



## AUSTRALIA

HZN AU Outperform

Price (at 05:10, 23 Feb 2015 GMT) A\$0.13

Valuation A\$ 0.37

- DCF (WACC 10.9%, beta 1.7, ERP 5.0%, RFR 4.5%)

12-month target A\$ 0.35

12-month TSR % +180.0

Volatility Index High

GICS sector Energy

Market cap A\$m 163

30-day avg turnover A\$m 0.7

Number shares on issue m 1,302

## Investment fundamentals

| Year end 30 Jun |   | 2014A | 2015E | 2016E | 2017E |
|-----------------|---|-------|-------|-------|-------|
| Revenue         | m | 144.3 | 96.6  | 119.9 | 122.6 |
| EBIT            | m | 26.8  | 31.6  | 48.6  | 47.2  |
| Reported profit | m | 12.8  | 18.2  | 19.8  | 18.2  |
| Adjusted profit | m | -9.1  | 9.7   | 19.8  | 18.2  |
| Gross cashflow  | m | 41.5  | 57.5  | 60.0  | 58.3  |
| CFPS            | ¢ | 3.3   | 4.4   | 4.2   | 2.9   |
| CFPS growth     | % | 211.3 | 34.4  | -4.9  | -30.6 |
| PGCFPS          | x | 3.0   | 2.2   | 2.3   | 3.4   |
| PGCFPS rel      | x | 0.32  | 0.24  | 0.28  | 0.44  |
| EPS adj         | ¢ | -0.7  | 0.7   | 1.4   | 0.9   |
| EPS adj growth  | % | nfm   | nfm   | 88.5  | -35.0 |
| PER adj         | x | nfm   | 13.2  | 7.0   | 10.7  |
| PER rel         | x | nfm   | 0.74  | 0.48  | 0.84  |
| Total DPS       | ¢ | 0.0   | 0.0   | 0.0   | 0.0   |
| Total div yield | % | 0.0   | 0.0   | 0.0   | 0.0   |
| ROA             | % | 5.4   | 6.2   | 9.7   | 9.3   |
| ROE             | % | -4.7  | 4.0   | 6.5   | 5.1   |
| EV/EBITDA       | x | 3.4   | 3.3   | 3.6   | 4.0   |
| Net debt/equity | % | 39.8  | 50.7  | 20.4  | 12.4  |
| P/BV            | x | 0.6   | 0.5   | 0.5   | 0.5   |

## HZN AU vs Small Ordinaries, &amp; rec history



Note: Recommendation timeline - if not a continuous line, then there was no Macquarie coverage at the time or there was an embargo period.

Source: FactSet, Macquarie Research, February 2015  
(all figures in USD unless noted, TP in AUD)

## Analyst(s)

Kirit Hira

+61 2 8232 9692

kirit.hira@macquarie.com

24 February 2015

Macquarie Securities (Australia) Limited

## Horizon Oil

## Some solutions to the funding gap

## Event

- **HZN reported 1H15 interim results:** Excluding U\$3.8m in insurance claims and a U\$4.7m positive revaluation of the convertible note, an underlying loss of U\$1.4m compared to our U\$2.4m loss forecast. However EBITDAX of U\$35.2m was 5% ahead of our forecast and operating cash flow of U\$22m was significantly stronger than expected.

## Impact

- **Material delays to the Stanley timeline:** After commencing a "Value Engineering Process" at Stanley, first condensate sales have now been deferred until CY18, with P&O's Western Queen Condensate tanker sub-chartered in the interim. While HZN has spent U\$31m (net) on development drilling (Stanley 5&3) in 2014, capex in 2015 is likely to remain minimal in our view. Furthermore the PRL 21 JV has elected to defer concept selection (underpinning a move into feasibility) by a further 2 months. After the PNG government provided for the award of a development licence across the 2.5tcf P'nyang field earlier this year (with OSH recently suggesting the possibility of aggregating 3<sup>rd</sup> party gas to provide critical mass) and given Repsol's intentions regarding Talisman's PNG acreage position remain unclear, it would appear prudent to delay commitment to a Greenfield mid-scale LNG development at Daru Island until the landscape in the Western Forelands (and some of the alternative development options) becomes clearer.
- **Some solutions to the funding gap:** With U\$110m of the debt facility now drawn and U\$60m repayable over the next 12 months under the current amortisation profile, we estimate that the current cash balances could be quickly eroded (even assuming capex/G&A falls by 50% to <U\$50m). With a U\$80m convertible note due for redemption in June 2016, HZN has commenced a process to restructure the existing debt facility to defer short-term repayments and expand the facility by ~U\$50m (incorporating the existing developed 2P reserves at Beibu in addition to recent 1P undeveloped discoveries). Assuming both can be achieved, under our revised forecasts we estimate that a ~U\$50m equity funding gap will be largely resolved (albeit until the debt facility matures in March 2018).

## Earnings and target price revision

- **CY15 NPAT falls to U\$9.7m from U\$13.3m:** We have incorporated the 1H15 result, higher DD&A for Beibu Gulf and deferral of Stanley condensate production until 2018. NAV falls to 37Acps from 43Acps following model roll-forward and due to delayed start-up of PNG liquids projects.

## Price catalyst

- 12-month price target: A\$0.35 based on a DCF methodology.
- Catalyst: Progress surrounding the restructure of the reserves-based facility.

## Action and recommendation

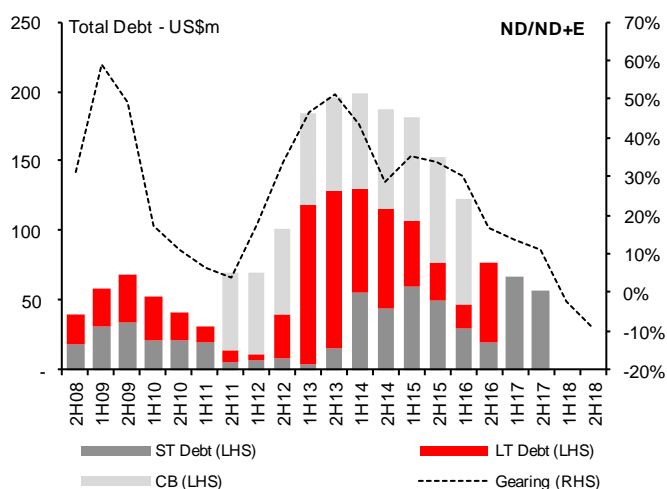
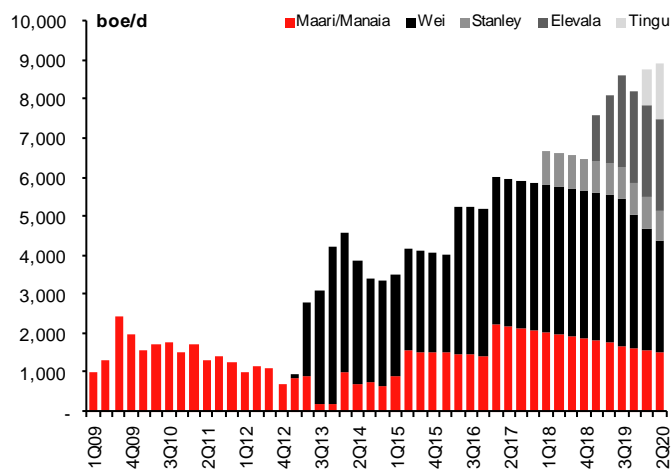
- **Maintain an Outperform and a A\$0.35/sh target:** Until the reserves-based debt facility is restructured, HZN will continue to trade at a discount to underlying value. That said, deferral of any commitment to a stand-alone LNG facility at Daru would appear prudent given the growing optionality for resource to be aggregated in the Western Forelands.

