAC Tech – SOTP valuation

Business segment	Value per share (RMB)	Valuation Methodology	Target P/E	% of FY22E Profit	FY22E EPS (RMB)
Acoustics	7.0	P/E target multiple	15x	61%	0.47
MEMS	0.5	P/E target multiple	15x	4%	0.03
ED & PM	3.4	P/E target multiple	15x	30%	0.23
Optics	0.80	P/E target multiple	20x	5%	0.04
TP (RMB)	11.6		15.3x		0.76
TP (HK\$)	14.0				

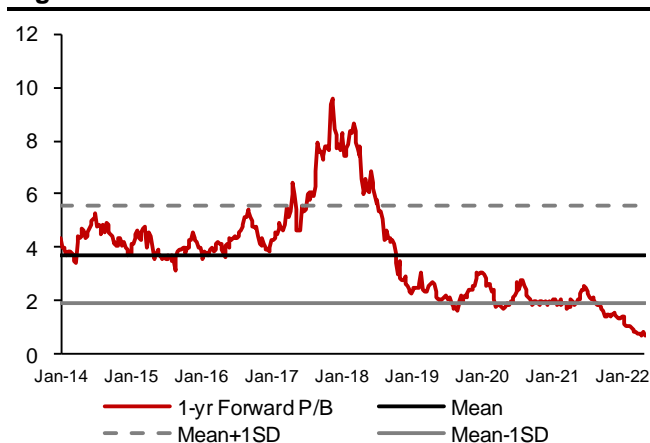
Sources: Company data, CMBIGM

Figure 7: 12M forward P/E band



Source: Company data, CMBIGM

Figure 8: 12M forward P/B band



Source: Company data, CMBIGM

Financial Summary

Income statement

YE 31 Dec (RMB mn)	FY20A	FY21A	FY22E	FY23E	FY24E
Revenue	17,140	17,667	18,915	20,601	21,435
COGS	(12,913)	(13,302)	(15,005)	(15,967)	(16,579)
Gross profit	4,227	4,365	3,910	4,634	4,856
Selling and marketing	(285)	(333)	(355)	(391)	(407)
Administrative	(672)	(824)	(831)	(824)	(857)
R&D	(1,920)	(1,726)	(1,692)	(2,019)	(2,101)
Operating profit	1,350	1,483	1,032	1,399	1,491
Financial cost	(353)	(415)	(420)	(420)	(420)
Other income/(losses)	650	346	386	393	410
Pre-tax profit	1,648	1,413	997	1,372	1,480
Tax	(147)	(120)	(128)	(137)	(148)
Minority interest	(6)	(23)	(54)	(77)	(83)
Net profit	1,507	1,316	923	1,312	1,415

Cash flow summary

YE 31 Dec (RMB mn)	FY20A	FY21A	FY22E	FY23E	FY24E
Profit before taxation	1,648	1,413	997	1,372	1,480
Depreciation	3,409	2,931	3,834	4,147	4,413
Change in working capital	(231)	(1,603)	3,135	(5,366)	4,962
Others	(1,233)	(544)	303	299	280
Net cash from operating	3,593	2,196	8,270	452	11,135
Capex	(3,262)	(4,327)	(3,678)	(3,126)	(2,657)
Other	-	81	-	-	-
Net cash from investing	(3,262)	(4,246)	(3,678)	(3,126)	(2,657)
Net borrowings	-	-	-	-	-
Interest paid	(353)	(415)	(420)	(420)	(420)
Dividend paid	(753)	(658)	(462)	(656)	(708)
Other	3,688	1,687	-	-	-
Net cash from financing	2,582	613	(882)	(1,076)	(1,128)
Net change in cash	2,913	(1,437)	3,711	(3,751)	7,350
Cash at beg of year	5,512	7,540	6,051	9,762	6,011
Exchange difference	-	-	-	-	-
Cash at end of year	7,540	6,051	9,762	6,011	13,361

Balance sheet

YE 31 Dec (RMB mn)	FY20A	FY21A	FY22E	FY23E	FY24E
Current assets	16,850	17,955	17,782	19,466	22,322
Cash & equivalents	7,540	6,051	9,762	6,011	13,361
Trade and other rev.	5,176	6,013	7,353	7,168	8,043
Inventories	3,995	5,695	471	6,091	723
Other current assets	138	195	195	195	195
Non-current assets	22,062	24,067	23,911	22,890	21,134
PPE	18,592	19,987	19,831	18,810	17,054
Lease prepayments	-	-	-	-	-
Intangible assets	373	384	384	384	384
Other non-curr. assets	3,096	3,696	3,696	3,696	3,696
Total assets	38,911	42,022	41,692	42,355	43,456
Current liabilities	9,380	9,668	8,931	9,015	9,491
Short-term borrowings	3,349	2,902	2,902	2,902	2,902
Trade & other payables	5,205	6,148	5,399	5,467	5,936
Tax payables	167	165	177	192	200
Other current liabilities	660	453	453	453	453
Non-current liabilities	7,711	9,852	9,852	9,852	9,852
Government grants	604	700	700	700	700
Deferred tax liabilities	49	41	41	41	41
Other non-current liab.	7,058	9,111	9,111	9,111	9,111
Total liabilities	17,090	19,520	18,783	18,867	19,344
Share capital	98	98	98	98	98
Reserves	21,061	21,713	22,174	22,830	23,538
Minority interest	662	691	637	560	476
Shareholders' equity	21,821	22,502	22,909	23,488	24,112
Total equity & liabilities	38,911	42,022	41,692	42,355	43,456

Key ratios

YE 31 Dec	FY20A	FY21A	FY22E	FY23E	FY24E
Sales mix (%)					
Dynamic components	44.1	48.6	46.1	43.1	43.6
MEMS (microphone)	6.3	5.7	5.5	5.6	5.9
Electro. (haptics)	39.9	31.9	30.7	35.1	34.2
Other	9.6	13.8	17.7	16.2	16.4
Growth (%)					
Revenue	(4.2)	3.1	7.1	8.9	4.0
Gross profit	(17.2)	3.3	(10.4)	18.5	4.8
Operating Income	(45.4)	9.8	(30.4)	35.7	6.5
Net profit	(32.2)	(12.6)	(29.9)	42.1	7.9
Profitability (%)					
Gross Margin	24.7	24.7	20.7	22.5	22.7
Operating Margin	7.9	8.4	5.5	6.8	7.0
Net margin	8.8	7.5	4.9	6.4	6.6
Balance sheet ratios					
Net debt/total equity (x)	Net cash	Net cash	Net cash	Net cash	Net cash
Current ratio (x)	1.8	1.9	2.0	2.2	2.4
Receivable turnover days	87.8	87.8	90.0	90.0	90.0
Inventory turnover days	88.6	88.6	75.0	75.0	75.0
Payable turnover days	84.7	84.7	70.0	70.0	70.0
Returns (%)					
ROE	6.9	5.8	4.0	5.6	5.9
ROA	3.9	3.1	2.2	3.1	3.3
Per share data (RMB)					
EPS	1.25	1.09	0.76	1.09	1.17
DPS	0.62	0.54	0.38	0.54	0.59

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 Ratings

BUY : Stock with potential return of over 15% over next 12 months
HOLD : Stock with potential return of +15% to -10% over next 12 months
SELL : Stock with potential loss of over 10% over next 12 months
NOT RATED : Stock is not rated by 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 does so entirely at their own risk.

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 to a person who is not an Accredited Investor, Expert Investor 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.