

Zhihu (ZH US)

Resilient education to offset subs slowdown

Zhihu delivered inline 3Q23 results with strong membership & vocational training and narrowing loss. Looking into 4Q23E, we expect topline -6% YoY, with adj. net loss at RMB200mn. Vocational training and online marketing would see sequential growth on seasonality and 11.11 promotion, while paid membership might slow down for a high base (forecasting +11% YoY). We think Zhihu is well positioned to capture the tailwinds of bite-size shows and IP monetization, by leveraging its vibrant IP & content library. Zhihu has also achieved good progress in AI application, with Zhihaitu to boost content productivity and enhance user experience. To reflect the membership slowdown, we trim its topline by 4%-7% in FY23-25E, with a new TP at US\$2.0.

- In-line 3Q23 with narrowing loss.** Zhihu delivered largely in-line 3Q23 results with revenue +12% YoY, and narrowing adj. net loss of RMB225mn (vs. consensus of RMB243mn). The solid topline was driven by strong membership (+39.2% YoY) and vocational training (+85.6% YoY), while partially dragged by shrinking marketing services (-17% YoY). Adj. net loss narrowed to RMB225mn, attributable to a better GPM of 53.7% (vs. consensus of 52.8%) mainly on enhanced monetization efforts and improved efficiency. By 3Q23, Zhihu had repurchased 18.3mn Class A ordinary shares with US\$42.6mn, under the US\$100mn buyback program till Jun 10, 2024. User metrics trended well, with 110.5mn MAU in 3Q23 vs. 109.4mn in 2Q23.
- Vocational training & marketing to see sequential growth in 4Q23E.** Strong vocational training should continue in 4Q23E, and we forecast rev +15% QoQ (+97% YoY), with seasonality and booming demand. Online marketing services might see gradual recovery (forecasting rev +10% QoQ, -26% YoY), on solid performance of 11.11 promotion. Given a high base, we expect membership growth to slightly decelerate to +11% YoY in 4Q23E. Zhihu succeeded in IP monetization for the recently hot IP-adopted drama of *Scent of Time* (from Xi Qianhua). We think Zhihu is well positioned to capture the tailwinds of bite-size shows and IP monetization, by leveraging its vibrant IP & content library. For the bottom line, we expect 4Q23E adj. net loss to continuously narrow to RMB200mn, with an improving GPM and disciplined S&M.
- AI in good progress.** Zhihaitu, the self-developed AI model with more than 100bn parameters and multi-modality capabilities, obtained the business license in Nov 2023. Currently, Zhihaitu AI is deployed internally to boost content productivity and enhance user experience, to further improve monetization.
- Maintain BUY.** To reflect the membership slowdown, we slightly trim FY23-25E rev by 4%-7%, and cut margin by 0.4-3.0ppts. Our DCF-based TP is adjusted to US\$2.0 for the financials adjustments.

Earnings Summary

(YE 31 Dec)	FY21A	FY22A	FY23E	FY24E	FY25E
Revenue (RMB mn)	2,959	3,605	4,111	4,946	5,693
YoY growth (%)	118.9	21.8	14.0	20.3	15.1
Adjusted net profit (RMB mn)	(747)	(1,196)	(768)	(226)	126
Diluted EPS (RMB cents)	(1.28)	(1.96)	(1.22)	(0.35)	0.19
YoY growth (%)	NA	NA	NA	NA	NA
Consensus EPS (RMB cents)	NA	NA	(1.2)	(0.3)	0.3
P/E (x)	NA	NA	NA	NA	34.8
P/S (x)	1.3	1.1	1.0	0.9	0.8
Net gearing (%)	Net cash	Net cash	Net cash	Net cash	Net cash

Source: Company data, Bloomberg, CMBIGM estimates

BUY (Maintain)

Target Price	US\$2.0
(Previous TP)	US\$2.10)
Up/Downside	117%
Current Price	US\$0.92

China Entertainment

Sophie HUANG

(852) 3900 0889

sophiehuang@cmbi.com.hk

Eason XU

(852) 3900 0849

easonxu@cmbi.com.hk

Stock Data

Mkt Cap (US\$ mn)	103.0
Avg 3 mths t/o (US\$ mn)	1.3
52w High/Low (US\$)	1.98/0.94
Total Issued Shares (mn)	100.0