**Fig 1 Horizon Oil - 1H14 Financial Results Summary – Macquarie vs. Actual**

| US\$m                    | Actual      | Macq/       | Delta             | Comments  |
|--------------------------|-------------|-------------|-------------------|---|
| Production Volume (kboe) | 565         | 565         | 0%                | 1H15 Production rates of ~3,390bopd are expected to improve with Maari growth initiatives |
| Oil & Gas Revenue        | 48.7        | 48.7        | 0%                |   |
| Other Revenue            | 4.6         | 4.5         | 2%                | Includes U\$4.5m of hedge gains   |
| Operating Costs          | -14.2       | -15.3       | -7%               | Unit opex of U\$21.5/bbl was down significantly on pcp                                    |
| Other Costs              | -3.9        | -4.5        | -13%              | Corporate overheads were largely flat   |
| <b>EBITDAX</b>           | <b>35.2</b> | <b>33.4</b> | <b>5%</b>         | <b>EBITDAX was 5% ahead of forecast due to lower operating/overhead costs</b>             |
| Exploration expensed     | -10.9       | -10.8       | 1%                | ~36% of exploration capex was expensed during the period (largely relating to Nama)       |
| DD&A                     | -16.9       | -17.2       | -1%               | DD&A/boe of U\$27.4/boe reflects the impact of Maari growth initiatives on DD&A           |
| Other non-cash charges   | 0.0         | 0.0         | <i>nmf</i>        |   |
| <b>EBIT</b>              | <b>7.3</b>  | <b>5.4</b>  | <b>35%</b>        | <b>EBIT was ~U\$2m above forecast due to lower operating costs</b>                        |
| Net Financing Costs      | -7.9        | -7.9        | 1%                |   |
| Income Tax               | 0.4         | 0.7         | -44%              | Higher due to U\$8.1m deferred tax asset not brought into account                         |
| APT                      | -1.0        | -0.7        | 42%               | Larger APT royalty reported at Maari  |
| <b>Adjusted NPAT</b>     | <b>-1.2</b> | <b>-2.4</b> | <b><i>nmf</i></b> | <b>Largely in line at the bottom line</b>   |
| Significant Items        | 8.5         | 0.0         |                   | Positive revaluation of the convertible note and Insurance claims                         |
| <b>Reported Profit</b>   | <b>7.3</b>  | <b>-2.4</b> | <b><i>nmf</i></b> |   |

Source: Company data, Macquarie Research, February 2015

**Fig 2 HZN’s target to reach ~7,000-8,000bopd of liquids production is now unlikely to be delivered until CY19 in light of project deferrals in PNG** **Fig 3 While gearing is anticipated to fall over the coming 12 months, with the CB due for redemption in June next year, HZN will need to restructure the U\$150m reserves-based debt facility to avoid having to raise equity**



