

# Alphabet (GOOG US)

# Inline 2Q24 results; GenAl gains traction

Alphabet reported 2Q24 financial results: total revenue increased by 14% YoY to US\$84.7bn, in line with Bloomberg consensus estimate; net income grew by 29% YoY to US\$23.6bn, 3% ahead of the consensus estimate, mainly due to management's effort to moderate expenses growth and slow down the pace of hiring. Looking ahead to 3Q24, we expect the high base to take a toll on revenue growth rate. We also expect 3Q24 OPM to start reflecting the increase in depreciation and expenses related to tech infrastructure investment, as noted by management. Management still expects to see FY24 full-year OPM to improve relative to FY23 given the solid efficiency gains in 1H24. We lift FY24-26 earnings forecast by 3-8% in view of the continued improvement in operating efficiency. We roll forward our valuation multiple and raise TP to US\$218.0 on 26x FY25E PE (previous: US\$185.5 on 27x FY24E PE). Maintain BUY.

- Resilient advertising business. Google Search & other revenue grew by 14% YoY to US\$48.5bn in 2Q24 (1Q24: +14% YoY), driven by strength in the retail and financial services verticals. YouTube ad revenue was up 13% YoY to US\$8.7bn in 2Q24 (1Q24: +21% YoY), thanks to the watch time growth, monetization improvement of Shorts, and momentum in connected TV services. All has been driving better user experience and improving ad performance. The roll-out of All overviews led to increased search usage and user satisfaction with the results. Advertisers that have adopted PMax to Broad Match with Smart Bidding in the Search campaigns saw an average increase of over 25% more conversions or value at a similar cost. For 3Q24, management are cautious on the Google ad revenue outlook, given the high base in 2H23.
- GenAl driving solid growth of cloud business. Google Cloud revenue delivered resilient growth of 29% YoY to US\$10.3bn in 2Q24 (1Q24: +28% YoY), driven by solid growth in Google Cloud Platform (GCP) and increasing contribution from Al. Google Cloud also reached the US\$1bn operating income milestone, with OPM up by 6.4ppt YoY and 1.9ppt QoQ to 11.3% in 2Q24. Year-to-date, Google Cloud Al infrastructure and generative Al solutions have already generated billions in revenue (c.5-15% of Google Cloud revenue in 1H24 on our estimate) and are used by over 2mn developers, per management. The majority of Google Cloud top 100 customers are already using Google Cloud generative Al solutions.
- Margin expansion continues. Overall OPM increased by 3.1ppt YoY and 0.7ppt QoQ to 32.4% in 2Q24, mostly due to moderate expenses growth and QoQ decline in headcount. For 3Q24, management expects increases in headcount, depreciation, and expenses related to its investment in tech infrastructure and talent. However, management still expects full-year OPM to improve in 2024 vs. 2023. Capex was up 91% YoY to US\$13.2bn in 2Q24, and management expects quarterly Capex throughout FY24 to be at or above US\$12bn.

## **Earnings Summary**

(YE 31 Dec)	FY22A	FY23A	FY24E	FY25E	FY26E				
Revenue (US\$ mn)	282,836	307,394	344,905	383,473	423,138				
YoY growth (%)	9.8	8.7	12.2	11.2	10.3				
Net profit (US\$ mn)	59,972.0	73,795.0	92,037.2	104,084.2	116,946.7				
EPS (Reported) (US\$)	4.59	5.84	7.41	8.38	9.42				
Consensus EPS (US\$)	4.59	5.84	7.60	8.67	9.95				
P/S (x)	8.1	7.4	6.6	5.9	5.4				
P/E (x)	40.0	31.4	24.8	21.9	19.5				
Source: Company data, Bloomberg, CMBIGM estimates									

# **BUY (Maintain)**

 Target Price
 U\$\$218.00

 (Previous TP
 U\$\$185.50)

 Up/Downside
 18.7%

 Current Price
 U\$\$183.60

**China Internet** 

**Saiyi HE, CFA** (852) 3916 1739 hesaiyi@cmbi.com.hk

Wentao LU, CFA luwentao@cmbi.com.hk

Ye TAO

franktao@cmbi.com.hk

#### Stock Data

Mkt Cap (US\$ mn)	2,279,394.0
Avg 3 mths t/o (US\$ mn)	946.0
52w High/Low (US\$)	192.66/122.79
Total Issued Shares (mn)	12415.0

