

Chinasoft (354 HK)

Huawei debut Harmony OS for smartphone

Huawei launched Harmony OS 2.0 on 2 Jun, which can be used across multiple devices. We believe massive deployment could take some time but this will create more IT service demand for Chinasoft in near term. Maintain BUY.

- Huawei debut Harmony OS 2.0 on smartphones.** On 2 Jun, Huawei officially launched Harmony OS 2.0 for smartphone, and stated that the new OS can be used across multiple devices. Huawei targets a total of 300mn devices running Harmony OS in 2021E (200mn being Huawei's products). We believe it is a necessary survival step for Huawei, after being banned by the U.S. on GMS access in 2019. However, we think massive deployment could be more difficult than expected as (1) it will be hard to incentivize developers to port Apps to new OS and without popular apps in near term; and (2) other Chinese smartphone brands may not use Harmony OS and the potential market is limited to home appliances/ IoT products in near term.
- New revenue stream to Chinasoft.** We believe Huawei will continue to invest R&D in building its Harmony OS ecosystem given strong cash (RMB357bn in FY20) and patents on hand. Amid the software-centric transition process, there will be additional IT services demand for Chinasoft. We identified 3 new revenue streams including (1) helping build different types of kits on Harmony OS for developers, (2) providing embedded modules for IoT OEM and (3) co-developing IoT products with OEM.
- Is Harmony OS 2.0 just Android?** Some tech [blogs](#) commented that Harmony OS 2.0 launched on smartphone is similar to Android instead of self-developed new OS. Rather, the Harmony 1.0 launched for IoT products last year is based on Huawei's LiteOS IoT microkernel. We think it makes sense that Huawei built Harmony OS 2.0 using the Android open source code without Google's ecosystem in China given our earlier concerns on Apps compatibility. Meanwhile, our investment thesis that there will be more IT service demand for Chinasoft will not change, as long as there is a new market/ applications/ device that require more testing and development work.
- Maintain BUY.** We raised FY21-22E net profit by 2-4% to reflect stronger top-line growth. Maintain BUY with new target price of HK\$12.00 (prior HK\$11.57), on unchanged 22x FY22E P/E.

Earnings Summary

(YE 31 Dec)	FY19A	FY20A	FY21E	FY22E	FY23E
Revenue (RMB mn)	12,042	14,101	17,905	21,197	24,069
YoY growth (%)	10%	15%	29%	19%	14%
Net profit (RMB mn)	755	955	1,189	1,433	1,673
EPS (RMB)	0.28	0.32	0.40	0.48	0.56
YoY growth (%)	10%	13%	25%	21%	17%
Consensus EPS (RMB)	0.28	0.32	0.42	0.53	0.67
PE (x)	29.8	26.5	21.3	17.6	15.1
EV/Sales (x)	2.0	1.6	1.2	0.9	0.8
Dividend Yield (%)	0.00	0.00	0.00	0.00	0.00
ROE (%)	12%	12%	13%	14%	14%
Net debt to equity	net cash	net cash	net cash	net cash	net cash

Source: Company data, Bloomberg, CMBIS estimates

BUY (Maintain)

Target Price **HK\$12.00**
 (Previous TP **HK\$11.57**)
 Up/Downside **+24.7%**
 Current Price **HK\$9.62**

China Software & IT Services

Marley Ngan

(852) 3916 3719

marleyngan@cmbi.com.hk

Stock Data

Mkt Cap (HK\$ mn)	20,310
Avg 3 mths t/o (HK\$ mn)	87.06
52w High/Low (HK\$)	115.65/ 43.27
Total Issued Shares (mn)	178