Source: Company data, Macquarie Research, February 2015

Fig 4 Horizon Oil financials

| Horizon Oil (HZN-AU)                 |              |              |              |                |                |                | Share Price: A\$0.13 |  |  |
|--------------------------------------|--------------|--------------|--------------|----------------|----------------|----------------|----------------------|--|--|
| Outperform                           |              |              |              |                |                |                | Shares: 1302m        |  |  |
| Profit & Loss                        |              | 2H14A        | 1H15E        | FY14A          | FY15E          | FY16E          | FY17E                |  |  |
| Sales revenue                        | US\$m        | 80           | 49           | 144            | 97             | 120            | 123                  |  |  |
| add other income                     | US\$m        | (6)          | 5            | (6)            | 18             | 6              | -                    |  |  |
| <b>Total revenue</b>                 | <b>US\$m</b> | <b>74</b>    | <b>53</b>    | <b>138</b>     | <b>114</b>     | <b>126</b>     | <b>123</b>           |  |  |
| less operating costs                 | US\$m        | (26)         | (18)         | (61)           | (34)           | (37)           | (35)                 |  |  |
| <b>EBITDAX</b>                       | <b>US\$m</b> | <b>48</b>    | <b>36</b>    | <b>78</b>      | <b>80</b>      | <b>89</b>      | <b>87</b>            |  |  |
| less exploration expensed            | US\$m        | (6)          | (11)         | (11)           | (15)           | (9)            | (12)                 |  |  |
| <b>EBITDA</b>                        | <b>US\$m</b> | <b>41</b>    | <b>25</b>    | <b>67</b>      | <b>65</b>      | <b>80</b>      | <b>75</b>            |  |  |
| less dep. & amort.                   | US\$m        | (22)         | (17)         | (40)           | (33)           | (32)           | (28)                 |  |  |
| less other non-cash costs            | US\$m        | (0)          | (1)          | (0)            | (1)            | -              | -                    |  |  |
| <b>EBIT</b>                          | <b>US\$m</b> | <b>19</b>    | <b>7</b>     | <b>27</b>      | <b>32</b>      | <b>49</b>      | <b>47</b>            |  |  |
| less net interest                    | US\$m        | (10)         | (8)          | (19)           | (16)           | (13)           | (12)                 |  |  |
| <b>Pre-tax operating profit</b>      | <b>US\$m</b> | <b>9</b>     | <b>(1)</b>   | <b>8</b>       | <b>16</b>      | <b>36</b>      | <b>35</b>            |  |  |
| less tax expense (incl APT)          | US\$m        | (15)         | (1)          | (17)           | (6)            | (16)           | (17)                 |  |  |
| <b>Net operating profit</b>          | <b>US\$m</b> | <b>(6)</b>   | <b>(1)</b>   | <b>(9)</b>     | <b>10</b>      | <b>20</b>      | <b>18</b>            |  |  |
| add non-recurring items              | US\$m        | 19           | 9            | 22             | 9              | -              | -                    |  |  |
| <b>Reported profit</b>               | <b>US\$m</b> | <b>13</b>    | <b>7</b>     | <b>13</b>      | <b>18</b>      | <b>20</b>      | <b>18</b>            |  |  |
| <b>Adjusted profit</b>               | <b>US\$m</b> | <b>(6)</b>   | <b>(1)</b>   | <b>(9)</b>     | <b>10</b>      | <b>20</b>      | <b>18</b>            |  |  |
|                                      |              |              |              | 0              |                |                |                      |  |  |
| <b>EPS (Adjusted)</b>                | <b>Acps</b>  | <b>(0.5)</b> | <b>(0.1)</b> | <b>(0.8)</b>   | <b>1.0</b>     | <b>1.8</b>     | <b>1.1</b>           |  |  |
| EPS Growth                           | %            | (106%)       | 81%          | (426%)         | 205%           | 89%            | (35%)                |  |  |
| DPS                                  | USc          | -            | -            | -              | -              | -              | -                    |  |  |
| DPS                                  | Ac           | -            | -            | -              | -              | -              | -                    |  |  |
| Franking                             | %            | 0%           | 0%           | 100%           | 100%           | 100%           | 100%                 |  |  |
| FFOWA shares on issue                | m            | 1,302        | 1,302        | 1,261          | 1,302          | 1,442          | 2,006                |  |  |
| Cashflow Analysis                    |              | 2H14A        | 1H15E        | FY14A          | FY15E          | FY16E          | FY17E                |  |  |
| Cash receipts from operations        | US\$m        | 71           | 54           | 139            | 115            | 121            | 123                  |  |  |
| less operating costs                 | US\$m        | (23)         | (24)         | (56)           | (41)           | (34)           | (37)                 |  |  |
| less interest paid                   | US\$m        | (5)          | (4)          | (11)           | (12)           | (13)           | (12)                 |  |  |
| less tax paid                        | US\$m        | (5)          | (5)          | (8)            | (10)           | (16)           | (17)                 |  |  |
| <b>Gross cashflow from operation</b> | <b>US\$m</b> | <b>38</b>    | <b>22</b>    | <b>65</b>      | <b>52</b>      | <b>59</b>      | <b>57</b>            |  |  |
| less expl & devlp                    | US\$m        | (38)         | (59)         | (93)           | (86)           | (42)           | (59)                 |  |  |
| less acq./inv.                       | US\$m        | -            | -            | 77             | -              | -              | -                    |  |  |
| less dividends                       | US\$m        | -            | -            | -              | -              | -              | -                    |  |  |
| add debt movements                   | US\$m        | (15)         | (9)          | (15)           | (39)           | (75)           | (20)                 |  |  |
| add equity/other                     | US\$m        | 0            | (10)         | 47             | -              | 50             | 24                   |  |  |
| <b>Net cashflow</b>                  | <b>US\$m</b> | <b>62</b>    | <b>(56)</b>  | <b>80</b>      | <b>(82)</b>    | <b>(8)</b>     | <b>1</b>             |  |  |
| +exchange rate adjustments           | US\$m        | (0)          | 0            | (1)            | 0              | 0              | 0                    |  |  |
| <b>Increase in cash</b>              | <b>US\$m</b> | <b>62</b>    | <b>(56)</b>  | <b>80</b>      | <b>(82)</b>    | <b>(8)</b>     | <b>1</b>             |  |  |
| <b>Net debt (cash)</b>               | <b>US\$m</b> | <b>89</b>    | <b>139</b>   | <b>(28)</b>    | <b>10</b>      | <b>49</b>      | <b>(10)</b>          |  |  |
| Balance sheet                        |              | 2H14A        | 1H15E        | FY14A          | FY15E          | FY16E          | FY17E                |  |  |
| Cash                                 | US\$m        | 99           | 44           | 99             | 17             | 9              | 10                   |  |  |
| Other current Assets                 | US\$m        | 22           | 51           | 22             | 51             | 56             | 55                   |  |  |
| Fixed Assets                         | US\$m        | 394          | 427          | 394            | 434            | 436            | 455                  |  |  |
| <b>Total Assets</b>                  | <b>US\$m</b> | <b>515</b>   | <b>521</b>   | <b>515</b>     | <b>501</b>     | <b>500</b>     | <b>520</b>           |  |  |
| Current Liabilities                  | US\$m        | 100          | 93           | 100            | 82             | 56             | 91                   |  |  |
| Total Liabilities                    | US\$m        | 292          | 264          | 292            | 234            | 163            | 141                  |  |  |
| <b>Shareholder equity</b>            | <b>US\$m</b> | <b>223</b>   | <b>256</b>   | <b>223</b>     | <b>267</b>     | <b>337</b>     | <b>379</b>           |  |  |
| Ratio analysis                       |              | 2H14A        | 1H15E        | FY14A          | FY15E          | FY16E          | FY17E                |  |  |
| ND/ND+E                              | %            | 28%          | 35%          | -14%           | 4%             | 13%            | -3%                  |  |  |
| Interest cover                       | x            | 3.1 x        | 0.9 x        | 2.2 x          | 2.5 x          | 8.5 x          | 9.0 x                |  |  |
| Dividend payout ratio                | %            | 0%           | 0%           | 0%             | 0%             | 0%             | 0%                   |  |  |
| ROA                                  | %            | 4%           | 1%           | 5%             | 6%             | 10%            | 9%                   |  |  |
| ROE                                  | %            | -3%          | 0%           | -5%            | 4%             | 7%             | 5%                   |  |  |
| ROC                                  | %            | 0%           | 2%           | 2%             | 6%             | 7%             | 6%                   |  |  |
| Effective tax rate                   | %            | 166%         | 71%          | 215%           | 29%            | 30%            | 30%                  |  |  |
| EBITDA margin                        | %            | 65%          | 67%          | 56%            | 70%            | 70%            | 71%                  |  |  |
| EBIT margin                          | %            | 26%          | 14%          | 19%            | 28%            | 38%            | 39%                  |  |  |
| Free cash flow                       | US\$m        | 77           | (37)         | 49             | (34)           | 17             | (3)                  |  |  |
| Valuation                            |              | 2H14A        | 1H15E        | FY14A          | FY15E          | FY16E          | FY17E                |  |  |
| EV/EBITDAX ratio                     | x            | 5.0 x        | 7.9 x        | 1.6 x          | 4.1 x          | 3.7 x          | 3.8 x                |  |  |
| P/E ratio                            | x            | nmf          | nmf          | nmf            | 21.6 x         | 6.9 x          | 11.0 x               |  |  |
| P/CEPS ratio                         | x            | 18.8 x       | 12.2 x       | 9.4 x          | 3.8 x          | 2.3 x          | 3.4 x                |  |  |
| FCF yield                            | %            | 18.5%        | nmf          | 12.5%          | nmf            | 12.1%          | nmf                  |  |  |
| Dividend yield                       | %            | 0.0%         | 0.0%         | 0.0%           | 0.0%           | 0.0%           | 0.0%                 |  |  |
| Sensitivities (Adjusted Earnings)    |              | NPV          | FY14A        | FY15E          | FY16E          | FY17E          |                      |  |  |
| Oil price (+US\$1/bbl)               | US\$m        | 0.37         | (9)          | 10             | 20             | 19             |                      |  |  |
|                                      | delta        | 0.00         | -            | 0              | 0              | 1              |                      |  |  |
|                                      | %            | 1%           | 0%           | 0%             | 2%             | 4%             |                      |  |  |
| Price assumptions                    |              | 2H14A        | 1H15E        | FY14A          | FY15E          | FY16E          | FY17E                |  |  |
| US\$/A\$                             | ¢            | 0.93         | 0.89         | 0.92           | 0.84           | 0.77           | 0.81                 |  |  |
| Oil - Brent                          | US\$/bbl     | 109.73       | 90.37        | 109.73         | 79.69          | 80.50          | 87.50                |  |  |
|                                      |              |              |              |                | 99.59          |                |                      |  |  |
| Production                           |              | 2H14A        | 1H15E        | FY14A          | FY15E          | FY16E          | FY17E                |  |  |
| Natural gas                          | PJ           | -            | -            | -              | -              | -              | -                    |  |  |
| Crude & condensate                   | kbbbls       | 762.5        | 618.7        | 1,434.7        | 1,312.8        | 1,481.2        | 1,392.7              |  |  |
| <b>Total production</b>              | <b>kboe</b>  | <b>762.5</b> | <b>618.7</b> | <b>1,434.7</b> | <b>1,312.8</b> | <b>1,481.2</b> | <b>1,392.7</b>       |  |  |
| Production rate                      | bopd         | 4,178        | 3,390        | 3,931          | 3,597          | 4,058          | 3,816                |  |  |

