## Sunny Optical Technology (2382 нк)

Target price: HKD44.30 (from HKD40.70)
Share price (4 Nov): HKD36.30 | Up/downside: +22.0\%

Buy
(from Outperform)

## Solid earnings outlook; pullback a good entry point

$>$ Intact industry trends: multi-cams in smartphones and smart cars
> We expect 32-55\% YoY EPS growth in 2016-18 with rising ROE
> Upgrading to Buy (1) from Outperform (2); raising TP to HKD44.30

## Kylie Huang

(886) 287586248 kylie.huang@daiwacm-cathay.com.tw

Anthony Liao
(886) 287586251
anthony.liao@daiwacm-cathay.com.tw


What's new: Sunny Optical's (Sunny) share price has corrected by 15\% over the past two months, due to market worries over the impact of Samsung Electronics' (SEC) (005930 KS, KRW1,627,000, Buy [1]) Note 7 issue and the status of orders from China smartphone brands, in our view. Our channel checks suggest that Sunny's business is on track and we view the recent pullback as a good entry point for investors. Sunny remains one of our top picks in the Greater China smartphone space

## What's the impact: Handset lens sets (HLS) orders from SEC and

 China smartphone brands remain solid. The market seems concerned that Sunny's HLS shipments might miss its guidance (+20-30\% YoY) due to the halt in production of the Note 7 and muted sentiment from China brands. Our channel checks indicate that orders from SEC remain solid as:1) Sunny is not a Note 7 supplier, and 2) SEC targets to promote its midrange models (A/J/C series) in 4Q16-1Q17 to offset units lost from the Note 7 , with Sunny a major supplier and set to benefit from the volume ramp-up, in our view. We also expect Sunny to ramp up volume in 10MP+ products for China clients in 2H16 on more project wins. Overall, we think Sunny is on track to meet our forecast of $23 \%$ YoY HLS shipment growth in 2016.

Well-positioned in the next smartphone and car mega trend. As previously discussed (see "The more the merrier: multi-cameras are the next mega trend in smartphones", 2 August 2016), we expect the number of dual-cam smartphones to grow to 230 m in 2017 and 390 m in 2018, from 60 m units in 2016, with Sunny, a major supplier of handset camera modules (HCM) and HLS, well positioned to benefit from this trend. Indeed, our industry surveys show that more tier-1 China brands (ie, Hauwei, Oppo, Vivo and Xiaomi) are expected to launch dual-cam smartphones in 2H161H17, with Sunny as the major HCM supplier. Driven by an ASP increase from dual-cams and an improving product mix, we expect Sunny's HCM ASP to grow by 10-18\% YoY in 2016-18 (vs. 3\% YoY decline in 2015). For HLS, Sunny should enjoy the spill-over benefits from an increase in overall HLS demand as a result of increased dual-cam adoption. For vehicle lenses, we expect shipments to grow $40 \%$ YoY in 2016-18 due multi-cam trends in cars as a result of the rising adoption of advanced driver assistance systems (ADAS) and regulation requirements.

What we recommend: We raise our 2016-18E EPS by 1-2\% to factor in ASP upside from dual-cams. We raise our 12-month target price to HKD44.30 (from HKD 40.70), based on an unchanged $25 x$ PER on our revised 2017E EPS (from $2 \mathrm{H} 16-1 \mathrm{H} 17$ ), which is at the high end of the stock's past-3-year trading range of $9-26 x$. Our TP represents $22 \%$ upside potential from current levels; thus we upgrade Sunny to Buy (1) from Outperform (2). Key risk: worse-than-expected pricing competition in HCM.

How we differ: Our 2017-18E EPS are 5-10\% above consensus due to our more optimistic revenue assumptions on multi-cam trends.

Dual-cam penetration in smartphones in 2014-18E


Source: Daiwa forecasts

Dual-cam adopted smartphone by brand 2014-18E


Source: Daiwa forecasts

Sunny Optical: revisions to revenue and earnings forecasts

|  | Revised forecasts |  |  | Previous forecasts |  |  | Change |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CNYm | 2016E | 2017E | 2018E | 2016E | 2017E | 2018E | 2016E | 2017E | 2018E |
| Revenues | 14,010 | 17,165 | 20,930 | 13,930 | 17,015 | 20,360 | 0.6\% | 0.9\% | 2.8\% |
| Gross profit | 2,438 | 3,090 | 3,914 | 2,427 | 3,070 | 3,828 | 0.5\% | 0.7\% | 2.3\% |
| Op. profits | 1,317 | 1,799 | 2,386 | 1,309 | 1,785 | 2,341 | 0.6\% | 0.8\% | 1.9\% |
| Pre-tax income | 1,379 | 1,860 | 2,452 | 1,372 | 1,846 | 2,408 | 0.5\% | 0.8\% | 1.9\% |
| Net profit | 1,182 | 1,596 | 2,104 | 1,172 | 1,578 | 2,058 | 0.8\% | 1.1\% | 2.2\% |
| EPS (CNY) | 1.10 | 1.48 | 1.95 | 1.09 | 1.47 | 1.91 | 0.8\% | 1.1\% | 2.2\% |
| Margins (\%) |  |  |  |  |  |  |  |  |  |
| Gross margin | 17.4\% | 18.0\% | 18.7\% | 17.4\% | 18.0\% | 18.8\% |  |  |  |
| Operating margin | 9.4\% | 10.5\% | 11.4\% | 9.4\% | 10.5\% | 11.5\% |  |  |  |
| Pretax margin | 9.8\% | 10.8\% | 11.7\% | 9.8\% | 10.9\% | 11.8\% |  |  |  |
| Net margin | 8.4\% | 9.3\% | 10.1\% | 8.4\% | 9.3\% | 10.1\% |  |  |  |