Source: FactSet

#### **Shareholding Structure**

Larry Page	5.7%
Sergey Brin	5.4%
Source: Company data	

Course. Company date

# Share Performance Absolute Relative

6-mth	22.1%	5.0%
3-mth	14.0%	-0.5%
1-mth	1.6%	-1.3%
	Absolute	itelative

Source: FactSet

### 12-mth Price Performance



Source: FactSet



# **Business forecasts update and valuation**

Figure 1: Alphabet: forecast revision

	Current			Previous			Change (%)		
US\$ bn	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E
Revenue	344.9	383.5	423.1	344.4	382.3	421.2	0.1%	0.3%	0.5%
Gross profit	196.9	219.9	243.8	193.8	215.6	237.5	1.6%	2.0%	2.6%
Operating profit	104.8	118.6	133.4	98.1	113.5	128.8	6.9%	4.5%	3.5%
Net profit	92.0	104.1	116.9	85.3	98.6	113.1	7.9%	5.6%	3.4%
EPS (US\$)	7.4	8.4	9.4	6.9	7.9	9.1	7.9%	5.6%	3.4%
Gross margin	57.1%	57.4%	57.6%	56.3%	56.4%	56.4%	0.8 ppt	1.0 ppt	1.2 ppt
Operating margin	30.4%	30.9%	31.5%	28.5%	29.7%	30.6%	1.9 ppt	1.2 ppt	0.9 ppt
Net margin	26.7%	27.1%	27.6%	24.8%	25.8%	26.9%	1.9 ppt	1.4 ppt	0.8 ppt

Source: CMBIGM estimates

Figure 2: Alphabet: CMBIGM estimates vs consensus

	_	CMBIGM	Consensu					Diff (%)	
US\$ bn	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E
Revenue	344.9	383.5	423.1	346.7	384.8	425.3	-0.5%	-0.4%	-0.5%
Gross profit	196.9	219.9	243.8	199.6	222.0	245.2	-1.4%	-0.9%	-0.6%
Operating profit	104.8	118.6	133.4	107.5	123.7	133.3	-2.5%	-4.1%	0.0%
Net profit	92.0	104.1	116.9	94.4	106.0	118.1	-2.5%	-1.8%	-1.0%
EPS (US\$)	7.4	8.4	9.4	7.6	8.7	10.0	-2.4%	-3.3%	-5.4%
Gross margin	57.1%	57.4%	57.6%	57.6%	57.7%	57.7%	-0.5 ppt	-0.3 ppt	0.0 ppt
Operating margin	30.4%	30.9%	31.5%	31.0%	32.1%	31.3%	-0.6 ppt	-1.2 ppt	0.2 ppt
Net margin	26.7%	27.1%	27.6%	27.2%	27.6%	27.8%	-0.5 ppt	-0.4 ppt	-0.1 ppt

Source: Bloomberg, CMBIGM estimates

## **Valuation**

We value Alphabet at US\$218.0 per share based on 26x 2025E P/E. Our target PE multiple is on par with the sector average (26x).

Figure 3: Alphabet: target valuation

P/E valuation (US\$mn)	2025E
Net income	92,037
Target 2025E P/E	26
Target equity valuation	2,669,079
Valuation per share (US\$)	218.0