| FY   | Gas | Crude | Condensate | LPG | Total   |
|------|-----|-------|------------|-----|---------|
| FY06 | -   | -     | -          | -   | -       |
| FY07 | -   | -     | -          | -   | -       |
| FY08 | -   | -     | -          | -   | -       |
| FY09 | -   | -     | -          | -   | -       |
| FY10 | -   | -     | -          | -   | -       |
| FY11 | -   | -     | -          | -   | -       |
| FY12 | -   | -     | -          | -   | -       |
| FY13 | -   | -     | -          | -   | -       |
| FY14 | -   | -     | -          | -   | -       |
| FY15 | -   | -     | -          | -   | -       |
| FY16 | -   | -     | -          | -   | 1,481.2 |
| FY17 | -   | -     | -          | -   | 1,392.7 |
| FY18 | -   | -     | -          | -   | -       |
| FY19 | -   | -     | -          | -   | -       |
| FY20 | -   | -     | -          | -   | -       |

| Reserves              |              | FY14A       | FY15E       | FY16E       | FY17E       |
|-----------------------|--------------|-------------|-------------|-------------|-------------|
| Natural gas           | Tcf          | -           | -           | -           | -           |
| Crude & condensate    | mmbbl        | 15.1        | 13.8        | 12.3        | 10.9        |
| <b>Total reserves</b> | <b>mmboe</b> | <b>15.1</b> | <b>13.8</b> | <b>12.3</b> | <b>10.9</b> |
| 2P reserve life       | years        | 11.5        | 9.3         | 8.8         | 7.7         |
| Mkt cap / 2P reserves | US\$/boe     | 10.0        | 9.3         | 12.5        | 19.3        |
| EV / 2P reserves      | US\$/boe     | 18.1        | 19.8        | 22.2        | 25.1        |

| Per bbl statistics  |          | 2H14A | 1H15E | FY14A | FY15E | FY16E | FY17E |
|---------------------|----------|-------|-------|-------|-------|-------|-------|
| Sales Revenue / boe | US\$/boe | 104.3 | 78.6  | 100.6 | 73.6  | 81.0  | 88.0  |
| EBIT / boe          | US\$/boe | 25.4  | 11.8  | 18.7  | 24.0  | 32.8  | 33.9  |
| Profit / boe        | US\$/boe | nmf   | nmf   | nmf   | 7.4   | 13.3  | 13.1  |
| Opex/boe            | US\$/boe | 17.2  | 11.9  | 21.6  | 12.7  | 12.8  | 10.3  |
| DDA/boe             | US\$/boe | 28.6  | 27.4  | 27.9  | 25.1  | 21.4  | 20.2  |

| NPV @ WACC of 10.9%                    |                         | US\$m      | A\$ps       | %    |
|--|-------------------------|------------|-------------|------|
| <b>Developing assets</b>               |                         | 124        | 0.08        |      |
| <b>Static assets &amp; exploration</b> |                         |            |             |      |
| Maari                                  | risked valuation @ 40%  | 26         | 0.02        |      |
| Beibu Gulf (+WZ 12-10-2)               | risked valuation @ 100% | 220        | 0.14        |      |
| Stanley liquids                        | risked valuation @ 90%  | 25         | 0.02        |      |
| Elevala/Ketu/Tingu Liquids             | risked valuation @ 50%  | 178        | 0.12        |      |
| Static & Exploration                   |                         | 131        | 0.09        |      |
| <b>Financial assets</b>                |                         |            |             |      |
| Corporate                              |                         | (23)       | (0.02)      |      |
| Cash & Investments                     |                         | 44         | 0.03        |      |
| Risked Osaka Gas Payment               |                         | 10         | 0.01        |      |
| Debt                                   |                         | (168)      | (0.11)      |      |
| <b>Group NPV</b>                       |                         | <b>567</b> | <b>0.37</b> |      |
| Shareprice prem/(disc) to NPV          |                         |            |             |      |
| - core NPV per share (A\$)             |                         |            | 0.17        |      |
| - risked NPV per share (A\$)           |                         |            | 0.37        |      |
| - unrisked NPV per share (A\$)         |                         |            | 1.14        | -66% |