Source: Daiwa forecasts

Sunny Optical: semi-annual and annual P\&L statement

|  | 2016E |  |  | 2017E | 2016E | 2017E | 2018E |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (CNYm) | 1H | 2 HE | 1HE | 2 HE |  |  |  |
| Net sales | 5,910 | 8,100 | 7,462 | 9,703 | 14,010 | 17,165 | 20,930 |
| COGS | 4,922 | 6,651 | 6,149 | 7,926 | 11,572 | 14,075 | 17,016 |
| Gross profit | 988 | 1,450 | 1,313 | 1,776 | 2,438 | 3,090 | 3,914 |
| Operating costs | 485 | 636 | 574 | 716 | 1,121 | 1,291 | 1,528 |
| Operating profit | 503 | 814 | 739 | 1,060 | 1,317 | 1,799 | 2,386 |
| Pre-tax income | 552 | 827 | 749 | 1111 | 1,379 | 1,860 | 2,452 |
| Net income | 465 | 716 | 640 | 956 | 1,182 | 1,596 | 2,104 |
| Net EPS (CNY) | 0.43 | 0.67 | 0.59 | 0.89 | 1.10 | 1.48 | 1.95 |
| Operating ratios |  |  |  |  |  |  |  |
| Gross margin | 16.7\% | 17.9\% | 17.6\% | 18.3\% | 17.4\% | 18.0\% | 18.7\% |
| Operating margin | 8.5\% | 10.0\% | 9.9\% | 10.9\% | 9.4\% | 10.5\% | 11.4\% |
| Pre-tax margin | 9.3\% | 10.2\% | 10.0\% | 11.5\% | 9.8\% | 10.8\% | 11.7\% |
| Net margin | 7.9\% | 8.8\% | 8.6\% | 9.8\% | 8.4\% | 9.3\% | 10.1\% |
| YoY (\%) |  |  |  |  |  |  |  |
| Net revenue | 27\% | 34\% | 26\% | 20\% | 31\% | 23\% | 22\% |
| Gross profit | 37\% | 39\% | 33\% | 23\% | 38\% | 27\% | 27\% |
| Operating income | 56\% | 39\% | 47\% | 30\% | 45\% | 37\% | 33\% |
| Pre-tax income | 58\% | 61\% | 36\% | 34\% | 60\% | 35\% | 32\% |
| Net income | 51\% | 58\% | 38\% | 33\% | 55\% | 35\% | 32\% |
| HoH (\%) |  |  |  |  |  |  |  |
| Net revenue | -2\% | 37\% | -8\% | 30\% |  |  |  |
| Gross profit | -5\% | 47\% | -9\% | 35\% |  |  |  |
| Operating income | -14\% | 62\% | -9\% | 43\% |  |  |  |
| Pre-tax income | 8\% | 50\% | -9\% | 48\% |  |  |  |
| Net income | 2\% | 54\% | -11\% | 49\% |  |  |  |

Sunny Optical: 1-year-forward PER


[^0]Sunny Optical: 1-year-forward PBR


[^1]Financial summary
Key assumptions

| Year to 31 Dec | $\mathbf{2 0 1 1}$ | $\mathbf{2 0 1 2}$ | $\mathbf{2 0 1 3}$ | $\mathbf{2 0 1 4}$ | $\mathbf{2 0 1 5}$ | $\mathbf{2 0 1 6 E}$ | $\mathbf{2 0 1 7 E}$ | 2018E |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Handset CCM shipment (m units) | 70 | 97 | 133 | 187 | 228 | 260 | 291 | 322 |
| Blended ASP of handset CCM (USD) | 2.38 | 3.78 | 4.98 | 5.68 | 5.51 | 6.52 | 7.14 | 7.87 |
| Vehicle lens shipment (m units) | 0 | 0 | 8 | 11 | 17 | 23 | 32 | 45 |
| Handset lens shipment ( $m$ units) | 32 | 36 | 26 | 75 | 302 | 370 | 446 | 535 |

Profit and loss (CNYm)