Source: Company data, CMBIGM estimates

Figure 4: Global online ad platforms: valuation comparison

	•							
Ticker	Price	00045	PE(x)	00005	00045	PS (x)	2225	EPS CAGR
	(LC)	2024E	2025E	2026E	2024E	2025E	2026E	24-26E
GOOG US	183.6	24.8	21.9	19.5	6.6	5.9	5.4	1.7
META US	488.7	23.6	20.5	18.3	7.8	6.9	6.2	1.5
PINS US	40.8	30.0	25.1	19.1	7.6	6.5	5.6	1.5
SNAP US	14.3	NA	39.0	25.6	4.4	3.8	3.4	NA
		26.1	26.4	20.5	6.6	5.8	5.1	NA
MSFT US	444.9	37.7	33.3	28.4	13.5	11.8	10.3	2.6
NVDA US	122.6	NA	44.9	32.5	50.8	25.0	18.4	NA
AMZN US	186.4	35.5	28.7	23.7	3.0	2.7	2.4	1.8
TSLA US	246.4	NA	NA	NA	7.9	6.7	5.6	NA
NFLX US	642.8	33.6	28.1	23.6	7.1	6.4	5.7	NA
CRM US	256.1	31.2	25.8	23.3	7.1	6.6	6.0	NA
ADBE US	546.0	30.1	26.5	23.2	11.3	10.1	9.1	2.5
INTU US	637.1	37.9	33.2	28.9	11.0	9.8	8.7	2.9
	GOOG US META US PINS US SNAP US  MSFT US NVDA US AMZN US TSLA US NFLX US CRM US ADBE US	MSFT US 444.9 NVDA US 186.4 TSLA US 246.4 NFLX US 642.8 CRM US 256.1 ADBE US 546.0	MSFT US 444.9 37.7 NVDA US 122.6 NA AMZN US 186.4 35.5 TSLA US 246.4 NA NFLX US 642.8 33.6 CRM US 256.1 31.2 ADBE US 546.0 30.1	CC   2024E   2025E	GOOG US         183.6         24.8         21.9         19.5           META US         488.7         23.6         20.5         18.3           PINS US         40.8         30.0         25.1         19.1           SNAP US         14.3         NA         39.0         25.6           26.1         26.4         20.5    MSFT US  MSFT US  444.9  37.7  33.3  28.4  NVDA US  122.6  NA  44.9  32.5  AMZN US  186.4  35.5  28.7  23.7  TSLA US  246.4  NA  NA  NA  NA  NA  NA  NFLX US  642.8  33.6  28.1  23.6  CRM US  25.8  23.3  ADBE US  546.0  30.1  26.5  23.2	GOOG US 183.6 24.8 21.9 19.5 6.6 META US 488.7 23.6 20.5 18.3 7.8 PINS US 40.8 30.0 25.1 19.1 7.6 SNAP US 14.3 NA 39.0 25.6 4.4 20.5 6.6 MSFT US 444.9 37.7 33.3 28.4 13.5 NVDA US 122.6 NA 44.9 32.5 50.8 AMZN US 186.4 35.5 28.7 23.7 3.0 TSLA US 246.4 NA NA NA NA 7.9 NFLX US 642.8 33.6 28.1 23.6 7.1 CRM US 256.1 31.2 25.8 23.3 7.1 ADBE US 546.0 30.1 26.5 23.2 11.3	GOOG US 183.6 24.8 21.9 19.5 6.6 5.9  META US 488.7 23.6 20.5 18.3 7.8 6.9  PINS US 40.8 30.0 25.1 19.1 7.6 6.5  SNAP US 14.3 NA 39.0 25.6 4.4 3.8  26.1 26.4 20.5 6.6 5.8   MSFT US 444.9 37.7 33.3 28.4 13.5 11.8  NVDA US 122.6 NA 44.9 32.5 50.8 25.0  AMZN US 186.4 35.5 28.7 23.7 3.0 2.7  TSLA US 246.4 NA NA NA NA 7.9 6.7  NFLX US 642.8 33.6 28.1 23.6 7.1 6.4  CRM US 256.1 31.2 25.8 23.3 7.1 6.6  ADBE US 546.0 30.1 26.5 23.2 11.3 10.1	GOOG US 183.6 24.8 21.9 19.5 6.6 5.9 5.4  META US 488.7 23.6 20.5 18.3 7.8 6.9 6.2  PINS US 40.8 30.0 25.1 19.1 7.6 6.5 5.6  SNAP US 14.3 NA 39.0 25.6 4.4 3.8 3.4  26.1 26.4 20.5 6.6 5.8 5.1  MSFT US 444.9 37.7 33.3 28.4 13.5 11.8 10.3  NVDA US 122.6 NA 44.9 32.5 50.8 25.0 18.4  AMZN US 186.4 35.5 28.7 23.7 3.0 2.7 2.4  TSLA US 246.4 NA NA NA NA 7.9 6.7 5.6  NFLX US 642.8 33.6 28.1 23.6 7.1 6.4 5.7  CRM US 256.1 31.2 25.8 23.3 7.1 6.6 6.0  ADBE US 546.0 30.1 26.5 23.2 11.3 10.1 9.1