Source: Bloomberg

Shareholding Structure

Chen Yuhong- Chairman	9.7%
Dan Capital	6.2%
CPS (share option scheme)	4.5%

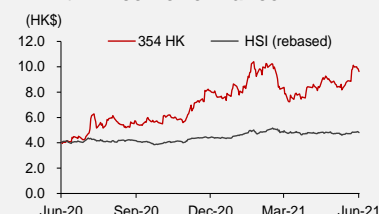
Source: HKEx

Share Performance

	Absolute	Relative
1-mth	19.0%	14.5%
3-mth	26.3%	11.6%
6-mth	39.1%	16.2%

Source: Bloomberg

12-mth Price Performance



Source: Bloomberg

Auditor: Deloitte

Related Report

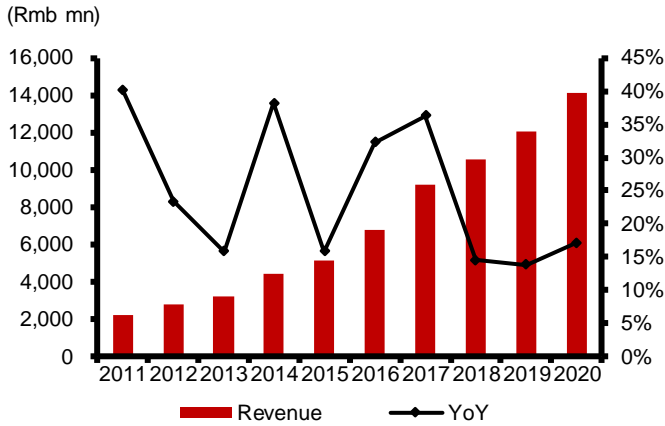
Chinasoft (354 HK) – Accelerating growth in FY21E – 31 Mar 2021

Please cast your valuable vote for CMBIS research team in the 2021 Asiamoney Brokers Poll:

<https://euromoney.com/brokers>

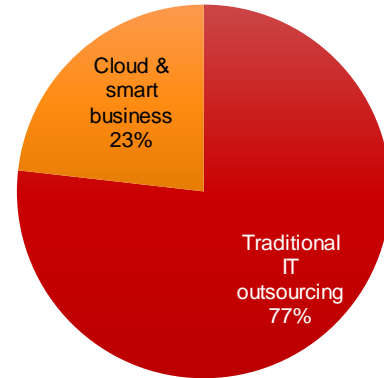
Focus Charts

Figure 1: Revenue and growth



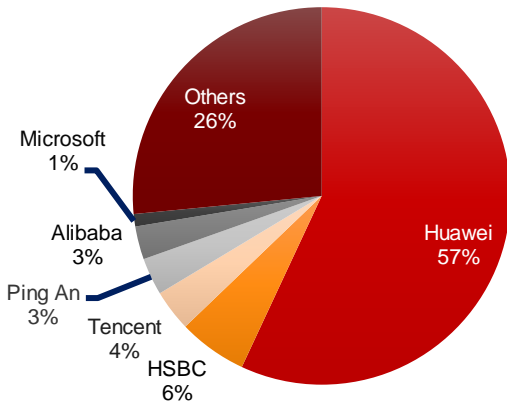
Source: Company data, CMBIS estimates

Figure 2: Revenue mix (2020)



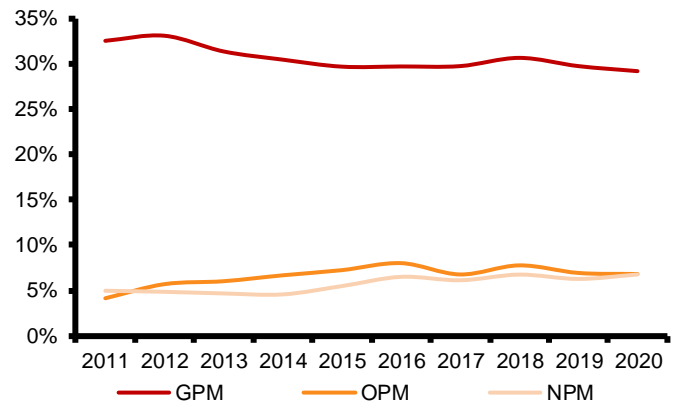
Source: Company data, CMBIS estimates

Figure 3: Customer breakdown (2020)