| Year to 31 Dec | 2011 | 2012 | 2013 | 2014 | 2015 | 2016E | 2017E | 2018E |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Handset CCM Revenues | 1,069 | 2,307 | 4,157 | 6,576 | 7,785 | 10,493 | 12,885 | 15,694 |
| Vehicle Lens Revenues | 100 | 167 | 291 | 421 | 651 | 901 | 1,309 | 1,898 |
| Other Revenue | 1,329 | 1,510 | 1,365 | 1,429 | 2,260 | 2,617 | 2,971 | 3,338 |
| Total Revenue | 2,499 | 3,984 | 5,813 | 8,426 | 10,696 | 14,010 | 17,165 | 20,930 |
| Other income | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| COGS | $(1,976)$ | $(3,243)$ | $(4,846)$ | $(7,137)$ | $(8,933)$ | $(11,572)$ | $(14,075)$ | $(17,016)$ |
| SG\&A | (182) | (214) | (254) | (320) | (352) | (448) | (491) | (565) |
| Other op.expenses | (131) | (163) | (251) | (392) | (502) | (672) | (800) | (963) |
| Operating profit | 210 | 363 | 462 | 577 | 909 | 1,317 | 1,799 | 2,386 |
| Net-interest inc./(exp.) | (3) | (3) | (7) | (14) | (16) | (21) | (22) | (22) |
| Assoc/forex/extraord./others | 33 | 37 | 49 | 71 | (31) | 85 | 85 | 90 |
| Pre-tax profit | 240 | 397 | 504 | 634 | 862 | 1,381 | 1,862 | 2,454 |
| Tax | (38) | (58) | (64) | (73) | (99) | (197) | (264) | (349) |
| Min. int./pref. div./others | 14 | 7 | (0) | 5 | (2) | (2) | (2) | (2) |
| Net profit (reported) | 215 | 346 | 440 | 566 | 762 | 1,182 | 1,596 | 2,104 |
| Net profit (adjusted) | 215 | 346 | 440 | 566 | 762 | 1,182 | 1,596 | 2,104 |
| EPS (reported)(CNY) | 0.223 | 0.360 | 0.443 | 0.529 | 0.709 | 1.097 | 1.482 | 1.953 |
| EPS (adjusted)(CNY) | 0.223 | 0.360 | 0.443 | 0.529 | 0.709 | 1.097 | 1.482 | 1.953 |
| EPS (adjusted fully-diluted)(CNY) | 0.223 | 0.360 | 0.443 | 0.529 | 0.709 | 1.097 | 1.482 | 1.953 |
| DPS (CNY) | 0.044 | 0.071 | 0.102 | 0.112 | 0.154 | 0.207 | 0.329 | 0.445 |
| EBIT | 210 | 363 | 462 | 577 | 909 | 1,317 | 1,799 | 2,386 |
| EBITDA | 298 | 472 | 609 | 792 | 1,155 | 1,629 | 2,226 | 2,907 |

Cash flow (CNYm)

| Year to 31 Dec | 2011 | 2012 | 2013 | 2014 | 2015 | 2016E | 2017E | 2018E |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Profit before tax | 240 | 397 | 504 | 634 | 862 | 1,381 | 1,862 | 2,454 |
| Depreciation and amortisation | 88 | 109 | 147 | 215 | 246 | 312 | 427 | 521 |
| Tax paid | (38) | (58) | (64) | (73) | (99) | (197) | (264) | (349) |
| Change in working capital | (264) | (169) | 55 | (898) | 609 | (299) | (559) | (545) |
| Other operational CF items | 14 | 7 | (0) | 5 | (2) | (2) | (2) | (2) |
| Cash flow from operations | 40 | 286 | 643 | (117) | 1,616 | 1,194 | 1,464 | 2,080 |
| Capex | (112) | (265) | (286) | (465) | (351) | (850) | (700) | (700) |
| Net (acquisitions)/disposals | 1 | 13 | 1 | (62) | (64) | 0 | 0 | 0 |
| Other investing CF items | 0 | (38) | (26) | (178) | (60) | 60 | 0 | 0 |
| Cash flow from investing | (111) | (291) | (311) | (705) | (475) | (790) | (700) | (700) |
| Change in debt | (35) | 34 | 392 | 56 | 167 | (5) | 0 | 0 |
| Net share issues/(repurchases) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dividends paid | (43) | (69) | (101) | (120) | (166) | (223) | (354) | (479) |
| Other financing CF items | (20) | (27) | 589 | (55) | (2) | 0 | 0 | 0 |
| Cash flow from financing | (97) | (61) | 879 | (120) | (0) | (229) | (354) | (479) |
| Forex effect/others | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Change in cash | (169) | (66) | 1,211 | (942) | 1,141 | 176 | 409 | 901 |
| Free cash flow | (73) | 20 | 357 | (582) | 1,265 | 344 | 764 | 1,380 |

Source: FactSet, Daiwa forecasts

Financial summary continued ...
Balance sheet (CNYm)

| As at 31 Dec | 2011 | 2012 | 2013 | 2014 | 2015 | 2016E | 2017E | 2018E |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Cash \& short-term investment | 681 | 614 | 1,826 | 884 | 2,025 | 2,200 | 2,610 | 3,511 |
| Inventory | 472 | 748 | 768 | 896 | 897 | 1,361 | 1,717 | 2,182 |
| Accounts receivable | 627 | 901 | 1,172 | 2,388 | 3,003 | 3,455 | 4,232 | 5,161 |
| Other current assets | 42 | 4 | 1 | 36 | 93 | 122 | 156 | 209 |
| Total current assets | 1,822 | 2,267 | 3,766 | 4,204 | 6,017 | 7,138 | 8,715 | 11,062 |
| Fixed assets | 489 | 646 | 785 | 1,035 | 1,141 | 1,679 | 1,952 | 2,131 |
| Goodwill \& intangibles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other non-current assets | 64 | 89 | 114 | 354 | 478 | 418 | 418 | 418 |
| Total assets | 2,375 | 3,002 | 4,665 | 5,594 | 7,636 | 9,235 | 11,085 | 13,611 |
| Short-term debt | 62 | 103 | 489 | 522 | 683 | 684 | 684 | 684 |
| Accounts payable | 599 | 939 | 1,257 | 1,744 | 2,914 | 3,646 | 4,242 | 5,128 |
| Other current liabilities | 9 | 11 | 36 | 31 | 142 | 56 | 69 | 84 |
| Total current liabilities | 671 | 1,052 | 1,782 | 2,297 | 3,739 | 4,386 | 4,995 | 5,896 |
| Long-term debt | 17 | 0 | 18 | 36 | 33 | 36 | 36 | 36 |
| Other non-current liabilities | 7 | 18 | 6 | 11 | 19 | 10 | 10 | 10 |
| Total liabilities | 694 | 1,070 | 1,805 | 2,343 | 3,791 | 4,432 | 5,041 | 5,942 |
| Share capital | 98 | 98 | 105 | 105 | 105 | 105 | 105 | 105 |
| Reserves/R.E./others | 1,584 | 1,834 | 2,755 | 3,145 | 3,740 | 4,698 | 5,939 | 7,564 |
| Shareholders' equity | 1,681 | 1,932 | 2,860 | 3,251 | 3,845 | 4,803 | 6,044 | 7,670 |
| Minority interests | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total equity \& liabilities | 2,375 | 3,002 | 4,665 | 5,594 | 7,636 | 9,235 | 11,085 | 13,611 |
| EV | 33,481 | 33,571 | 32,763 | 33,756 | 32,774 | 32,602 | 32,193 | 31,292 |
| Net debt/(cash) | (601) | (512) | $(1,319)$ | (327) | $(1,309)$ | $(1,480)$ | $(1,890)$ | $(2,791)$ |
| BVPS (CNY) | 1.741 | 2.007 | 2.876 | 3.038 | 3.579 | 4.460 | 5.612 | 7.121 |

