

BYD (002594 CH)

Momentum to maintain with NEV sales

BYD announced that total auto sales volume achieved 48K units in Oct, an increase of 16.1% YoY. Among these, NEPV achieved 22K units, an increase of 83.1% YoY/ 18.5% MoM. The Company announced its 4Q20E earnings guidance with a bottom-line range of RMB 4.2bn-4.6bn in 2021E. We believe BYD will benefit most from recent improving sentiment on NEV, from both sales volume and market sentiment perspective. We raised our bottom-line forecast by 24% to RMB 5.2bn in 2020E to reflect a higher ASP and GPM on auto segment. **Reiterate BUY rating and raise TP to RMB223.8.**

- **BYD continues rapid growth in NEV segment in Oct.** BYD sold 47K units (ICE+NEV) of auto in Oct, an increase of 16.1%YoY. Its NEV business remains on the high growth path with a total sales volume of 23K units, an increase of 84.7% YoY. Among these, NEPV achieved 22K units (+83.1% YoY) whereas NECV achieved 1.2K units (+123.2% YoY). We believe that the total delivery of model Han is in line with our expectations, with a total volume of 7,545 units in Oct. We expect that the sales volume of Han will continue to rise MoM within the year as the production of the blade battery is ramping up. In terms of ICE, sales reached 25K units in Oct, down 14.2% YoY/up 9.9% MoM.
- **3Q20 achieved RMB1.75bn, an increase 1363% YoY, in line with the Company's earnings preview.** Among them, BYD Electronics (285 HK, BUY) contributed approximately RMB1.22mn while other segments contributed RMB527mn. We believe that a series of new models, underpinned by production ramp-up of blade battery, will support the sales performance in the short term. We expect BYD will achieve total NEPV sales of 45K units in Nov & Dec, an increase of 112%YoY. We expect DM4.0 (expected rollout in 1Q21E) and new BEV platform (expected rollout in 2021 Shanghai Auto Show) will further boost its NEV sales in 2021E.
- **Higher ASP and GPM raise the 2021E bottom-line forecast.** We expect that strong sales of model Han among its NEPV will increase to 20% in NEV sales mixbased on our new calculation. Therefore, aggregate ASP for the NEPV segment increased by 9% to RMB187K in 2020. In the meanwhile, we believe that BYD will continue to utilize its cost control advantage, driving its improvement in GPM of auto segment. We therefore raised our 2021E earnings forecast by 30% to RMB6.88mn.

Earnings Summary

(YE 31 Dec)	FY18A	FY19A	FY20E	FY21E	FY22E
Revenue (RMB mn)	130,055	127,739	156,971	208,657	272,410
YoY growth (%)	22.79%	-1.78%	22.88%	32.93%	30.55%
Net income (RMB mn)	2,780	1,614	5,210	6,884	10,606
EPS (RMB)	0.93	0.50	1.81	2.43	3.79
YoY growth (%)	-34%	-47%	265%	34%	56%
Consensus EPS(RMB)	N/A	N/A	1.05	1.20	1.65
P/E (x)	198.39	371.70	101.95	76.17	48.76
P/B (x)	9.14	8.88	8.06	7.20	6.16
Yield (%)	0.12%	0.03%	0.11%	0.15%	0.22%
ROE (%)	5.05%	2.88%	8.73%	10.38%	13.96%
Net gearing (%)	64%	79%	86%	78%	72%

Source: Company data, Bloomberg, CMBIS estimates

BUY (Maintain)

Target Price	RMB223.8
(Previous TP	RMB155.7)
Up/Downside	+21.1%
Current Price	RMB184.8

China NEV Sector

Jack Bai
 (852) 3900 0835
 jackbai@cmbi.com.hk

Robin Xiao
 (852) 3900 0849
 robinxiao@cmbi.com.hk

Stock Data

Mkt Cap (HK\$ mn)	490,762
Avg 3 mths t/o (HK\$ mn)	4,085.03
52-week high/low	184.83/42.49
Total Issued Shares (mn)	915(H)
	1,813(A)