Source: FactSet

Shareholding Structure

Mattews International	4.5%
Qiming Corporate GP	4.1%

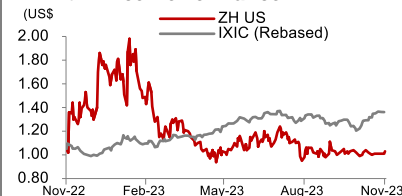
Source: HKEx

Share Performance

	Absolute	Relative
1-mth	1.0%	-10.6%
3-mth	-1.0%	-3.3%
6-mth	0.0%	-9.1%

Source: FactSet

12-mth Price Performance



Source: FactSet

Figure 1: 3Q23 financial review

RMB mn, Dec-YE	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	QoQ	YoY	Consensus	Diff %	CMBI	Diff %
Revenue	1,019	743	836	912	1,114	994	1,044	1,022	-2.1%	12.1%	1,019	0%	1,019	0%
Operating Profit	(460)	(500)	(526)	(472)	(504)	(437)	(534)	(529)	NA	NA	(343)	NA	(516)	NA
Net profit	(383)	(614)	(487)	(300)	(180)	(181)	(280)	(279)	NA	NA	(294)	NA	(304)	NA
Adj. net profit	(241)	(367)	(444)	(251)	(134)	(120)	(222)	(225)	NA	NA	(243)	NA	(234)	NA
Adj. EPS (RMB)	(0.41)	(0.61)	(0.72)	(0.41)	(0.22)	(0.20)	(0.37)	(0.38)	NA	NA	(0.43)	NA	(0.38)	NA
Margin (%)														
Gross margin	47.1%	45.1%	47.8%	48.7%	56.4%	51.5%	53.8%	53.7%			52.8%		53.2%	
Operating margin	-45.1%	-67.3%	-62.9%	-51.7%	-45.3%	-43.9%	-51.2%	-51.7%			-33.7%		-50.7%	
Adj. net margin	-23.6%	-49.4%	-53.1%	-27.5%	-12.0%	-12.1%	-21.3%	-22.0%			-23.8%		-23.0%	
Growth (%)														
Revenue (YoY)	96.1%	55.4%	31.0%	10.7%	9.3%	33.8%	24.9%	12.1%			21.9%		11.7%	
Revenue (QoQ)	23.8%	-27.1%	12.5%	9.1%	22.2%	-10.7%	5.0%	-2.1%			2.5%		-2.5%	
Operating Profit	NA	NA	NA	NA	NA	NA	NA	NA			NA		NA	
Adj. net profit	NA	NA	NA	NA	NA	NA	NA	NA			NA		NA	

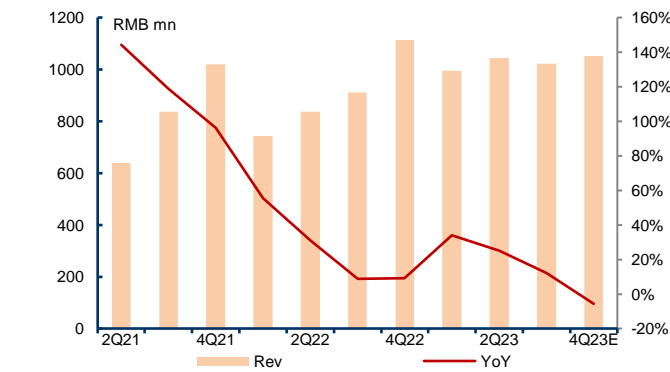
Source: Company data, Bloomberg, CMBIGM estimates

Figure 2: 3Q23 revenue breakdown

RMB mn, Dec-YE	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	QoQ	YoY
Total revenue	1,019	743	836	912	1,114	994	1,044	1,022	-2%	12%
Marketing services	745	444	478	462	572	392	413	383	-7%	-17%
Paid membership	209	222	271	335	403	455	449	467	4%	39%
Vocational Training	22	40	46	78	85	107	145	145	0%	86%
Others	43	38	41	36	54	40	38	28	-27%	-24%