Key ratios (\%)

| Year to 31 Dec | $\mathbf{2 0 1 1}$ | $\mathbf{2 0 1 2}$ | $\mathbf{2 0 1 3}$ | $\mathbf{2 0 1 4}$ | $\mathbf{2 0 1 5}$ | $\mathbf{2 0 1 6 E}$ | $\mathbf{2 0 1 7 E}$ | $\mathbf{2 0 1 8 E}$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Sales (YoY) | $\mathbf{3 7 . 4}$ | 59.5 | 45.9 | 45.0 | 26.9 | 31.0 | 22.5 | 21.9 |
| EBITDA (YoY) | 30.3 | 58.1 | 29.1 | 30.0 | 45.9 | 41.0 | 36.6 |  |
| Operating profit (YoY) | 48.0 | 73.0 | 27.1 | 24.9 | 57.6 | 44.8 | 36.6 |  |
| Net profit (YoY) | 49.7 | 60.8 | 27.2 | 28.5 | 34.5 | 55.1 | 35.1 | 31.8 |
| Core EPS (fully-diluted) (YoY) | 51.7 | 61.3 | 23.1 | 19.4 | 34.0 | 54.8 | 35.1 | 31.8 |
| Gross-profit margin | 20.9 | 18.6 | 16.6 | 15.3 | 16.5 | 17.4 | 18.0 | 18.7 |
| EBITDA margin | 11.9 | 11.8 | 10.5 | 9.4 | 10.8 | 11.6 | 13.0 | 13.9 |
| Operating-profit margin | 8.4 | 9.1 | 7.9 | 6.8 | 8.5 | 9.4 | 10.5 |  |
| Net profit margin | 8.6 | 8.7 | 7.6 | 6.7 | 7.1 | 8.4 | 9.3 | 110.4 |
| ROAE | 13.4 | 19.2 | 18.4 | 18.5 | 21.5 | 27.3 | 29.4 | 30.7 |
| ROAA | 9.7 | 12.9 | 11.5 | 11.0 | 11.5 | 14.0 | 15.7 | 17.0 |
| ROCE | 12.3 | 19.1 | 17.1 | 16.1 | 21.7 | 26.1 | 29.3 | 31.5 |
| ROIC | 18.9 | 24.8 | 27.3 | 22.9 | 29.5 | 38.5 | 41.3 | 45.3 |
| Net debt to equity | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a |
| Effective tax rate | 15.8 | 14.7 | 12.6 | 11.5 | 11.5 | 14.3 | 14.2 | 14.2 |
| Accounts receivable (days) | 79.0 | 70.0 | 65.1 | 77.1 | 92.0 | 84.1 | 81.7 | 81.9 |
| Current ratio (x) | 2.7 | 2.2 | 2.1 | 1.8 | 1.6 | 1.6 | 1.7 | 1.9 |
| Net interest cover (x) | 70.4 | 115.7 | 70.0 | 41.3 | 56.8 | 63.2 | 83.3 | 110.5 |
| Net dividend payout | 19.8 | 19.8 | 22.9 | 21.3 | 21.8 | 18.9 | 22.2 | 22.8 |
| Free cash flow yield | n.a. | 0.1 | 1.0 | n.a. | 3.7 | 1.0 | 2.2 | 4.0 |

Source: FactSet, Daiwa forecasts

Company profile

Founded in 1984, Sunny Optical is the leading optical component manufacturer in the China technology supply chain. It develops and provides optical-related products with various applications, including instruments, components and opto-electronic modules. The company's major customers include leading China smartphone brand name makers Huawei, Lenovo and OPPO.