Source: Bloomberg

Shareholding Structure

Wang Chuanfu	18.83%
Lv Xiangyang	8.77%
Bershire Hathaway Energy	8.25%

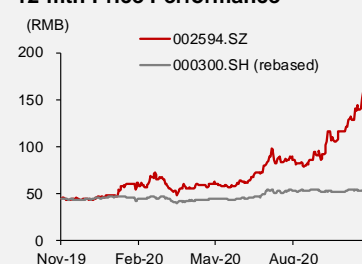
Source: Company announcement

Share Performance

	Absolute	Relative
1-mth	59.0%	49.3%
3-mth	109.8%	105.2%
6-mth	208.5%	147.1%

Source: Bloomberg

12-mth Price Performance



Source: Wind

Auditor: Ernst & Young

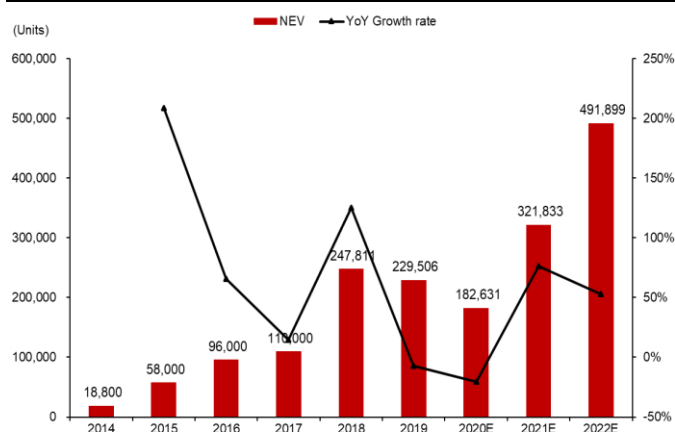
Related Report

1. "BYD (002594 CH) – Upside remains as bottom-line revised up" – 15 Oct 2020
2. "BYD (002594 CH) – A shining monthly delivery of model "Han" – 8 Sep 2020
3. "BYD (002594 CH) – Hidden giant in the cave" – 23 Jul 2020

- **Sentiment-driven re-rating on the NEV segment.** BYD's share price performed well exceed our expectation, while fundamentals were largely on track with our projection. We think BYD's re-rating was mainly sentimentally driven on an optimistic outlook for the NEV segment. Based on our SOTP framework, we believe the market is currently pricing the NEV segment at a 5.5x FY21E P/S ratio. After peers' recent share price rally, we believe BYD's NEV valuation is significantly lower than the peer's average of 10.1x FY21E P/S. Based on FY21E NEV sales projection of RMB62.8bn, we expect 1) **bull case share price to trade up 8.9x P/S at RMB263**, in line with Tesla (TSLA US, NR)'s valuation in a thrilling market sentiment; 2) **bear case share price to trade down to 3x P/S at RMB145.7**; and 3) **base case valuation of 7x P/S at RMB223.8**, matching with peers valuation growth with 30% discount. Our valuation revision reflects changes only on the NEV segment, and we think other catalysts such as power batteries gaining external shipment could boost valuation further. **Our TP for BYD is revised up by 43.7% to RMB223.8, maintain BUY.**