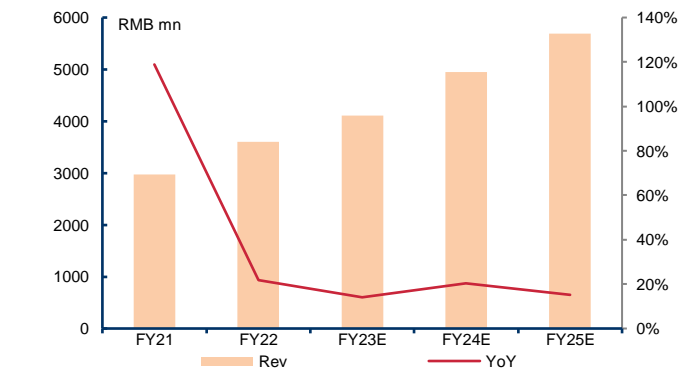
Source: Company data

Figure 3: Quarterly rev estimates



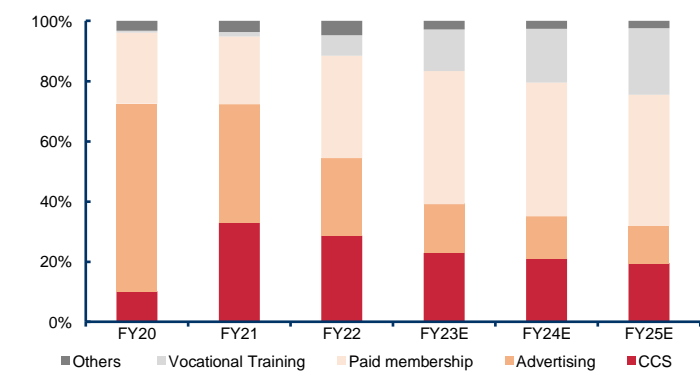
Source: Company data, CMBIGM estimates

Figure 4: Yearly rev estimates



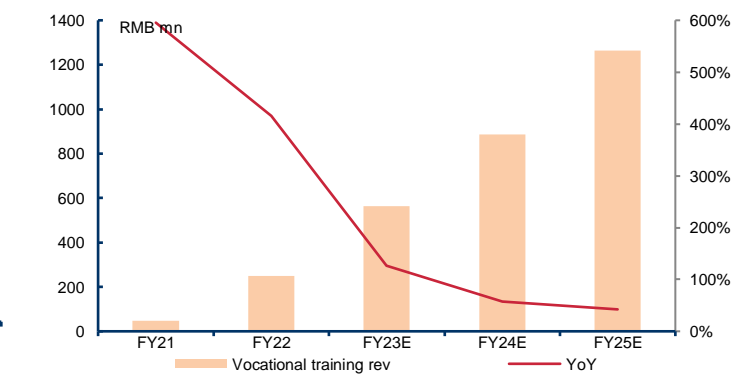
Source: Company data, CMBIGM estimates

Figure 5: Rev mix change



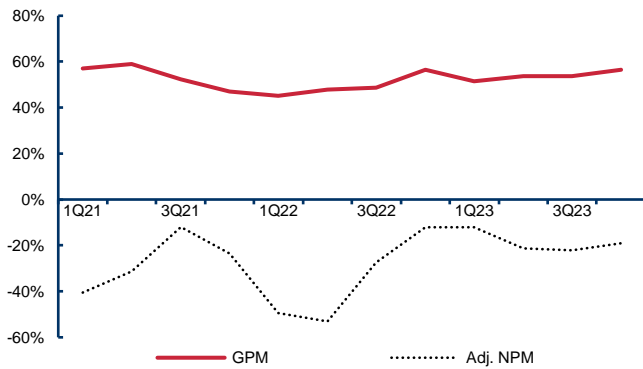
Source: Company data, CMBIGM estimates

Figure 6: Vocational training rev estimates



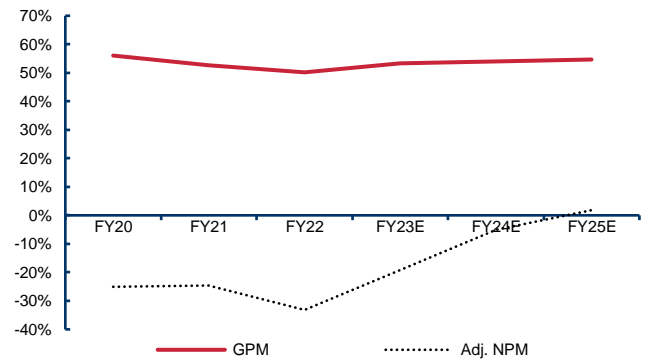
Source: Company data, CMBIGM estimates

Figure 7: Quarterly margin



Source: Company data, CMBIGM estimates

Figure 8: Yearly margin estimates



Source: Company data, CMBIGM estimates

Figure 9: CMBIGM estimates vs consensus

RMB mn, Dec-YE	CMBIGM			Consensus			Diff (%)		
	FY23E	FY24E	FY25E	FY23E	FY24E	FY25E	FY23E	FY24E	FY25E
Revenue	4,111	4,946	5,693	4,251	5,160	5,968	-3.3%	-4.1%	-4.6%
Gross profit	2,216	2,694	3,136	2,253	2,847	3,388	-1.7%	-5.4%	-7.4%
Operating profit	(1,183)	(477)	(153)	(1,128)	(536)	(183)	NA	NA	NA
Adj. net profit	(768)	(226)	126	(759)	(220)	224	NA	NA	-43.8%
EPS (RMB)	(1.22)	(0.35)	0.19	(1.22)	(0.32)	0.26	NA	NA	-26.2%
Gross margin	53.9%	54.5%	55.1%	53.0%	55.2%	56.8%	+0.9ppts	-0.7ppts	-1.7ppts
Operating margin	-28.8%	-9.6%	-2.7%	-26.5%	-10.4%	-3.1%	-2.2ppts	+0.8ppts	+0.4ppts
Net margin	-18.7%	-4.6%	2.2%	-17.8%	-4.3%	3.8%	-0.8ppts	-0.3ppts	-1.5ppts

Source: Company data, Bloomberg, CMBIGM estimates

Figure 10: Earnings revision

RMB mn, Dec-YE	New			Old			Diff (%)		
	FY23E	FY24E	FY25E	FY23E	FY24E	FY25E	FY23E	FY24E	FY25E
Revenue	4,111	4,946	5,693	4,287	5,269	6,138	-4.1%	-6.1%	-7.3%