Samsung Electronics: share price and Daiwa recommendation trend

| Date | Target price | Rating | Date | Target price | Rating | Date | Target price | Rating |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| $07 / 01 / 14$ | $1,700,000$ | 0 | Buy | $31 / 03 / 16$ | $1,510,000$ | Buy | $07 / 10 / 16$ | $1,960,000$ | Buy |
| $29 / 07 / 15$ | $1,470,000$ |  | $24 / 06 / 16$ | $1,710,000$ | Buy | $27 / 10 / 16$ | Buy |  |  |
| $16 / 10 / 15$ | $1,580,000$ | Buy | $28 / 07 / 16$ | $1,740,000$ | Buy |  |  |  |  |
| $31 / 12 / 15$ |  | Buy | $09 / 08 / 16$ | $1,940,000$ | Buy |  |  |  |  |


| 2,000,000 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1,900,000 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1,800,000 - 1,800,000 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $1,700,000$ - 1,700,000 - 1,710,6000,000 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $1,600,000$ - - 1,580,00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $1,500,000 \mathrm{M}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1,300,000 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1,200,000 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1,100,000 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Source: Daiwa

Note: where appropriate, historical target prices have been adjusted to reflect the current share count

## Important Disclosures and Disclaimer

This publication is produced by Daiwa Securities Group Inc．and／or its non－U．S．affiliates，and distributed by Daiwa Securities Group Inc．and／or its non－U．S．affiliates，except to the extent expressly provided herein．This publication and the contents hereof are intended for information purposes only，and may be subject to change without further notice．Any use，disclosure， distribution，dissemination，copying，printing or reliance on this publication for any other purpose without our prior consent or approval is strictly prohibited．Neither Daiwa Securities Group Inc． nor any of its respective parent，holding，subsidiaries or affiliates，nor any of its respective directors，officers，servants and employees，represent nor warrant the accuracy or completeness of the information contained herein or as to the existence of other facts which might be significant，and will not accept any responsibility or liability whatsoever for any use of or reliance upon this publication or any of the contents hereof．Neither this publication，nor any content hereof，constitute，or are to be construed as，an offer or solicitation of an offer to buy or sell any of the securities or investments mentioned herein in any country or jurisdiction nor，unless expressly provided，any recommendation or investment opinion or advice．Any view，recommendation， opinion or advice expressed in this publication may not necessarily reflect those of Daiwa Securities Group Inc．，and／or its affiliates nor any of its respective directors，officers，servants and employees except where the publication states otherwise．This research report is not to be relied upon by any person in making any investment decision or otherwise advising with respect to， or dealing in，the securities mentioned，as it does not take into account the specific investment objectives，financial situation and particular needs of any person．

Daiwa Securities Group Inc．，its subsidiaries or affiliates，or its or their respective directors，officers and employees from time to time have trades as principals，or have positions in，or have other interests in the securities of the company under research including market making activities，derivatives in respect of such securities or may have also performed investment banking and other services for the issuer of such securities．The following are additional disclosures．

Ownership of Securities
For＂Ownership of Securities＂information，please visit BlueMatrix disclosure link at https：／／daiwa3．bluematrix．com／sellside／Disclosures．action．
Investment Banking Relationship
For＂Investment Banking Relationship＂，please visit BlueMatrix disclosure link at https：／／daiwa3．bluematrix．com／sellside／Disclosures．action．
Japan
Daiwa Securities Co．Ltd．and Daiwa Securities Group Inc．
Daiwa Securities Co．Ltd．is a subsidiary of Daiwa Securities Group Inc．
Investment Banking Relationship
Within the preceding 12 months，the subsidiaries and／or affiliates of Daiwa Securities Group Inc．＊has lead－managed public offerings and／or secondary offerings（excluding straight bonds）of the securities of the following companies：China Reinsurance Group Corporation（1508 HK）．
＊Subsidiaries of Daiwa Securities Group Inc．for the purposes of this section shall mean any one or more of：Daiwa Capital Markets Hong Kong Limited（大和資本市場香港有限公司），Daiwa Capital Markets Singapore Limited，Daiwa Capital Markets Australia Limited，Daiwa Capital Markets India Private Limited，Daiwa－Cathay Capital Markets Co．，Ltd．，Daiwa Securities Capita Markets Korea Co．，Ltd．

## Hong Kong

This research is distributed in Hong Kong by Daiwa Capital Markets Hong Kong Limited（大和資本市場香港有限公司）（＂DHK＂）which is regulated by the Hong Kong Securities and Futures Commission．Recipients of this research in Hong Kong may contact DHK in respect of any matter arising from or in connection with this research．

Relevant Relationship（DHK）
DHK may from time to time have an individual employed by or associated with it serves as an officer of any of the companies under its research coverage．

## Korea

The developing analyst of this research and analysis material hereby states and confirms that the contents of this material correctly reflect the analyst＇s views and opinions and that the analyst has not been placed under inappropriate pressure or interruption by an external party．
Name of Analyst ：SK Kim

Disclosure of Analysts＇Interests
If an analyst engaging in or a person who exercises influences on the preparation or publication of a Research Report containing recommendations for general investors to trade financial investment instruments with regard to which the analyst or the influential person has personal interests and if the recommendations contained in the Report may have impacts on the personal interests，Daiwa Securities Capital Markets Korea Co．，Ltd．（＂Daiwa Securities Korea＂）shall ensure that the Analyst or the influential person notifies that he／she has personal interests with regard to：