Average			34.3	33.0	27.0	12.9	9.4	7.9	
Uber	UBER US	67.5	NA	28.8	20.8	3.3	2.8	2.4	NA
ServiceNow	NOW US	765.5	NA	47.3	38.7	14.4	11.9	10.3	NA

Source: Bloomberg, CMBIGM Note: data as of 23 Jul 2024



# **Financial Summary**

INCOME STATEMENT	2021A	2022A	2023A	2024E	2025E	2026E
YE 31 Dec (US\$ mn)						
Revenue	257,637	282,836	307,394	344,905	383,473	423,138
Cost of goods sold	(110,939)	(126,203)	(133,332)	(148,055)	(163,542)	(179,346)
Gross profit	146,698	156,633	174,062	196,851	219,931	243,792
Operating expenses	(67,984)	(81,791)	(89,769)	(92,021)	(101,314)	(110,439)
Selling expense	(22,912)	(26,567)	(27,917)	(27,868)	(30,678)	(33,005)
Admin expense	(13,510)	(15,724)	(16,425)	(14,831)	(16,489)	(18,195)
R&D expense	(31,562)	(39,500)	(45,427)	(49,321)	(54,146)	(59,239)
Others	0	0	0	0	0	0
Operating profit	78,714	74,842	84,293	104,830	118,617	133,353
Other income/expense	12,020	(3,514)	1,424	3,449	3,835	4,231
Pre-tax profit	90,734	71,328	85,717	108,279	122,452	137,584
Income tax	(14,701)	(11,356)	(11,922)	(16,242)	(18,368)	(20,638)
After tax profit	76,033	59,972	73,795	92,037	104,084	116,947
Net profit	76,033	59,972	73,795	92,037	104,084	116,947
Adjusted net profit	91,409	79,334	96,255	116,181	130,927	146,566
BALANCE SHEET	2021A	2022A	2023A	2024E	2025E	2026E
YE 31 Dec (US\$ mn)						
Current assets	188,143	164,795	171,530	221,358	295,745	395,536
Cash & equivalents	20,945	21,879	24,048	66,947	136,416	231,340
Account receivables	39,304	40,258	47,964	54,893	59,811	64,678
Inventories	1,170	2,670	0	0 1,000	0	0 1,070
Financial assets at FVTPL	118,704	91,883	86,868	86,868	86,868	86,868
Other current assets	8,020	8,105	12,650	12,650	12,650	12,650
Non-current assets	171,125	200,469	230,862	257,665	281,204	302,799
PP&E	97,599	112,668	134,345	161,148	184,687	206,282
Right-of-use assets	12,959	14,381	14,091	14,091	14,091	14,091
Deferred income tax	1,284	5,261	12,169	12,169	12,169	12,169
Investment in JVs & assos	29,549	30,492	31,008	31,008	31,008	31,008
Intangibles	1,417	2,084	2,084	2,084	2,084	2,084
Goodwill	22,956	28,960	29,198	29,198	29,198	29,198
Other non-current assets	5,361	6,623	7,967	7,967	7,967	7,967
Total assets	359,268	365,264	402,392	479,023	576,949	698,334
Current liabilities	64,254	69,300	81,814	91,468	97,829	104,138
Account payables	6,037	5,128	7,493	8,154	8,827	9,486
Tax payable	0	0	0	0	0	0
Other current liabilities	12,284	12,278	13,013	17,933	19,476	21,063
Accrued expenses	45,933	51,894	61,308	65,381	69,526	73,589
Non-current liabilities	43,379	39,820	37,199	37,199	37,199	37,199
Long-term borrowings	14,817	14,701	13,253	13,253	13,253	13,253
Obligations under finance leases	11,389	12,501	12,460	12,460	12,460	12,460
Deferred income	535	599	911	911	911	911
Other non-current liabilities	16,638	12,019	10,575	10,575	10,575	10,575
Total liabilities	107,633	109,120	119,013	128,667	135,028	141,337
Capital surplus	61,774	68,184	76,534	51,474	38,955	37,084
Retained earnings	191,484	195,563	211,247	303,284	407,368	524,315
Other reserves	(1,623)	(7,603)	(4,402)	(4,402)	(4,402)	(4,402)
Total shareholders equity	251,635	256,144	283,379	350,356	441,921	556,998
Total equity and liabilities	359,268	365,264	402,392	479,023	576,949	698,334