Gross profit	2,216	2,694	3,136	2,283	2,865	3,368	-3.0%	-6.0%	-6.9%
Operating profit	(1,183)	(477)	(153)	(1,074)	(386)	(40)	NA	NA	NA
Adj. net profit	(768)	(226)	126	(786)	(82)	272	NA	NA	-53.7%
EPS (RMB)	(1.22)	(0.35)	0.19	(1.25)	(0.13)	0	NA	NA	-53.7%
Gross margin	53.9%	54.5%	55.1%	53.3%	54.4%	54.9%	+0.6ppts	+0.1ppts	+0.2ppts
Operating margin	-28.8%	-9.6%	-2.7%	-25.1%	-7.3%	-0.6%	-3.7ppts	-2.3ppts	-2.0ppts
Net margin	-18.7%	-4.6%	2.2%	-18.3%	-1.6%	4.4%	-0.4ppts	-3.0ppts	-2.2ppts

Source: Company data, CMBIGM estimates

Figure 11: DCF Valuation

DCF valuation (RMB mn)	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E
EBIT	(970)	(263)	34	99	423	503	580	650	713	769
Tax	(7)	0	11	(2)	(51)	(75)	(87)	(98)	(107)	(115)
D&A	22	26	27	33	39	43	47	51	56	62
Working capital	(245)	(87)	600	70	60	51	44	37	31	27
CAPEX	(21)	(25)	(28)	(31)	(34)	(38)	(42)	(46)	(50)	(55)
FCF	(1,220)	(349)	643	169	436	484	542	595	644	687
FCF Growth		NA	NA	-74%	158%	11%	12%	10%	8%	7%
Terminal Value										7,583
PV (FCF+ Terminal Value)	(1,220)	(310)	510	119	274	271	270	264	254	2,904

Assumptions

WACC	12.3%
Tax rate	15.0%
Risk free rate	3.2%
Beta	1.10
Market risk return	11.5%
Cost of equity	12.3%
WACC	12.3%
Terminal growth rate	3.0%

Equity Value

PV	3,334
minus: Net cash	5,420
minus: Minority Interest	0
Equity Value	8,754
Shares (mn)	612
Target Price (US\$) based on DCF	2.0

		WACC				
		10.3%	11.3%	12.3%	13.3%	14.3%
Growth	1.5%	2.1	2.0	1.9	1.8	1.7
	2.0%	2.2	2.0	1.9	1.8	1.7
	2.5%	2.2	2.1	1.9	1.8	1.7
	3.0%	2.3	2.1	2.0	1.8	1.7
	3.5%	2.4	2.2	2.0	1.9	1.8
	4.0%	2.5	2.2	2.0	1.9	1.8
	4.5%	2.5	2.3	2.1	1.9	1.8