1．The equity，the equity－linked bonds and the instruments with the subscription right to the equity issued by the legal entity covered in the Research Report（or the legal entity subject to the investment recommendations）；
2．The stock option granted by the legal entity covered in the Research Report（or the legal entity subject to the investment recommendations）；or
3．The equity futures，the equity options and the equity－linked warrants backed by the equity prescribed in the preceding Paragraph 1 as the underlying assets．
Legal Entities subject to Research Report Coverage Restrictions
Daiwa Securities Korea hereby states and confirms that Daiwa Securities Korea has no conflicts of interests with the legal entity covered in this Research Report：
1．In that Daiwa Securities Korea does NOT offer direct or indirect payment guarantee for the legal entity by means of，for instance，guarantee，endorsement，provision of collaterals or the acquisition of debts；
2．In that Daiwa Securities Korea does NOT own one－hundredth（or $1 / 100$ ）or more of the total number of outstanding equities issued by the legal entity；
3．In that The legal entity is NOT an affiliated company of Daiwa Securities Korea pursuant to Sub－paragraph 3，Article 2 of the Monopoly Regulation and Fair Trade Act of Korea；
4．In that，although Daiwa Securities Korea offers advisory services for the legal entity with regard to an M\＆A deal，the size of the M\＆A deal does NOT exceed five－hundredths（or $5 / 100$ ）of the total asset size or the total number of equities issued and outstanding of the legal entity；
5．In that，although Daiwa Securities Korea acted in the capacity of a Lead Underwriter for the initial public offering of the legal entity，more than one－year has passed since the IPO date
6．In that Daiwa Securities Korea is NOT designated by the legal entity as the＇tender offer agent＇pursuant to the Paragraph 2，Article 133 of the Financial Services and Capital Market
Act or the legal entity is NOT the issuer of the equity subject to the proposed tender offer；this requirement，however applies until the maturity of the tender offer period；or
7．In that Daiwa Securities Korea does NOT have significant or material interests with regard to the legal entity．
Disclosure of Prior Distribution to Third Party
This report has not been distributed to the third party in advance prior to public release．
The following explains the rating system in the report as compared to KOSPI，based on the beliefs of the author（s）of this report．
＂1＂：the security could outperform the KOSPI by more than $15 \%$ over the next 12 months，unless otherwise stated．
＂2＂：the security is expected to outperform the KOSPI by $5-15 \%$ over the next 12 months，unless otherwise stated．
＂ 3 ＂：the security is expected to perform within 5\％of the KOSPI（better or worse）over the next 12 months，unless otherwise stated．
＂4＂：the security is expected to underperform the KOSPI by $5-15 \%$ over the next 12 months，unless otherwise stated．
＂ 5 ＂：the security could underperform the KOSPI by more than $15 \%$ over the next 12 months，unless otherwise stated
＂Positive＂means that the analyst expects the sector to outperform the KOSPI over the next 12 months，unless otherwise stated．
＂Neutral＂means that the analyst expects the sector to be in－line with the KOSPI over the next 12 months，unless otherwise stated．
＂Negative＂means that the analyst expects the sector to underperform the KOSPI over the next 12 months，unless otherwise stated．

## Additional information may be available upon request．

Singapore
This research is distributed in Singapore by Daiwa Capital Markets Singapore Limited and it may only be distributed in Singapore to accredited investors，expert investors and institutiona investors as defined in the Financial Advisers Regulations and the Securities and Futures Act（Chapter 289），as amended from time to time．By virtue of distribution to these category of investors，Daiwa Capital Markets Singapore Limited and its representatives are not required to comply with Section 36 of the Financial Advisers Act（Chapter 110）（Section 36 relates to disclosure of Daiwa Capital Markets Singapore Limited＇s interest and／or its representative＇s interest in securities）．Recipients of this research in Singapore may contact Daiwa Capital Markets Singapore Limited in respect of any matter arising from or in connection with the research．

## Australia

This research is distributed in Australia by Daiwa Capital Markets Australia Limited and it may only be distributed in Australia to wholesale investors within the meaning of the Corporations Act． Recipients of this research in Australia may contact Daiwa Capital Markets Stockbroking Limited in respect of any matter arising from or in connection with the research．

India
This research is distributed in India to Institutional Clients only by Daiwa Capital Markets India Private Limited (Daiwa India) which is an intermediary registered with Securities \& Exchange Board of India as a Stock Broker, Merchant Bank and Research Analyst. Daiwa India, its Research Analyst and their family members and its associates do not have any financial interest save as disclosed or other undisclosed material conflict of interest in the securities or derivatives of any companies under coverage. Daiwa India and its associates, may have received compensation for any products other than Investment Banking (as disclosed) or brokerage services from the subject company in this report or from any third party during the past 12 months. Daiwa India and its associates may have debt holdings in the subject company. For information on ownership of equity, please visit BlueMatrix disclosure Link at https://daiwa3.bluematrix.com/sellside/Disclosures.action.
There is no material disciplinary action against Daiwa India by any regulatory authority impacting equity research analysis activities as of the date of this report.
Associates of Daiwa India, registered with Indian regulators, include Daiwa Capital Markets Singapore Limited and Daiwa Portfolio Advisory (India) Private Limited.

## Taiwan

This research is distributed in Taiwan by Daiwa-Cathay Capital Markets Co., Ltd. and it may only be distributed in Taiwan to specific customers who have signed recommendation contracts with Daiwa-Cathay Capital Markets Co., Ltd. and non-customers including (i) professional institutional investors, (ii) TWSE or TPEx listed companies, upstream and downstream vendors, and specialists that offer or seek advice, and (iii) potential customers with an actual need for business development in accordance with the Operational Regulations Governing Securities Firms Recommending Trades in Securities to Customers. Neither Daiwa-Cathay Capital Markets Co., Ltd. nor its personnel who writes or reviews the research report has any conflict of interest in this research. Since Daiwa-Cathay Capital Markets Co., Ltd. does not operate brokerage trading business in foreign markets, this research is "without recommendation" to any foreign securities and Daiwa-Cathay Capital Markets Co., Ltd. does not accept orders from customers to trade in such securities that are without recommendation. Recipients of this research in Taiwan may contact Daiwa-Cathay Capital Markets Co., Ltd. in respect of any matter arising from or in connection with the research.