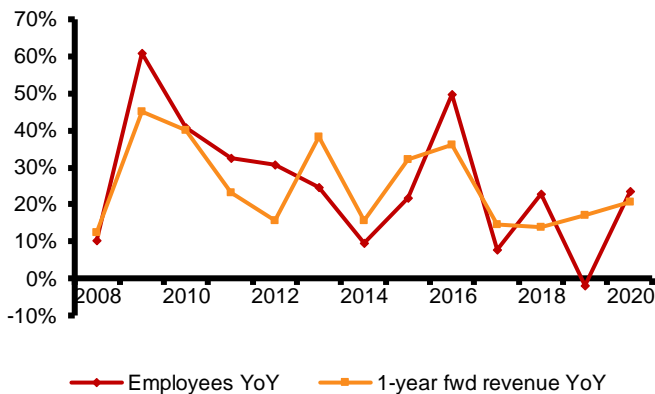
Source: Company data, CMBIS estimates

Figure 4: Margins



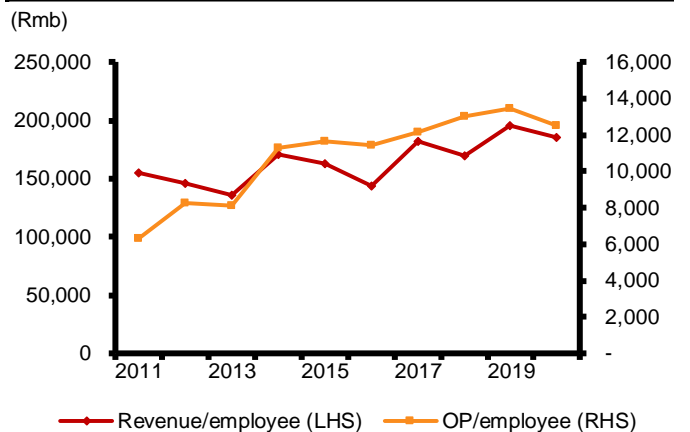
Source: Company data, CMBIS estimates

Figure 5: Forward revenue and employees



Source: Company data, CMBIS estimates

Figure 6: Revenue & operating profit per employee



Source: Company data, CMBIS estimates

Huawei HarmonyOS

Harmony OS event key takeaways

- Huawei officially launched Harmony OS 2.0 (Operating System) for smartphone on 2 Jun 2021 and announced new products (smartphones, tablet, watch, earbuds, smart display) with Harmony OS.
- Harmony OS was first unveiled in Aug 2019, after the US announced trade restrictions that banned Google from providing technical support to new Huawei phone models and access to GMS (Google Mobile Services), the developer services which most Android apps are based. Harmony OS is claimed to be designed for multiple devices. **Huawei targets a total of 300mn devices running Harmony OS in 2021** of which 200mn are Huawei's consumer products.

Figure 7: Harmony OS is claimed to be used across multiple devices



Source: Huawei

Figure 8: More than 300 applications are available in Harmony OS ecosystem



Source: Huawei

Our view

- We believe developing Harmony OS is a necessary survival step for Huawei. However, deployment could be more difficult than expected in near term as
 - (1) Hard to incentivize developers/ users to use**
It is hard to incentivize developers to port applications from Android to new OS as it is a complex process that consumes time and money. There will be a lot of effort in recompiling and testing to ensure compatibility. Without popular apps, users may not want to use the devices in near term. That was the reason why Samsung tried to push for its self-developed Tizen OS few years ago but failed.
 - (2) Adoption is limited to domestic, non-rival devices**
We believe it will be hard to persuade other Chinese smartphone brands to use Harmony OS. As such, the potential market is limited to home appliances/ IoT products companies to use the new OS.

Implications to Chinasoft

- **Help Huawei to develop different types of kits on Harmony OS.** The development cost of each type of kits could range between RMB500k and RMB1mn. If Chinasoft is developing 500 kits per year, the related IT service revenue would amount to RMB250mn.
- **Provide embedded modules for IoT OEM.** Chinasoft partners with IoT hardware suppliers to provide embedded modules to OEM such that applications can be easily deployed to Harmony OS smart devices. Chinasoft charges a fixed fee per device deployed. Assuming Chinasoft takes 10% market share of the 100mn non-Huawei smart devices on Harmony OS with each module ASP of RMB10, this will bring RMB100mn revenue opportunity to Chinasoft.
- **Co-develop IoT products with OEM.** Chinasoft can co-develop IoT products with OEM that wishes to use Harmony OS. This could be charged on project based or by fixed fee per device deployed.