Source: Company data, Macquarie Research, February 2015

Fig 5 Horizon Oil NAV breakdown

| Production Assets                                | Interest | Unrisked<br>mmboe | Unrisked<br>USD (m) | Risk  | Risked<br>mmboe | Risked<br>USD (m) | USD/boe     | Aps<br>risked | Aps<br>unrisked | % NPV       | Sensitivity   |               |               |  |
|--|----------|-------------------|---------------------|-------|-----------------|-------------------|-------------|---------------|-----------------|-------------|---------------|---------------|---------------|--|
|  |          |                   |                     |       |                 |                   |             |               |                 |             | -\$10         | Base          | +\$10         |  |
| Maari  | 10.0%    | 4.8               | 124                 | 100%  | 4.8             | 124               | 25.9        | 0.08          | 0.08            | 22%         | 0.07          | 0.08          | 0.09          |  |
| Beibu Gulf (+WZ 12-10-2)                         | 27.0%    | 7.4               | 220                 | 100%  | 7.4             | 220               | 29.8        | 0.14          | 0.14            | 39%         | 0.14          | 0.14          | 0.14          |  |
| <b>Sub Total</b>                                 |          | <b>12.2</b>       | <b>344</b>          |       | <b>12.2</b>     | <b>344</b>        |             | <b>0.23</b>   | <b>0.23</b>     | <b>61%</b>  | <b>0.21</b>   | <b>0.23</b>   | <b>0.24</b>   |  |
| <b>Developing Assets</b>                         |          |                   |                     |       |                 |                   |             |               |                 |             |               |               |               |  |
| Maari/M2A w ater injection                       | 10.0%    | 2.0               | 66                  | 40%   | 0.8             | 26                | 32.5        | 0.02          | 0.04            | 5%          | 0.02          | 0.02          | 0.02          |  |
| Stanley liquids                                  | 23.3%    | 2.7               | 28                  | 90%   | 2.4             | 25                | 10.4        | 0.02          | 0.02            | 4%          | 0.01          | 0.02          | 0.02          |  |
| Elevala/Ketu/Tingu Liquids                       | 20.9%    | 15.4              | 355                 | 50%   | 7.7             | 178               | 23.0        | 0.12          | 0.23            | 32%         | 0.10          | 0.12          | 0.14          |  |
| <b>Sub Total</b>                                 |          | <b>20.1</b>       | <b>449</b>          |       | <b>10.9</b>     | <b>229</b>        |             | <b>0.15</b>   | <b>0.29</b>     | <b>41%</b>  | <b>0.12</b>   | <b>0.15</b>   | <b>0.18</b>   |  |
| <b>Static assets and exploration</b>             |          |                   |                     |       |                 |                   |             |               |                 |             |               |               |               |  |
| Beibu Gulf: WZ 12-8E & 12-10-1                   | 27.0%    | 3.5               | 53                  | 30%   | 1.0             | 16                | 15.2        | 0.01          | 0.03            | 3%          | 0.01          | 0.01          | 0.01          |  |
| PRL 21: Toro (liquids)                           | 34.9%    | 4.2               | 76                  | 15%   | 0.6             | 11                | 20.8        | 0.01          | 0.05            | 2%          | 0.01          | 0.01          | 0.01          |  |
| Stanley contracted gas                           | 23.3%    | 2.1               | 19                  | 25%   | 0.5             | 5                 | 9.0         | 0.00          | 0.01            | 1%          | 0.00          | 0.00          | 0.00          |  |
| Daru mid-scale LNG                               | 10.4%    | 48.5              | 348                 | 10%   | 4.9             | 35                | 7.2         | 0.02          | 0.23            | 6%          | 0.02          | 0.02          | 0.03          |  |
| PNG LNG 3rd Party Supply                         | 21.5%    | 50.8              | 133                 | 30%   | 15.2            | 40                | 2.6         | 0.03          | 0.09            | 7%          | 0.02          | 0.03          | 0.03          |  |
| PEP 51313: Matariki                              | 21.0%    | 23.1              | 186                 | 2.5%  | 0.6             | 5                 | 10.0        | 0.00          | 0.12            | 1%          | 0.00          | 0.00          | 0.00          |  |
| PEP 51313: Te Wahtu                              | 21.0%    | 11.8              | 73                  | 2.5%  | 0.3             | 2                 | 10.0        | 0.00          | 0.05            | 0%          | 0.00          | 0.00          | 0.00          |  |
| PEP 51313: Pukeko NE                             | 21.0%    | 7.0               | 25                  | 2.5%  | 0.2             | 1                 | 10.0        | 0.00          | 0.02            | 0%          | 0.00          | 0.00          | 0.00          |  |
| PPL 259: Other                                   | 35.0%    | 12.6              | 168                 | 10.0% | 1.3             | 17                | 15.0        | 0.01          | 0.11            | 3%          | 0.01          | 0.01          | 0.01          |  |
| <b>Sub Total</b>                                 |          | <b>163</b>        | <b>1,081</b>        |       | <b>24.6</b>     | <b>131</b>        |             | <b>0.09</b>   | <b>0.71</b>     | <b>18%</b>  | <b>0.08</b>   | <b>0.09</b>   | <b>0.09</b>   |  |
| <b>Financial &amp; Corporate</b>                 |          |                   |                     |       |                 |                   |             |               |                 |             |               |               |               |  |
| Cash   |          |                   |                     |       |                 | 44                |             | 0.03          | 0.03            | 8%          | 0.03          | 0.03          | 0.03          |  |
| Post-money raising                               |          |                   |                     |       |                 | -                 |             | -             | -               | 0%          | -             | -             | -             |  |
| Risked Osaka Gas Payment                         |          |                   |                     |       |                 | 10                |             | 0.01          | 0.01            | 2%          | 0.01          | 0.01          | 0.01          |  |
| Debt   |          |                   |                     |       |                 | (106)             |             | (0.07)        | (0.07)          | -20%        | (0.07)        | (0.07)        | (0.07)        |  |
| Hedge Book                                       |          |                   |                     |       |                 | 19                |             | 0.01          | 0.01            | 3%          | 0.02          | 0.01          | 0.01          |  |
| Convertible Bond                                 |          |                   |                     |       |                 | (80)              |             | (0.05)        | (0.05)          | -14%        | (0.05)        | (0.05)        | (0.05)        |  |
| Corporate costs                                  |          |                   |                     |       |                 | (23)              |             | (0.02)        | (0.02)          | -4%         | (0.01)        | (0.02)        | (0.01)        |  |
| <b>Sub Total</b>                                 |          |                   |                     |       |                 | <b>(138)</b>      |             | <b>(0.09)</b> | <b>(0.09)</b>   | <b>-25%</b> | <b>(0.09)</b> | <b>(0.09)</b> | <b>(0.10)</b> |  |
| <b>Overall total</b>                             |          | <b>196</b>        | <b>mmboe</b>        |       |                 | <b>567</b>        | <b>USDm</b> | <b>0.37</b>   | <b>1.14</b>     | <b>94%</b>  | <b>0.33</b>   | <b>0.37</b>   | <b>0.40</b>   |  |
| - core NPV per share (A\$)                       |          | 12                |                     |       |                 |                   |             | 0.17          |                 |             | 0.15          | 0.17          | 0.18          |  |
| - risked NPV per share (A\$)                     |          | 48                |                     |       |                 |                   |             | 0.37          |                 |             | 0.33          | 0.37          | 0.40          |  |
| - unrisked NPV per share (A\$)                   |          | 196               |                     |       |                 |                   |             | 1.14          |                 |             | 1.03          | 1.14          | 1.24          |  |
| Diluted shares outstanding (m)                   |          |                   |                     |       |                 |                   |             | 1,752.1       |                 |             |               |               |               |  |
| Ordinary Shares on Issue (m)                     |          |                   |                     |       |                 |                   |             | 1,302.0       |                 |             |               |               |               |  |
| Post-money shares (m)                            |          |                   |                     |       |                 |                   |             | 450.1         |                 |             |               |               |               |  |
| New shares from options and convertible debt (m) |          |                   |                     |       |                 |                   |             | -             |                 |             |               |               |               |  |
| Exchange Rate                                    |          |                   |                     |       |                 |                   |             | 0.87          |                 |             |               |               |               |  |
| WACC (post tax)                                  |          |                   |                     |       |                 |                   |             | 10.9%         |                 |             |               |               |               |  |
| Share Price                                      |          |                   |                     |       |                 |                   |             | 0.13          |                 |             |               |               |               |  |
| Price premium to NPV                             |          |                   |                     |       |                 |                   |             | -66%          |                 |             |               |               |               |  |

Source: Macquarie Research, February 2015

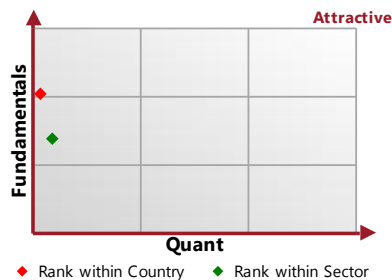
## Macquarie Quant View

The quant model currently holds a strong negative view on Horizon Oil. The strongest style exposure is Growth, indicating this stock has good historic and/or forecast growth. Growth metrics focus on both top and bottom line items. The weakest style exposure is Price Momentum, indicating this stock has had weak medium to long term returns which often persist into the future.