## Philippines

This research is distributed in the Philippines by DBP-Daiwa Capital Markets Philippines, Inc. which is regulated by the Philippines Securities and Exchange Commission and the Philippines Stock Exchange, Inc. Recipients of this research in the Philippines may contact DBP-Daiwa Capital Markets Philippines, Inc. in respect of any matter arising from or in connection with the research. DBP-Daiwa Capital Markets Philippines, Inc. recommends that investors independently assess, with a professional advisor, the specific financial risks as well as the legal, regulatory, tax, accounting, and other consequences of a proposed transaction. DBP-Daiwa Capital Markets Philippines, Inc. may have positions or may be materially interested in the securities in any of the markets mentioned in the publication or may have performed other services for the issuers of such securities.
For relevant securities and trading rules please visit SEC and PSE links at http://www.sec.gov.ph/irr/AmendedIRRfina/version.pdf and http://www.pse.com.ph/respectively.

## Thailand

This research is distributed to only institutional investors in Thailand primarily by Thanachart Securities Public Company Limited ("TNS").
This report is prepared by analysts who are employed by Daiwa Securities Group Inc. and/or its non-U.S. affiliates. This report is provided to you for informational purposes only and it is not, and is not to be construed as, an offer or an invitation to make an offer to sell or buy any securities. Neither Thanachart Securities Public Company Limited, Daiwa Securities Group Inc. nor any of their respective parent, holding, subsidiaries or affiliates, nor any of their respective directors, officers, servants and employees accept any liability whatsoever for any direct or consequential loss arising from any use of this research or its contents.
The information and opinions contained herein have been compiled or arrived at from sources believed to be reliable. However, Thanachart Securities Public Company Limited, Daiwa Securities Group Inc. nor any of their respective parent, holding, subsidiaries or affiliates, nor any of their respective directors, officers, servants and employees make no representation or warranty, express or implied, as to their accuracy or completeness. Expressions of opinion herein are subject to change without notice. The use of any information, forecasts and opinions contained in this report shall be at the sole discretion and risk of the user.
Daiwa Securities Group Inc. and/or its non-U.S. affiliates perform and seek to perform business with companies covered in this research. Thanachart Securities Public Company Limited, Daiwa Securities Group Inc., their respective parent, holding, subsidiaries or affiliates, their respective directors, officers, servants and employees may have positions and financial interest in securities mentioned in this research. Thanachart Securities Public Company Limited, Daiwa Securities Group Inc., their respective parent, holding, subsidiaries or affiliates may from time to time perform investment banking or other services for, or solicit investment banking or other business from, any entity mentioned in this research. Therefore, investors should be aware of conflict of interest that may affect the objectivity of this research.

## United Kingdom

This research report is produced by Daiwa Securities Co. Ltd. and/or its affiliates and is distributed in the European Union, Iceland, Liechtenstein, Norway and Switzerland. Daiwa Capital Markets Europe Limited is authorised and regulated by The Financial Conduct Authority ("FCA") and is a member of the London Stock Exchange and Eurex. This publication is intended for investors who are not Retail Clients in the United Kingdom within the meaning of the Rules of the FCA and should not therefore be distributed to such Retail Clients in the United Kingdom. Should you enter into investment business with Daiwa Capital Markets Europe's affiliates outside the United Kingdom, we are obliged to advise that the protection afforded by the United Kingdom regulatory system may not apply; in particular, the benefits of the Financial Services Compensation Scheme may not be available.

Daiwa Capital Markets Europe Limited has in place organisational arrangements for the prevention and avoidance of conflicts of interest. Our conflict management policy is available at http://www.uk.daiwacm.com/about-us/corporate-governance-regulatory.

## Germany

This document is distributed in Germany by Daiwa Capital Markets Europe Limited, Niederlassung Frankfurt which is regulated by BaFin (Bundesanstalt fuer Finanzdienstleistungsaufsicht) for the conduct of business in Germany.

## Bahrain

This research material is distributed in Bahrain by Daiwa Capital Markets Europe Limited, Bahrain Branch, regulated by The Central Bank of Bahrain and holds Investment Business Firm Category 2 license and having its official place of business at the Bahrain World Trade Centre, South Tower, 7th floor, P.O. Box 30069, Manama, Kingdom of Bahrain. Tel No. +97317534452 Fax No. +973 535113

## United States

This report is distributed in the U.S. by Daiwa Capital Markets America Inc. (DCMA). It may not be accurate or complete and should not be relied upon as such. It reflects the preparer's views at the time of its preparation, but may not reflect events occurring after its preparation; nor does it reflect DCMA's views at any time. Neither DCMA nor the preparer has any obligation to update this report or to continue to prepare research on this subject. This report is not an offer to sell or the solicitation of any offer to buy securities. Unless this report says otherwise, any recommendation it makes is risky and appropriate only for sophisticated speculative investors able to incur significant losses. Readers should consult their financial advisors to determine whether any such recommendation is consistent with their own investment objectives, financial situation and needs. This report does not recommend to U.S. recipients the use of any of DCMA's non-U.S. affiliates to effect trades in any security and is not supplied with any understanding that U.S. recipients of this report will direct commission business to such non-U.S. entities. Unless applicable law permits otherwise, non-U.S. customers wishing to effect a transaction in any securities referenced in this material should contact a Daiwa entity in their local jurisdiction. Most countries throughout the world have their own laws regulating the types of securities and other investment products which may be offered to their residents, as well as a process for doing so. As a result, the securities discussed in this report may not be eligible for sales in some jurisdictions. Customers wishing to obtain further information about this report should contact DCMA: Daiwa Capital Markets America Inc., Financial Square, 32 Old Slip, New York, New York 10005 (Tel no. 212-612-7000).