Source: Company data, Bloomberg, CMBIGM estimates

Figure 12: Valuation comps

Company	Ticker	Mkt cap (USD mn)	Currency	Price	CMBI Rating	CMBI TP	PE			PS			FY23-25 EPS CAGR
							FY23E	FY24E	FY25E	FY23E	FY24E	FY25E	
Zhihu	ZH US	561	USD	0.9	BUY	2.0	NA	NA	34.8	1.0	0.9	0.8	NA
Online Community													
Bilibili	BILI US	5,540	USD	13	BUY	24	NA	NA	43.9	1.7	1.5	1.3	NA
Kuaishou	1024 HK	31,707	HKD	57	BUY	97	25.9	15.7	10.5	2.0	1.7	1.5	58%
Average							25.9	15.7	10.5	1.9	1.6	1.4	58%
VAS													
China Literature	772 HK	3,544	HKD	27	NA	NA	17.0	15.1	13.4	3.3	3.0	2.8	14%
Tencent	700 HK	386,346	HKD	317	BUY	465	17.6	15.1	13.3	4.5	4.0	3.6	15%
JOYY	YY US	2,433	USD	39	BUY	51	10.4	10.5	9.1	1.1	1.0	0.9	11%
Huya	HUYA US	802	USD	3	BUY	7	NA	45.0	16.7	0.8	0.9	0.8	149%
Douyu	DOYU US	247	USD	1	NA	NA	16.2	14.3	10.4	0.3	0.3	0.3	40%
TME	TME US	14,415	USD	8	NA	NA	17.3	15.7	14.0	3.7	3.7	3.3	12%
Mango	300413 CH	6,858	CNY	26	NA	NA	22.5	18.9	16.4	3.4	3.0	2.7	18%
iQIYI	IQ US	4,437	USD	5	BUY	9	13.0	10.0	8.1	1.0	0.9	0.9	27%
Average							16.3	14.2	12.7	1.9	1.8	1.7	16%
Ad													
Baidu	BIDU US	41,822	USD	120	BUY	196	11.1	11.2	10.0	2.2	2.0	1.9	4%
Weibo	WB US	2,750	USD	12	BUY	24	5.5	5.2	4.7	1.6	1.5	1.4	7%
Average							8.3	8.2	7.4	1.9	1.8	1.6	6%
Average							14.5	13.0	11.6	1.9	1.8	1.6	21%

Source: Bloomberg, CMBIGM estimates

Financial Summary

INCOME STATEMENT	2020A	2021A	2022A	2023E	2024E	2025E
YE 31 Dec (RMB mn)						
Revenue	1,352	2,959	3,605	4,111	4,946	5,693
Cost of goods sold	(227)	(368)	(356)	(341)	(371)	(410)
Gross profit	758	1,554	1,808	2,216	2,694	3,136
Operating expenses	(1,361)	(2,945)	(3,412)	(3,399)	(3,170)	(3,289)
Selling expense	(735)	(1,635)	(2,026)	(2,031)	(1,915)	(2,027)
Admin expense	(296)	(690)	(622)	(442)	(436)	(433)
R&D expense	(330)	(620)	(763)	(926)	(819)	(829)
Operating profit	(603)	(1,391)	(1,604)	(1,183)	(477)	(153)
Other income	25	31	68	141	48	65
Gain/loss on financial assets at FVTPL	(69)	28	(177)	(20)	(24)	3
Investment gain/loss	56	59	70	41	13	13
Other gains/(losses)	74	(21)	78	35	0	0
Pre-tax profit	(516)	(1,293)	(1,564)	(986)	(440)	(72)
Income tax	(1)	(5)	(14)	(7)	0	11
Net profit	(518)	(1,299)	(1,578)	(993)	(440)	(61)
Adjusted net profit	(337)	(747)	(1,196)	(768)	(226)	126
BALANCE SHEET	2020A	2021A	2022A	2023E	2024E	2025E
YE 31 Dec (RMB mn)						
Current assets	3,720	8,334	7,320	6,688	6,714	7,080
Cash & equivalents	958	2,157	4,526	2,948	2,660	3,403
Account receivables	486	832	834	1,295	1,622	1,248
Prepayment	124	272	199	238	226	223
ST bank deposits	1,093	2,816	948	948	948	948
Other current assets	1,060	2,258	812	1,258	1,258	1,258
Non-current assets	41	471	336	247	255	269
PP&E	8	10	7	27	37	45
Right-of-use assets	3	127	100	26	26	26
Investment in JVs & assos	0	19	na	na	na	na
Intangibles	23	68	80	67	66	71
Goodwill	0	74	126	126	126	126
Other non-current assets	6	174	22	0	0	0
Total assets	3,761	8,805	7,656	6,934	6,969	7,349
Current liabilities	1,015	1,898	1,825	1,977	2,204	2,428
Account payables	734	1,340	1,200	1,291	1,436	1,590
Tax payable	7	66	26	5	5	5
Other current liabilities	271	451	546	627	710	780
Lease liabilities	3	41	53	53	53	53
Non-current liabilities	0	169	137	137	137	137
Long-term borrowings	0	82	43	43	43	43
Other non-current liabilities	0	87	94	94	94	94
Share capital	0	0	0	0	0	0
Capital surplus	0	0	(34)	0	0	0
Retained earnings	(196)	(339)	(66)	(339)	(339)	(339)
Other reserves	0	13,350	13,615	13,971	14,218	14,435
Total shareholders equity	(4,949)	(6,281)	(7,862)	(8,852)	(9,292)	(9,353)
Total equity and liabilities	(4,949)	(6,281)	(7,862)	(8,852)	(9,292)	(9,353)