Debate on Harmony OS

- Some tech blogs ([link](#)) commented that the lately revealed Harmony OS 2.0 for smartphones is not a proprietary new OS built by Huawei. Instead, the Harmony OS 2.0 is still Android based on Linux, and all apps are Android apps. For the earlier announced Harmony OS 1.0, it is based on Huawei self-developed LiteOS IoT microkernel. However, such OS is just for IoT products instead of smartphones.
- Legally speaking, Huawei can continue to use Android open source code without Google's ecosystem in China. The publicly available software is not subject to U.S. export restrictions.
- Whether Harmony OS is Android based or not will not change our conclusion that there will be additional IT demand (discussed above) for Chinasoft.

Earnings revision

Figure 9: Earnings revision

RMB mn	2021E			2022E			2023E		
	New	Old	%Diff	New	Old	%Diff	New	Old	%Diff
Sales	17,905	17,308	3%	21,197	20,298	4%	24,069	23,530	2%
Gross profit	5,301	5,120	4%	6,304	6,035	4%	7,177	7,013	2%
OP Profit	1,278	1,247	2%	1,545	1,492	4%	1,779	1,743	2%
PBT	1,269	1,235	3%	1,529	1,477	4%	1,796	1,761	2%
Net profit	1,189	1,157	3%	1,433	1,384	4%	1,673	1,641	2%
EPS (RMB)	0.40	0.39	3%	0.48	0.46	4%	0.56	0.55	2%
Margins									
GM	29.6%	29.6%	3 bps	29.7%	29.7%	1 bps	29.8%	29.8%	1 bps
OPM	7.1%	7.2%	-7 bps	7.3%	7.4%	-6 bps	7.4%	7.4%	-2 bps
PBT margin	7.1%	7.1%	-5 bps	7.2%	7.3%	-6 bps	7.5%	7.5%	-2 bps
Net margin	6.6%	6.7%	-4 bps	6.8%	6.8%	-6 bps	7.0%	7.0%	-2 bps

Source: Company data, CMBIS estimates

Figure 10: CMBI estimates vs consensus

RMB mn	2021E			2022E			2023E		
	CMBI	Street	Diff	CMBI	Street	Diff	CMBI	Street	Diff
Sales	17,308	17,372	-0%	20,298	20,727	-2%	24,069	25,472	-6%
Gross profit	5,120	5,242	-2%	6,035	6,323	-5%	7,177	7,858	-9%
OP Profit	1,247	1,379	-10%	1,492	1,635	-9%	1,779	2,158	-18%
PBT	1,234	1,271	-3%	1,475	1,546	-5%	1,796	2,092	-14%
Net profit	1,156	1,166	-1%	1,383	1,422	-3%	1,673	1,943	-14%
EPS (RMB)	0.39	0.42	-7%	0.46	0.52	-11%	0.56	0.73	-24%
Margins									
GM	29.6%	30.2%	-59 bps	29.7%	30.5%	-77 bps	29.8%	30.9%	-103 bps
OPM	7.2%	7.9%	-73 bps	7.4%	7.9%	-54 bps	7.4%	8.5%	-108 bps
PBT margin	7.1%	7.3%	-19 bps	7.3%	7.5%	-19 bps	7.5%	8.2%	-75 bps
Net margin	6.7%	6.7%	-3 bps	6.8%	6.9%	-5 bps	7.0%	7.6%	-68 bps