**164/174**

Global Alpha Model  
Sector Rank

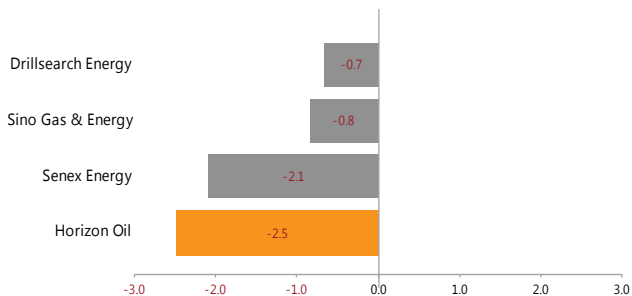
**% of BUY recommendations** 57% (4/7)  
**Number of Price Target downgrades** 7  
**Number of Price Target upgrades** 0



Displays where the company's ranked based on the fundamental consensus Price Target and Macquarie's Quantitative Alpha model. The rankings are displayed relative to the sector and country.

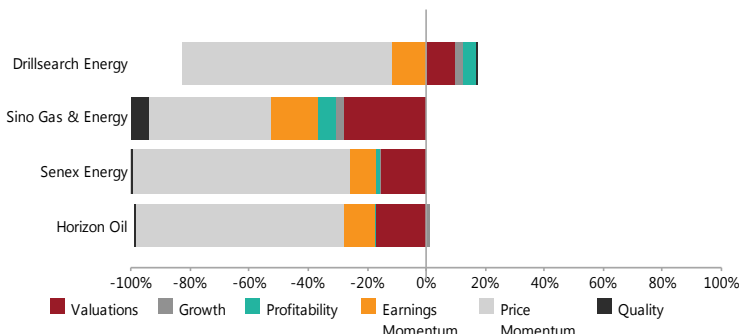
### Macquarie Alpha Model ranking

A list of comparable companies and their Macquarie Alpha model score (higher is better).



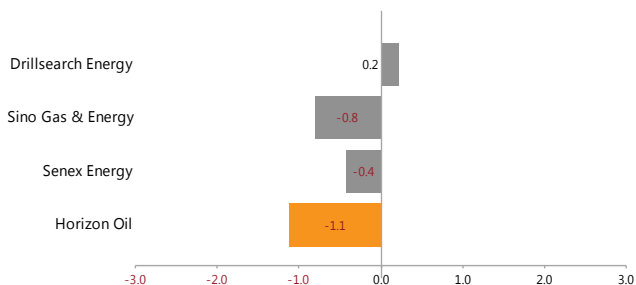
### Factors driving the Alpha Model

For the comparable firms this chart shows the key underlying styles and their contribution to the current overall Alpha score.



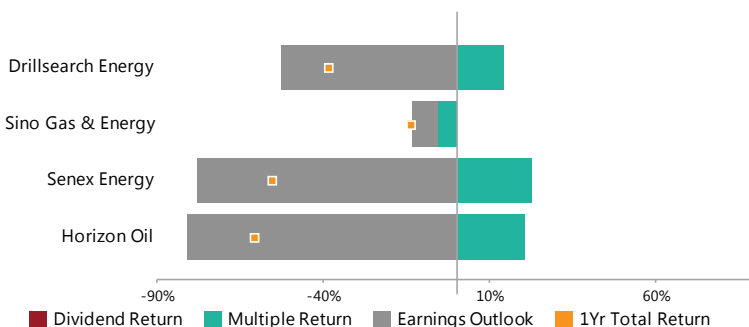
### Macquarie Earnings Sentiment Indicator

The Macquarie Sentiment Indicator is an enhanced earnings revisions signal that favours analysts who have more timely and higher conviction revisions. Current score shown below.



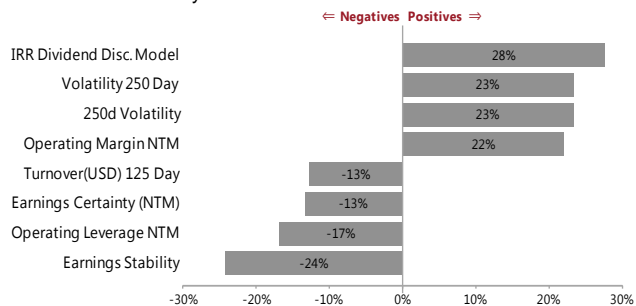
### Drivers of Stock Return

Breakdown of 1 year total return (local currency) into returns from dividends, changes in forward earnings estimates and the resulting change in earnings multiple.



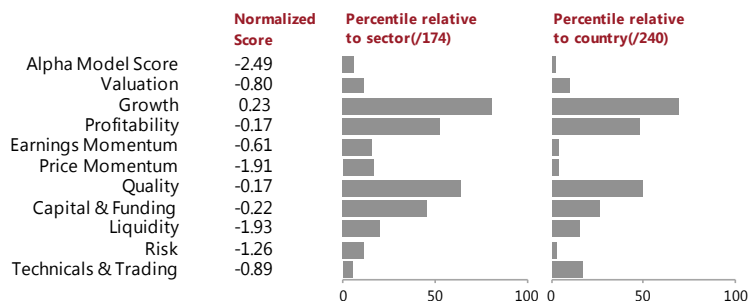
### What drove this Company in the last 5 years

Which factor score has had the greatest correlation with the company's returns over the last 5 years.



### How it looks on the Alpha model

A more granular view of the underlying style scores that drive the alpha (higher is better) and the percentile rank relative to the sector and country



For more details on the Macquarie Alpha model or for more customised analysis and screens, please contact the Macquarie Global Quantitative/Custom Products Group ([cpg@macquarie.com](mailto:cpg@macquarie.com))

## Important disclosures:

**Recommendation definitions****Macquarie - Australia/New Zealand**

Outperform – return >3% in excess of benchmark return  
 Neutral – return within 3% of benchmark return  
 Underperform – return >3% below benchmark return

Benchmark return is determined by long term nominal GDP growth plus 12 month forward market dividend yield

**Macquarie – Asia/Europe**

Outperform – expected return >+10%  
 Neutral – expected return from -10% to +10%  
 Underperform – expected return <-10%

**Macquarie First South - South Africa**

Outperform – expected return >+10%  
 Neutral – expected return from -10% to +10%  
 Underperform – expected return <-10%

**Macquarie - Canada**

Outperform – return >5% in excess of benchmark return  
 Neutral – return within 5% of benchmark return  
 Underperform – return >5% below benchmark return

**Macquarie - USA**

Outperform (Buy) – return >5% in excess of Russell 3000 index return  
 Neutral (Hold) – return within 5% of Russell 3000 index return  
 Underperform (Sell) – return >5% below Russell 3000 index return

**Volatility index definition\***

This is calculated from the volatility of historical price movements.

**Very high-highest risk** – Stock should be expected to move up or down 60–100% in a year – investors should be aware this stock is highly speculative.