					A WESTLY OWNER S	institutely of Chica Sterchants Fank
CASH FLOW	2021A	2022A	2023A	2024E	2025E	2026E
YE 31 Dec (US\$ mn)						
Operating						
Profit before taxation	90,734	71,328	85,717	108,279	122,452	137,584
Depreciation & amortization	11,555	15,287	11,946	21,484	26,312	31,298
Tax paid	(14,701)	(11,356)	(11,922)	(16,242)	(18,368)	(20,638)
Change in working capital	(1,523)	(2,235)	(3,845)	2,724	1,444	1,442
Others	5,587	18,471	19,850	24,143	26,843	29,620
Net cash from operations	91,652	91,495	101,746	140,389	158,683	179,306
Investing						
Capital expenditure	(24,640)	(31,485)	(32,251)	(48,287)	(49,852)	(52,892)
Acquisition of subsidiaries/ investments	(2,618)	(6,969)	(495)	0	0	0
Others	(8,265)	18,156	5,683	0	0	0
Net cash from investing	(35,523)	(20,298)	(27,063)	(48,287)	(49,852)	(52,892)
Financing						
Net borrowings	(1,236)	(1,196)	(760)	0	0	0
Share repurchases	(50,274)	(59,296)	(61,504)	(49,203)	(39,363)	(31,490)
Others	(9,852)	(9,265)	(9,829)	0	0	0
Net cash from financing	(61,362)	(69,757)	(72,093)	(49,203)	(39,363)	(31,490)
Net change in cash						
Cash at the beginning of the year	26,465	20,945	21,879	24,048	66,947	136,416
Exchange difference	(287)	(506)	(421)	0	0	0
Cash at the end of the year	20,945	21,879	24,048	66,947	136,416	231,340
GROWTH	2021A	2022A	2023A	2024E	2025E	2026E
YE 31 Dec						
Revenue	41.2%	9.8%	8.7%	12.2%	11.2%	10.3%
Gross profit	50.0%	6.8%	11.1%	13.1%	11.7%	10.8%
Operating profit	90.9%	(4.9%)	12.6%	24.4%	13.2%	12.4%
Net profit	88.8%	(21.1%)	23.0%	24.7%	13.1%	12.4%
Adj. net profit	71.6%	(13.2%)	21.3%	20.7%	12.7%	11.9%
PROFITABILITY	2021A	2022A	2023A	2024E	2025E	2026E
YE 31 Dec						
Gross profit margin	56.9%	55.4%	56.6%	57.1%	57.4%	57.6%
Operating margin	30.6%	26.5%	27.4%	30.4%	30.9%	31.5%
Adj. net profit margin	35.5%	28.0%	31.3%	33.7%	34.1%	34.6%
Return on equity (ROE)	32.1%	23.6%	27.4%	29.0%	26.3%	23.4%
GEARING/LIQUIDITY/ACTIVITIES	2021A	2022A	2023A	2024E	2025E	2026E
YE 31 Dec						
Current ratio (x)	2.9	2.4	2.1	2.4	3.0	3.8
Receivable turnover days	55.7	52.0	57.0	58.1	56.9	55.8
VALUATION	2021A	2022A	2023A	2024E	2025E	2026E
YE 31 Dec						
P/E	1.6	40.0	31.4	24.8	21.9	19.5
P/E (diluted)	1.6	40.3	31.7	25.0	22.1	19.7
P/B	0.5	9.4	8.2	6.5	5.2	4.1

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



# **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**

: Stock with potential return of over 15% over next 12 months BUY HOLD Stock with potential return of +15% to -10% over next 12 months SELL NOT RATED : Stock with potential loss of over 10% over next 12 months

: 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

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.