Source: Company data, CMBIS estimates

Operating model

Figure 11: Operating model

RMB mn	2019	2020	2021E	2022E	2023E
Revenues	12,042	14,101	17,905	21,197	24,069
Cost of sales	(8,459)	(9,983)	(12,604)	(14,893)	(16,892)
Gross Profit	3,583	4,118	5,301	6,304	7,177
<i>Gross margin</i>	<i>29.8%</i>	<i>29.2%</i>	<i>29.6%</i>	<i>29.7%</i>	<i>29.8%</i>
R&D	(809)	(930)	(1,356)	(1,594)	(1,828)
SG&A	(1,813)	(2,031)	(2,625)	(3,125)	(3,531)
Operating Income	827	952	1,278	1,545	1,779
<i>Operating margin</i>	<i>6.9%</i>	<i>6.7%</i>	<i>7.1%</i>	<i>7.3%</i>	<i>7.4%</i>
Non-Operating Income	(28)	83	(9)	(16)	17
Profit Before Tax	799	1,035	1,269	1,529	1,796
Income tax (expense) gain	(42)	(87)	(82)	(102)	(128)
Minorities	2	(7)	(2)	(5)	(5)
Net Income to Shareholders	755	955	1,189	1,433	1,673
<i>Net margin</i>	<i>6.3%</i>	<i>6.8%</i>	<i>6.6%</i>	<i>6.8%</i>	<i>7.0%</i>
EPS (RMB)	0.31	0.33	0.40	0.48	0.56
Fully diluted EPS (RMB)	0.28	0.32	0.40	0.48	0.56
Revenue breakdown					
IT outsourcing	10,042	10,830	12,671	14,445	16,034
Emerging cloud business	2,000	3,271	5,234	6,752	8,035
Huawei	6,570	8,030	9,664	10,920	12,230
HSBC	880	830	872	872	872
Tencent	350	500	725	979	1,175
Alibaba	260	400	620	868	1,128
Ping An	300	450	698	977	1,172
Others	3,682	3,891	5,328	6,583	7,493
Growth YoY					
Revenues	14%	17%	27%	18%	14%
Gross profit	10%	15%	29%	19%	14%
Operating Income	1%	15%	34%	21%	15%
EPS	4%	7%	23%	19%	17%

Source: Company data, CMBIS estimates

Figure 12: Semi-annual operating model

RMB mn	1H19	2H19	1H20	2H20	1H21E	2H21E
Revenues	5,538	6,504	6,059	8,042	7,863	10,042
Gross Profit	1,567	2,016	1,649	2,469	2,202	3,099
Operating profit	426	401	421	531	600	678
Net profit (loss)	363	392	401	554	546	643
EPS (RMB)	0.15	0.16	0.16	0.19	0.19	0.22
Margins						
Gross margin	28.3%	31.0%	27.2%	30.7%	28.0%	30.9%
Operating margin	7.7%	6.2%	6.9%	6.6%	7.6%	6.8%
Net margin	6.5%	6.0%	6.6%	6.9%	6.9%	6.4%
Growth (HoH)						
Revenues	-4%	17%	-7%	33%	-2%	28%
Gross Profit	-16%	29%	-18%	50%	-11%	41%
Operating profit	14%	-6%	5%	26%	13%	13%
Net profit (loss)	2%	8%	2%	38%	-1%	18%
Growth (YoY)						
Revenues	15%	13%	9%	24%	30%	25%
Gross Profit	13%	9%	5%	22%	34%	25%
Operating profit	-3%	7%	-1%	32%	43%	28%
Net profit (loss)	1%	10%	11%	41%	36%	16%

Source: Company data, CMBIS estimates

Valuation

Chinasoft (354 HK, BUY, TP HK\$12.00)

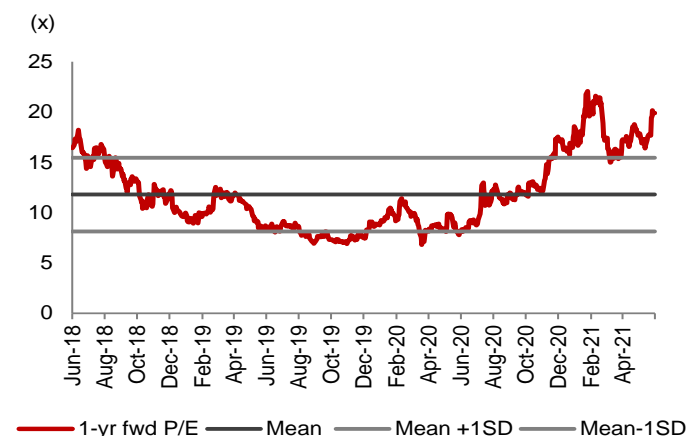
We have BUY rating on Chinasoft with target price of HK\$12.00, based on unchanged 22x FY22E P/E (50% premium to its five-year mean). We believe Chinasoft deserves re-rating given accelerating growth, improving margins and diversifying into non-Huawei large enterprises.