## Ownership of Securities

For "Ownership of Securities" information please visit BlueMatrix disclosure link at https://daiwa3.bluematrix.com/sellside/Disclosures.action.
Investment Banking Relationships
For "Investment Banking Relationships" please visit BlueMatrix disclosure link at https://daiwa3.bluematrix.com/sellside/Disclosures.action.

## DCMA Market Making

For "DCMA Market Making" please visit BlueMatrix disclosure link at https://daiwa3.bluematrix.com/sellside/Disclosures.action.

## Research Analyst Conflicts

For updates on "Research Analyst Conflicts" please visit BlueMatrix disclosure link at https://daiwa3.bluematrix.com/sellside/Disclosures.action. The principal research analysts who prepared this report have no financial interest in securities of the issuers covered in the report, are not (nor are any members of their household) an officer, director or advisory board member of the issuer(s) covered in the report, and are not aware of any material relevant conflict of interest involving the analyst or DCMA, and did not receive any compensation from the issuer during the past 12 months except as noted: no exceptions.

Research Analyst Certification
For updates on "Research Analyst Certification" and "Rating System" please visit BlueMatrix disclosure link at https://daiwa3.bluematrix.com/sellside/Disclosures.action. The views about any and all of the subject securities and issuers expressed in this Research Report accurately reflect the personal views of the research analyst(s) primarily responsible for this report (or the views of the firm producing the report if no individual analysts[s] is named on the report); and no part of the compensation of such analyst(s) (or no part of the compensation of the firm if no individual analyst[ s )] is named on the report) was, is, or will be directly or indirectly related to the specific recommendations or views contained in this Research Report.

The following explains the rating system in the report as compared to relevant local indices, unless otherwise stated, based on the beliefs of the author of the report.
"1": the security could outperform the local index by more than $15 \%$ over the next 12 months.
"2": the security is expected to outperform the local index by $5-15 \%$ over the next 12 months.
" 3 ": the security is expected to perform within $5 \%$ of the local index (better or worse) over the next 12 months.
"4": the security is expected to underperform the local index by $5-15 \%$ over the next 12 months.
" 5 ": the security could underperform the local index by more than $15 \%$ over the next 12 months.
Disclosure of investment ratings

| Rating | Percentage of total |
| :--- | :---: |
| Buy $^{*}$ | $64.0 \%$ |
| Hold $^{\star \star}$ | $21.2 \%$ |
| Sell |  |
| Sou* | $14.8 \%$ |

## Source: Daiwa

Notes: data is for single-branded Daiwa research in Asia (ex Japan) and correct as of 30 September 2016.

* comprised of Daiwa's Buy and Outperform ratings.
** comprised of Daiwa's Hold ratings.
*** comprised of Daiwa's Underperform and Sell ratings.


## Additional information may be available upon request.

Japan - additional notification items pursuant to Article 37 of the Financial Instruments and Exchange Law (This Notification is only applicable where report is distributed by Daiwa Securities Co. Ltd.)

If you decide to enter into a business arrangement with us based on the information described in materials presented along with this document, we ask you to pay close attention to the following items.

- In addition to the purchase price of a financial instrument, we will collect a trading commission* for each transaction as agreed beforehand with you. Since commissions may be included in the purchase price or may not be charged for certain transactions, we recommend that you confirm the commission for each transaction.
- In some cases, we may also charge a maximum of $¥ 2$ million (including tax) per year as a standing proxy fee for our deposit of your securities, if you are a non-resident of Japan.
- For derivative and margin transactions etc., we may require collateral or margin requirements in accordance with an agreement made beforehand with you. Ordinarily in such cases, the amount of the transaction will be in excess of the required collateral or margin requirements.
- There is a risk that you will incur losses on your transactions due to changes in the market price of financial instruments based on fluctuations in interest rates, exchange rates, stock prices, real estate prices, commodity prices, and others. In addition, depending on the content of the transaction, the loss could exceed the amount of the collateral or margin requirements.
- There may be a difference between bid price etc. and ask price etc. of OTC derivatives handled by us.
- Before engaging in any trading, please thoroughly confirm accounting and tax treatments regarding your trading in financial instruments with such experts as certified public accountants. *The amount of the trading commission cannot be stated here in advance because it will be determined between our company and you based on current market conditions and the content of each transaction etc.

When making an actual transaction, please be sure to carefully read the materials presented to you prior to the execution of agreement, and to take responsibility for your own decisions regarding the signing of the agreement with us.

Corporate Name: Daiwa Securities Co. Ltd.
Financial instruments firm: chief of Kanto Local Finance Bureau (Kin-sho) No. 108 Memberships: Japan Securities Dealers Association, The Financial Futures Association of Japan Japan Securities Investment Advisers Association
Type II Financial Instruments Firms Association


[^0]:    Source: Bloomberg, Daiwa forecasts

[^1]:    Source: Bloomberg, Daiwa forecasts