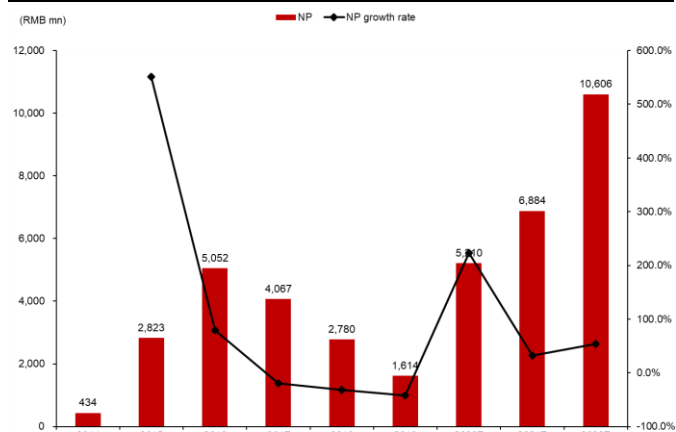
Focus chart

Figure 1: NEV Sales volume forecast: BYD



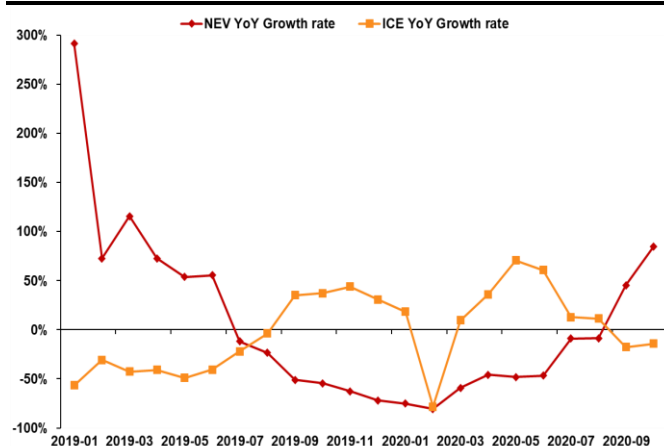
Source: Company data, CMBIS estimates

Figure 2: Bottom-line forecast



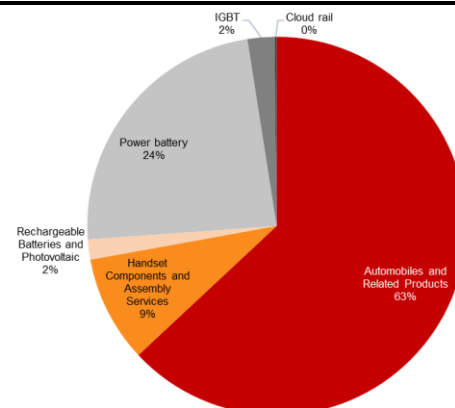
Source: Company data, CMBIS estimates

Figure 3: Monthly sales review: by NEV/ICE



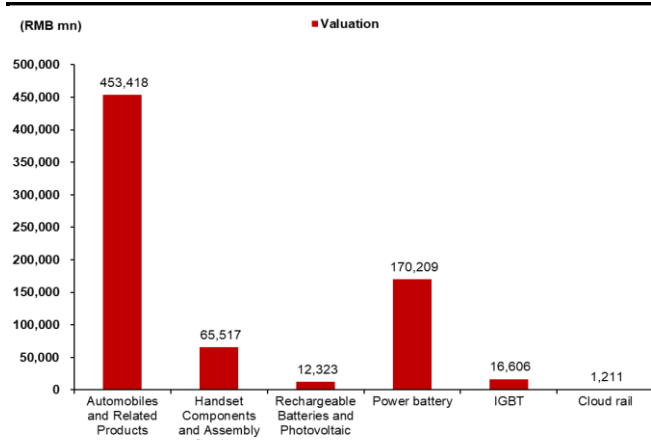
Source: Company data

Figure 4: Valuation proportion in 2021E



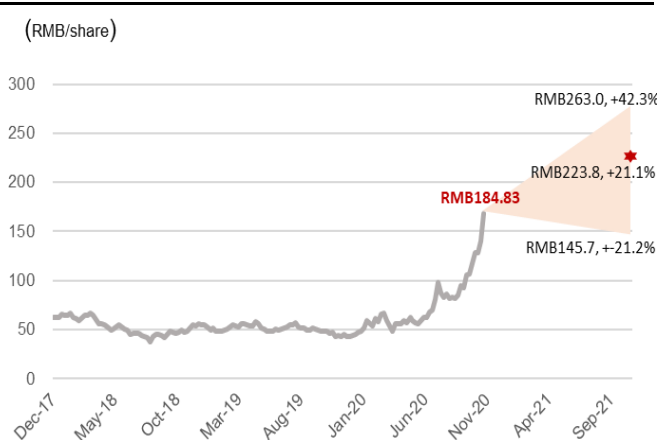
Source: Company data

Figure 5: Valuation by segment in 2021E



Source: Company data, CMBIS estimates

Figure 6: Risk-Reward



Source: Company data, CMBIS estimates

Earnings Revision

Figure 7: Earnings revision

(RMB mn)	New		Old		Change (%)	
	FY20E	FY21E	FY20E	FY21E	FY20E	FY21E
Revenue	156,971	208,657	156,971	201,032	0%	4%
Gross profit	28,095	36,039	26,647	32,923	5%	9%
Operating profit	7,383	10,097	5,911	7,704	25%	31%
Net profit	5,210	6,884	4,218	5,287	24%	30%
EPS (RMB)	1.81	2.43	1.45	1.84	25%	32%
GPM	17.90%	17.27%	16.98%	16.38%	0.9 ppt	0.9 ppt
OPM	4.70%	4.84%	3.77%	3.83%	0.9 ppt	1.0 ppt
NPM	3.32%	3.30%	2.69%	2.63%	0.6 ppt	0.7 ppt

Source: CMBIS estimates

Figure 8: CMBIS estimates vs consensus

(RMB mn)	CMBIS		Consensus		Diff (%)	
	FY20E	FY21E	FY20E	FY21E	FY20E	FY21E
Revenue	156,971	208,657	148,041	175,338	6%	19%
Gross profit	28,095	36,039	23,981	27,177	17%	33%
Operating profit	7,383	10,097	8,991	10,170	-18%	-1%
Net profit	5,210	6,884	3,939	4,226	32%	63%
EPS (RMB)	1.81	2.43	1.44	1.65	26%	47%
GPM	17.90%	17.27%	16.20%	15.50%	1.7 ppt	1.8 ppt
OPM	4.70%	4.84%	6.07%	5.80%	-1.4 ppt	-1.0 ppt