**High** – stock should be expected to move up or down at least 40–60% in a year – investors should be aware this stock could be speculative.

**Medium** – stock should be expected to move up or down at least 30–40% in a year.

**Low-medium** – stock should be expected to move up or down at least 25–30% in a year.

**Low** – stock should be expected to move up or down at least 15–25% in a year.

\* Applicable to Asia/Australian/NZ/Canada stocks only

**Recommendations** – 12 months

**Note:** Quant recommendations may differ from Fundamental Analyst recommendations

**Financial definitions**

All "Adjusted" data items have had the following adjustments made:

Added back: goodwill amortisation, provision for catastrophe reserves, IFRS derivatives & hedging, IFRS impairments & IFRS interest expense  
 Excluded: non recurring items, asset revals, property revals, appraisal value uplift, preference dividends & minority interests

**EPS** = adjusted net profit / efpowa\*

**ROA** = adjusted ebit / average total assets

**ROA Banks/Insurance** = adjusted net profit / average total assets

**ROE** = adjusted net profit / average shareholders funds

**Gross cashflow** = adjusted net profit + depreciation

\*equivalent fully paid ordinary weighted average number of shares

All Reported numbers for Australian/NZ listed stocks are modelled under IFRS (International Financial Reporting Standards).

**Recommendation proportions – For quarter ending 31 December 2014**

|              | AU/NZ  | Asia   | RSA    | USA    | CA     | EUR    |   |
|--------------|--------|--------|--------|--------|--------|--------|---|
| Outperform   | 51.80% | 58.06% | 45.07% | 44.42% | 60.54% | 46.81% | (for US coverage by MCUSA, 5.29% of stocks followed are investment banking clients) |
| Neutral      | 31.80% | 27.37% | 30.99% | 50.10% | 35.37% | 33.51% | (for US coverage by MCUSA, 3.08% of stocks followed are investment banking clients) |
| Underperform | 16.39% | 14.57% | 23.94% | 5.48%  | 4.08%  | 19.68% | (for US coverage by MCUSA, 0.44% of stocks followed are investment banking clients) |

**HZN AU vs Small Ordinaries, & rec history**

(all figures in AUD currency unless noted)

Note: Recommendation timeline – if not a continuous line, then there was no Macquarie coverage at the time or there was an embargo period.

Source: FactSet, Macquarie Research, February 2015

**12-month target price methodology**

HZN AU: A\$0.35 based on a DCF methodology

**Company-specific disclosures:**

**HZN AU:** Macquarie and its affiliates collectively and beneficially own or control 1% or more of any class of Horizon Oil Limited's equity securities.

Important disclosure information regarding the subject companies covered in this report is available at [www.macquarie.com/disclosures](http://www.macquarie.com/disclosures).

| Date        | Stock Code (BBG code) | Recommendation | Target Price |
|-------------|-----------------------|----------------|--------------|
| 09-Dec-2014 | HZN AU                | Outperform     | A\$.35       |
| 08-Oct-2014 | HZN AU                | Outperform     | A\$.50       |
| 06-Aug-2014 | HZN AU                | Outperform     | A\$.55       |
| 24-May-2013 | HZN AU                | Outperform     | A\$.59       |
| 12-Oct-2012 | HZN AU                | Outperform     | A\$.54       |
| 13-Jul-2012 | HZN AU                | Outperform     | A\$.49       |

**Target price risk disclosures:**

**HZN AU:** Any inability to compete successfully in their markets may harm the business. This could be a result of many factors which may include geographic mix and introduction of improved products or service offerings by competitors. The results of operations may be materially affected by global economic conditions generally, including conditions in financial markets. The company is exposed to market risks, such as changes in interest rates, foreign exchange rates and input prices. From time to time, the company will enter into transactions, including transactions in derivative instruments, to manage certain of these exposures.

**Analyst certification:**

The views expressed in this research accurately reflect the personal views of the analyst(s) about the subject securities or issuers and no part of the compensation of the analyst(s) was, is, or will be directly or indirectly related to the inclusion of specific recommendations or views in this research. The analyst principally responsible for the preparation of this research receives compensation based on overall revenues of Macquarie Group Ltd ABN 94 122 169 279 (AFSL No. 318062) (MGL) and its related entities (the Macquarie Group) and has taken reasonable care to achieve and maintain independence and objectivity in making any recommendations.

**General disclaimers:**

Macquarie Securities (Australia) Ltd; Macquarie Capital (Europe) Ltd; Macquarie Capital Markets Canada Ltd; Macquarie Capital Markets North America Ltd; Macquarie Capital (USA) Inc; Macquarie Capital Securities Ltd and its Taiwan branch; Macquarie Capital Securities (Singapore) Pte Ltd; Macquarie Securities (NZ) Ltd; Macquarie First South Securities (Pty) Limited; Macquarie Capital Securities (India) Pvt Ltd; Macquarie Capital Securities

(Malaysia) Sdn Bhd; Macquarie Securities Korea Limited and Macquarie Securities (Thailand) Ltd are not authorized deposit-taking institutions for the purposes of the Banking Act 1959 (Commonwealth of Australia), and their obligations do not represent deposits or other liabilities of Macquarie Bank Limited ABN 46 008 583 542 (MBL) or MGL. MBL does not guarantee or otherwise provide assurance in respect of the obligations of any of the above mentioned entities. MGL provides a guarantee to the Monetary Authority of Singapore in respect of the obligations and liabilities of Macquarie Capital Securities (Singapore) Pte Ltd for up to SGD 35 million. This research has been prepared for the general use of the wholesale clients of the Macquarie Group and must not be copied, either in whole or in part, or distributed to any other person. If you are not the intended recipient you must not use or disclose the information in this research in any way. If you received it in error, please tell us immediately by return e-mail and delete the document. We do not guarantee the integrity of any e-mails or attached files and are not responsible for any changes made to them by any other person. MGL has established and implemented a conflicts policy at group level (which may be revised and updated from time to time) (the "Conflicts Policy") pursuant to regulatory requirements (including the FCA Rules) which sets out how we must seek to identify and manage all material conflicts of interest. Nothing in this research shall be construed as a solicitation to buy or sell any security or product, or to engage in or refrain from engaging in any transaction. In preparing this research, we did not take into account your investment objectives, financial situation or particular needs. Macquarie salespeople, traders and other professionals may provide oral or written market commentary or trading strategies to our clients that reflect opinions which are contrary to the opinions expressed in this research. Macquarie Research produces a variety of research products including, but not limited to, fundamental analysis, macro-economic analysis, quantitative analysis, and trade ideas. Recommendations contained in one type of research product may differ from recommendations contained in other types of research, whether as a result of differing time horizons, methodologies, or otherwise. Before making an investment decision on the basis of this research, you need to consider, with or without the assistance of an adviser, whether the advice is appropriate in light of your particular investment needs, objectives and financial circumstances. There are risks involved in securities trading. The price of securities can and does fluctuate, and an individual security may even become valueless. International investors are reminded of the additional risks inherent in international investments, such as currency fluctuations and international stock market or economic conditions, which may adversely affect the value of the investment. This research is based on information obtained from sources believed to be reliable but we do not make any representation or warranty that it is accurate, complete or up to date. We accept no obligation to correct or update the information or opinions in it. Opinions expressed are subject to change without notice. No member of the Macquarie Group accepts any liability whatsoever for any direct, indirect, consequential or other loss arising from any use of this research and/or further communication in relation to this research. Clients should contact analysts at, and execute transactions through, a Macquarie Group entity in their home jurisdiction unless governing law permits otherwise. The date and timestamp for above share price and market cap is the closed price of the price date. #CLOSE is the final price at which the security is traded in the relevant exchange on the date indicated.