Figure 13: Peers' valuation

Company	Ticker	Rating	Mk Cap (US\$ mn)	Price (LC)	TP (LC)	P/E		ROE		Sales CAGR FY20-23	EPS CAGR FY20-23	
						FY21E	FY22E	FY21E	FY22E			
Chinasoft	354 HK	BUY	3,603	9.62	12.00	21.2	17.6	12.7	13.6	20%	21%	
Digital China	000034 CH	NR	1,872	18.14	N/A	15.1	11.7	14.8	16.3	9%	25%	
Infosys	INFO IN	NR	80,567	1380.40	N/A	30.1	26.1	28.4	28.7	13%	15%	
Tata Consultancy	TCS IN	NR	158,804	3134.30	N/A	35.5	29.4	38.0	42.2	10%	11%	
						Mean	24.5	21.2	23.5	25.2	13%	18%
						Median	25.7	21.9	21.6	22.5	12%	18%

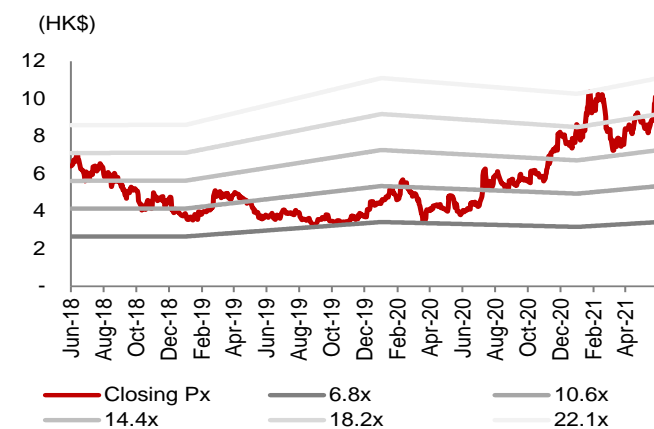
Source: Bloomberg, CMBIS estimates

Figure 14: 12M forward P/E band



Source: Company data, CMBIS

Figure 15: 12M forward P/B band



Source: Company data, CMBIS

Financial Summary

Income statement

YE 31 Dec (RMB mn)	FY19A	FY20A	FY21E	FY22E	FY23E
Revenue	12,042	14,101	17,905	21,197	24,069
Cost of sales	(8,459)	(9,983)	(12,604)	(14,893)	(16,892)
Gross profit	3,583	4,118	5,301	6,304	7,177
Selling exp	(618)	(729)	(907)	(1,017)	(1,155)
Admin exp	(1,196)	(1,302)	(1,718)	(2,107)	(2,376)
R&D exp	(809)	(930)	(1,356)	(1,594)	(1,828)
Other operating exp.	(134)	(205)	(42)	(40)	(39)
Operating profit	827	952	1,278	1,545	1,779
Finance costs	(166)	(151)	(154)	(197)	(208)
Other non-oper exp.	138	235	145	180	225
Pre-tax profit	799	1,035	1,269	1,529	1,796
Income tax expense	(42)	(87)	(82)	(102)	(128)
Minority interests	2	(7)	(2)	(5)	(5)
Net profit to shareholders	755	955	1,189	1,433	1,673

Cash flow summary

YE 31 Dec (RMB mn)	FY19A	FY20	FY21E	FY22E	FY23E
Net profit	799	1,035	1,269	1,529	1,796
Depreciation/amortization	197	170	100	104	108
Change in working capital	(516)	(533)	455	(317)	(528)
Others	274	480	(82)	(102)	(128)
Net cash from operating	754	1,153	1,742	1,214	1,249
Capex	(105)	(159)	(150)	(150)	(150)
Others	(120)	(32)	(42)	(40)	(39)
Net cash from investing	(224)	(192)	(192)	(190)	(189)
Net borrowings	52	217	1,396	187	293
Dividend paid	0	0	(71)	(86)	(100)
Others	(701)	145	2	5	5
Net cash from financing	(650)	362	1,327	107	197
Net change in cash	(119)	1,323	2,878	1,131	1,258
Cash at beginning of the year	2,646	2,526	3,787	6,729	7,900
Exchange difference	(1)	(62)	65	40	39
Cash at the end of the year	2,526	3,787	6,729	7,900	9,196