NPM	3.32%	3.30%	2.66%	2.41%	0.7 ppt	0.9 ppt

Source: Bloomberg, CMBIS estimates

Figure 9: Revenue breakdown

(RMB mn)	FY18A	FY19A	FY20E	FY21E	FY22E
Automobiles and Related Products	76,007	63,266	62,154	90,849	122,661
...YoY	34%	-17%	-2%	46%	35%
Handset Components and Assembly Services	42,230	53,380	81,565	101,466	117,092
...YoY	4%	26%	53%	24%	15%
Rechargeable Batteries and Photovoltaic	8,950	10,506	12,607	14,498	16,238
...YoY	2%	17%	20%	15%	12%
Other business	2,868	587	646	807	969
...YoY	5524%	-80%	10%	25%	20%
Total Explicit revenue	130,055	127,739	156,971	207,620	256,959
...YoY	23%	-2%	23%	32%	24%
Power battery				667	14,647
...YoY					2096%
IGBT				369	803
...YoY					118%
Total	130,055	127,739	156,971	208,657	272,410
...YoY	23%	-2%	23%	33%	31%

Source: Company data, CMBIS estimates

Figure 10: P&L breakdown

(RMB mn)	FY18A	FY19A	FY20E	FY21E	FY22E
Revenue	130,055	127,739	156,971	208,657	272,410
...YoY	22.79%	-1.78%	22.88%	32.93%	30.55%
Cost of sales	(108,725)	(106,924)	(128,876)	(172,617)	(225,595)
Gross profit	21,330	20,814	28,095	36,039	46,815
GPM (%)	16.40%	16.29%	17.90%	17.27%	17.19%
...YoY	5.91%	-2.42%	34.98%	28.28%	29.90%
Selling Exp	(4,729)	(4,346)	(5,180)	(7,094)	(9,534)
...% of rev	-3.64%	-3.40%	-3.30%	-3.40%	-3.50%
Admin Exp	(4,989)	(5,629)	(6,279)	(7,929)	(8,990)
...% of rev	-3.84%	-4.41%	-4.00%	-3.80%	-3.30%
Operating profit	4,241	2,312	7,383	10,097	15,301
OPM (%)	3.26%	1.81%	4.70%	4.84%	5.62%
...YoY	-21.62%	-45.48%	219.30%	36.76%	51.54%
Net profit	2,780	1,614	5,210	6,884	10,606
NPM (%)	2.14%	1.26%	3.32%	3.30%	3.89%
...YoY	-31.64%	-41.93%	222.70%	32.13%	54.07%