CASH FLOW	2020A	2021A	2022A	2023E	2024E	2025E
YE 31 Dec (RMB mn)						
Operating						
Profit before taxation	(516)	(1,293)	(1,564)	(986)	(440)	(72)
Depreciation & amortization	20	21	25	22	26	27
Tax paid	(1)	(5)	(14)	(7)	0	11
Change in working capital	(10)	291	(134)	(245)	(87)	600
Others	264	546	572	247	247	216
Net cash from operations	(244)	(440)	(1,115)	(969)	(254)	782
Investing						
Capital expenditure	(2)	(7)	(1)	(29)	(35)	(40)
Acquisition of subsidiaries/ investments	0	(33)	(61)	0	0	0
Net proceeds from disposal of short-term investments	(1,887)	(6,130)	(2,072)	1,000	0	0
Others	2,319	3,034	5,624	0	0	0
Net cash from investing	430	(3,137)	3,490	971	(35)	(40)
Financing						
Proceeds from share issues	0	0	0	0	0	0
Others	9	4,876	(108)	(1,580)	0	0
Net cash from financing	9	4,876	(108)	(1,580)	0	0
Net change in cash						
Cash at the beginning of the year	900	958	2,157	4,526	2,948	2,660
Exchange difference	(138)	(100)	102	0	0	0
Cash at the end of the year	958	2,157	4,526	2,948	2,660	3,403
GROWTH	2020A	2021A	2022A	2023E	2024E	2025E
YE 31 Dec						
Revenue	101.7%	118.9%	21.8%	14.0%	20.3%	15.1%
Gross profit	142.7%	105.1%	16.4%	22.5%	21.6%	16.4%
PROFITABILITY	2020A	2021A	2022A	2023E	2024E	2025E
YE 31 Dec						
Gross profit margin	56.0%	52.5%	50.2%	53.9%	54.5%	55.1%
Operating margin	(44.6%)	(47.0%)	(44.5%)	(28.8%)	(9.6%)	(2.7%)
Adj. net profit margin	(25.0%)	(25.2%)	(33.2%)	(18.7%)	(4.6%)	2.2%
GEARING/LIQUIDITY/ACTIVITIES	2020A	2021A	2022A	2023E	2024E	2025E
YE 31 Dec						
Current ratio (x)	3.7	4.4	4.0	3.4	3.0	2.9
Receivable turnover days	98.8	81.3	84.3	94.5	107.6	92.0
Payable turnover days	988.3	1,028.2	1,302.4	1,332.0	1,341.7	1,347.1
VALUATION	2020A	2021A	2022A	2023E	2024E	2025E
YE 31 Dec						
P/E (diluted)	na	na	na	na	na	42.4
P/B	na	2.6	0.7	0.5	0.5	0.5

Source: Company data, CMBIGM estimates. Note: The calculation of net cash includes financial assets.

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.