Balance sheet

YE 31 Dec (RMB mn)	FY19A	FY20	FY21E	FY22E	FY23E
Current assets	8,198	10,394	13,249	15,208	17,498
Cash & equivalents	2,526	3,787	6,729	7,900	9,196
Account receivables	3,297	4,580	3,671	3,978	4,496
Amount due from customers	2,228	1,904	2,663	3,124	3,581
Other current assets	147	123	186	206	225
Non-current assets	2,547	2,693	2,720	2,766	2,808
PPE	802	858	927	1,013	1,093
Intangible assets	1,101	1,086	1,044	1,004	965
Other non-current assets	643	749	749	749	749
Total assets	10,745	13,087	15,969	17,974	20,306
Current liabilities	3,150	2,718	4,574	5,155	5,791
ST borrowings	1,523	368	1,856	1,965	2,136
Account payables	1,229	1,753	2,663	3,124	3,581
Accrued expense	106	117	0	0	0
Other current liabilities	291	480	55	65	74
Non-current liabilities	1,062	1,592	1,500	1,578	1,701
LT borrowings	928	1,421	1,329	1,407	1,530
Other non-current liabilities	134	171	171	171	171
Total liabilities	4,211	4,311	6,075	6,733	7,492
Share capital	116	132	132	132	132
Capital surplus	3,145	4,735	4,735	4,735	4,735
Retained earnings	3,677	4,492	5,610	6,957	8,529
Other reserves	-471	-605	-605	-605	-605
Minority interest	66	23	23	23	23
Total equity	6,534	8,776	9,894	11,241	12,814
Total liabilities and equity	10,745	13,087	15,969	17,974	20,306

Key ratios

YE 31 Dec	FY19A	FY20	FY21E	FY22E	FY23E
Revenue mix					
Emerging cloud business	15%	17%	23%	29%	32%
Traditional IT outsourcing	85%	83%	77%	71%	68%
Growth (%)					
Revenue	14%	17%	27%	18%	14%
Gross profit	10%	15%	29%	19%	14%
Operating profit	1%	15%	34%	21%	15%
Net profit	5%	26%	25%	21%	17%
Profit & loss ratio (%)					
Gross margin	29.8%	29.2%	29.6%	29.7%	29.8%
Operating margin	6.9%	6.7%	7.1%	7.3%	7.4%
Net profit margin	6.3%	6.8%	6.6%	6.8%	7.0%
Balance sheet ratio					
Receivable turnover days	99	117	74	68	67
Amount due days	67	49	54	53	54
Payable turnover days	52	63	76	76	76
Current ratio (x)	2.60	3.82	2.90	2.95	3.02
Net debt to equity	net cash	net cash	net cash	net cash	net cash
Profitability (%)					
ROE	12.0%	12.5%	12.7%	13.6%	13.9%
ROIC	12.9%	13.5%	18.7%	22.7%	24.2%
Per share data (RMB)					
EPS (RMB)	0.28	0.32	0.40	0.48	0.56
DPS (RMB)	0.02	0.03	0.02	0.03	0.03
BVPS (RMB)	2.45	2.93	3.30	3.75	4.28

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.

CMBIS 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 CMBIS

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 Securities Limited

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

CMB International Securities Limited ("CMBIS") 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. CMBIS 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. CMBIS 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 CMBIS, solely for the purpose of supplying information to the clients of CMBIS 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 CMBIS 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. CMBIS has exerted every effort in its capacity to ensure, but not to guarantee, their accuracy, completeness, timeliness or correctness. CMBIS provides the information, advices and forecasts on an "AS IS" basis. The information and contents are subject to change without notice. CMBIS 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. CMBIS may make investment decisions or take proprietary positions that are inconsistent with the recommendations or views in this report.

CMBIS 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 CMBIS 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 CMBIS may have a conflict of interest that could affect the objectivity of this report and CMBIS 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 CMBIS.

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 CMBIS.

For recipients of this document in the United States

CMBIS is not a registered broker-dealer in the United States. As a result, CMBIS 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.