Source: Company data, CMBIS estimates

Figure 11: Valuation comparison vs major NEV players

NEV Company	Ticker	Major model	NEV Sales in China					Market Cap (US\$, mn)	2021E Sales est. (US\$, mn)	P/S multiple FY21E
			Jul	Aug	Sep	Oct	10M20			
Tesla	TSLA US Equity	Model 3	11,014	11,811	11,329	NA	79,908	399,047	45,043	8.9
Nio	NIO US	ES6, EC6, ES8	3,533	3,965	4,708	5,055	26,375	51,368	4,037	12.7
Li Auto	LI US	ONE	2,445	2,711	3,504	3,692	18,160	21,168	2,523	8.4
XPENG	XPEV US	G3, P7	2,451	2,649	3,478	3,040	14,077	20,124	1,967	10.2
WM Motor	N/A	EX5, EX6	2,036	2,057	2,107	3,003	35,920	N/A	N/A	N/A
BYD's NEV segment*	1211 HK/ 002594 CH	Han**	1,200	4,000	5,612	7,545	18,362	51,797	7,969	6.5
		Other EVs	13,900	11,283	14,269	15,672	39,452			

Source: Company data, Bloomberg, CMBIS estimates

Note: *BYD NEV segment's market cap and sales estimates are estimated by CMBIS;

**BYD Han's sales data is based on BYD's disclosure through its official Weibo;

Financial Summary

Income statement

YE 31 Dec (RMB mn)	FY18A	FY19A	FY20E	FY21E	FY22E
Revenue	130,055	127,739	156,971	208,657	272,410
Cost of sales	(108,725)	(106,924)	(128,876)	(172,617)	(225,595)
Gross profit	21,330	20,814	28,095	36,039	46,815
Taxes and levies	(2,146)	(1,561)	(1,884)	(2,504)	(3,269)
S&D exp	(4,729)	(4,346)	(5,180)	(7,094)	(9,534)
R&D exp	(3,760)	(4,141)	(4,521)	(5,988)	(7,764)
Admin exp	(4,989)	(5,629)	(6,279)	(7,929)	(8,990)
Finance costs	(2,997)	(3,014)	(3,635)	(4,162)	(4,029)
Impairment losses	(1,020)	(636)	(791)	(1,043)	(1,364)
Other income	2,328	1,724	2,259	3,185	3,918
Investment income	248	(809)	(549)	(313)	(272)
GL from changes in FV	(5)	10	(56)	4	(38)
GL on disposal	(19)	(100)	(76)	(97)	(172)
Operating profit/(loss)	4,241	2,312	7,383	10,097	15,301
Non-operating income	230	226	471	417	490
Non-operating expense	(86)	(107)	(118)	(157)	(217)
Profit before income tax	4,385	2,431	7,736	10,358	15,575
Income tax expense	(829)	(312)	(1,142)	(1,644)	(2,150)
Profit for the year	3,556	2,119	6,595	8,713	13,425
Non-controlling interests	776	504	1,385	1,830	2,819
NP	2,780	1,614	5,210	6,884	10,606

Cash flow

YE 31 Dec (RMB mn)	FY18A	FY19A	FY20E	FY21E	FY22E
Net income	2,780	1,614	5,210	6,884	10,606
D&A	9,995	9,933	10,035	12,193	14,571
Change in working capital	(291)	3,233	4,475	7,802	(315)
Others	(543)	6,427	-	-	-
Net cash from operating	12,523	14,741	11,912	12,919	27,641
Capex & investments	(6,076)	(12,040)	(12,992)	(13,608)	(14,961)
Associated companies	(496)	(499)	(406)	(447)	(491)
Others	(7,659)	(8,342)	(4,520)	(5,529)	(5,858)
Net cash from investing	(14,231)	(20,881)	(17,919)	(19,584)	(21,310)
Equity raised	-	-	-	-	-
Change of Debts	5,076	10,535	13,572	13,628	2,414
Dividend paid	(557)	(164)	(521)	(688)	(1,061)
Others	(603)	(3,761)	7,202	7,361	10,010
Net cash from financing	3,917	6,610	8,682	8,032	(3,955)
Net change in cash	2,209	470	2,675	1,368	2,376
Cash at the beginning	9,903	13,052	12,650	15,325	16,693
Others	941	(872)	-	-	-
Cash at the end	13,052	12,650	15,325	16,693	19,069
Less: pledged cash	-	-	-	-	-

Balance sheet

YE 31 Dec (RMB mn)	FY18A	FY19A	FY20E	FY21E	FY22E
Non-current assets	79,361	88,675	102,159	116,354	131,224
Fixed asset	43,679	49,443	58,001	66,220	74,742
Intangible assets	11,314	12,650	14,840	16,943	19,123
Interest in joint	3,561	4,060	4,466	4,913	5,404
Other non-current assets	20,807	22,521	24,852	28,278	31,956
Current assets	115,211	106,967	127,203	160,394	190,954
Cash	13,052	12,650	15,325	16,693	19,069
Account receivable	49,284	43,934	52,324	67,309	77,831
Inventory	26,330	25,572	31,281	41,099	50,132
Other current assets	26,545	24,811	28,274	35,294	43,922
Current liabilities	116,569	108,029	131,067	167,393	196,203
Borrowings	37,789	40,332	50,310	62,614	62,925
Account payables	46,283	36,168	42,959	55,683	70,498
Other payables	13,568	11,217	13,532	18,125	23,687
Tax payables	18,930	20,311	24,266	30,971	39,091
Non-current liabilities	17,308	25,011	29,606	32,288	36,058
Borrowings	13,924	21,916	25,511	26,834	28,937
Deferred income tax	66	103	91	132	172
Provisions	-	-	-	-	-
Others	3,317	2,992	4,004	5,322	6,949
Total equity	60,694	62,601	68,689	77,067	89,918
Minority Interest	5,496	5,839	6,102	7,005	8,080
Shareholders' equity	55,198	56,762	62,587	70,062	81,837

Key ratios

YE 31 Dec	FY18A	FY19A	FY20E	FY21E	FY22E
Sales mix (%)					
Automobiles	58%	50%	40%	44%	45%
Handset Components	32%	42%	52%	49%	43%
Rechargeable Batteries	7%	8%	8%	7%	6%
Other business	2%	0%	0%	0%	0%
Power battery	0%	0%	0%	0%	5%
IGBT	0%	0%	0%	0%	0%
Total	100%	100%	100%	100%	100%
P&L ratios (%)					
Gross profit margin	16%	16%	18%	17%	17%
Pre-tax margin	3%	2%	5%	5%	6%
Net margin	3%	2%	4%	4%	5%
Effective tax rate	19%	13%	15%	16%	14%
Balance sheet ratios					
Current ratio (x)	0.99	0.99	0.97	0.96	0.97
Quick ratio (x)	0.59	0.59	0.57	0.54	0.53
Cash ratio (x)	0.11	0.12	0.12	0.10	0.10
Debtors turnover days	138	126	122	118	104
Total debt / total equity	221%	213%	234%	259%	258%
Net debt / equity ratio	64%	79%	86%	78%	72%
Returns (%)					
ROE	5%	3%	9%	10%	14%
ROA	4%	3%	5%	6%	7%
Per share					
EPS (RMB)	0.93	0.50	1.81	2.43	3.79
DPS (RMB)	0.20	0.06	0.19	0.25	0.39
BVPS (RMB)	20.23	20.81	22.94	25.68	30.00

Source: Company data, CMBIS estimates

Note: *All numbers are based on A share financial statement

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.