#### Country-specific disclaimers:

**Australia:** In Australia, research is issued and distributed by Macquarie Securities (Australia) Ltd (AFSL No. 238947), a participating organisation of the Australian Securities Exchange. **New Zealand:** In New Zealand, research is issued and distributed by Macquarie Securities (NZ) Ltd, a NZX Firm. **Canada:** In Canada, research is prepared, approved and distributed by Macquarie Capital Markets Canada Ltd, a participating organisation of the Toronto Stock Exchange, TSX Venture Exchange & Montréal Exchange. Macquarie Capital Markets North America Ltd., which is a registered broker-dealer and member of FINRA, accepts responsibility for the contents of reports issued by Macquarie Capital Markets Canada Ltd in the United States and sent to US persons. Any US person wishing to effect transactions in the securities described in the reports issued by Macquarie Capital Markets Canada Ltd should do so with Macquarie Capital Markets North America Ltd. The Research Distribution Policy of Macquarie Capital Markets Canada Ltd is to allow all clients that are entitled to have equal access to our research. **United Kingdom:** In the United Kingdom, research is issued and distributed by Macquarie Capital (Europe) Ltd, which is authorised and regulated by the Financial Conduct Authority (No. 193905). **Germany:** In Germany, this research is issued and/or distributed by Macquarie Capital (Europe) Limited, Niederlassung Deutschland, which is authorised and regulated by the UK Financial Conduct Authority (No. 193905), and in Germany by BaFin. **France:** In France, research is issued and distributed by Macquarie Capital (Europe) Ltd, which is authorised and regulated in the United Kingdom by the Financial Conduct Authority (No. 193905). **Hong Kong & Mainland China:** In Hong Kong, research is issued and distributed by Macquarie Capital Securities Ltd, which is licensed and regulated by the Securities and Futures Commission. In Mainland China, Macquarie Securities (Australia) Limited Shanghai Representative Office only engages in non-business operational activities excluding issuing and distributing research. Only non-A share research is distributed into Mainland China by Macquarie Capital Securities Ltd. **Japan:** In Japan, research is issued and distributed by Macquarie Capital Securities (Japan) Limited, a member of the Tokyo Stock Exchange, Inc. and Osaka Securities Exchange Co. Ltd (Financial Instruments Firm, Kanto Financial Bureau (kin-sho) No. 231, a member of Japan Securities Dealers Association and The Financial Futures Association of Japan and Japan Investment Advisers Association). **India:** In India, research is issued and distributed by Macquarie Capital Securities (India) Pvt. Ltd. (CIN: U65920MH1995PTC090696), formerly known as Macquarie Capital (India) Pvt. Ltd., 92, Level 9, 2 North Avenue, Maker Maxity, Bandra Kurla Complex, Bandra (East), Mumbai – 400 051, India, which is a SEBI registered stockbroker having membership with National Stock Exchange of India Limited (INB231246738) and BSE Limited (INB011246734). **Malaysia:** In Malaysia, research is issued and distributed by Macquarie Capital Securities (Malaysia) Sdn. Bhd. (Company registration number: 463469-W) which is a Participating Organisation of Bursa Malaysia Berhad and a holder of Capital Markets Services License issued by the Securities Commission. **Taiwan:** In Taiwan, research is issued and distributed by Macquarie Capital Securities Ltd, Taiwan Branch, which is licensed and regulated by the Financial Supervisory Commission. No portion of the report may be reproduced or quoted by the press or any other person without authorisation from Macquarie. Nothing in this research shall be construed as a solicitation to buy or sell any security or product. Research Associate(s) in this report who are registered as Clerks only assist in the preparation of research and are not engaged in writing the research. **Thailand:** In Thailand, research is produced, issued and distributed by Macquarie Securities (Thailand) Ltd. Macquarie Securities (Thailand) Ltd. is a licensed securities company that is authorized by the Ministry of Finance, regulated by the Securities and Exchange Commission of Thailand and is an exchange member of the Stock Exchange of Thailand. The Thai Institute of Directors Association has disclosed the Corporate Governance Report of Thai Listed Companies made pursuant to the policy of the Securities and Exchange Commission of Thailand. Macquarie Securities (Thailand) Ltd does not endorse the result of the Corporate Governance Report of Thai Listed Companies but this Report can be accessed at: <http://www.thai-iod.com/en/publications.asp?type=4>. **South Korea:** In South Korea, unless otherwise stated, research is prepared, issued and distributed by Macquarie Securities Korea Limited, which is regulated by the Financial Supervisory Services. Information on analysts in MSKL is disclosed at <http://dis.kofia.or.kr/websquare/index.jsp?w2xPath=/wg/fundMgr/DISFundMgrAnalystStut.xml&divisionId=MDIS03002001000000&servicId=SDIS030020010000>. **South Africa:** In South Africa, research is issued and distributed by Macquarie First South Securities (Pty) Limited, a member of the JSE Limited. **Singapore:** In Singapore, research is issued and distributed by Macquarie Capital Securities (Singapore) Pte Ltd (Company Registration Number: 198702912C), a Capital Markets Services license holder under the Securities and Futures Act to deal in securities and provide custodial services in Singapore. Pursuant to the Financial Advisers (Amendment) Regulations 2005, Macquarie Capital Securities (Singapore) Pte Ltd is exempt from complying with sections 25, 27 and 36 of the Financial Advisers Act. All Singapore-based recipients of research produced by Macquarie Capital (Europe) Limited, Macquarie Capital Markets Canada Ltd, Macquarie First South Securities (Pty) Limited and Macquarie Capital (USA) Inc. represent and warrant that they are institutional investors as defined in the Securities and Futures Act. **United States:** In the United States, research is issued and distributed by Macquarie Capital (USA) Inc., which is a registered broker-dealer and member of FINRA. Macquarie Capital (USA) Inc. accepts responsibility for the content of each research report prepared by one of its non-US affiliates when the research report is distributed in the United States by Macquarie Capital (USA) Inc. Macquarie Capital (USA) Inc.'s affiliate's analysts are not registered as research analysts with FINRA, may not be associated persons of Macquarie Capital (USA) Inc., and therefore may not be subject to FINRA rule restrictions on communications with a subject company, public appearances, and trading securities held by a research analyst account. Information regarding futures is provided for reference purposes only and is not a solicitation for purchases or sales of futures. Any persons receiving this report directly from Macquarie Capital (USA) Inc. and wishing to effect a transaction in any security described herein should do so with Macquarie Capital (USA) Inc. Important disclosure information regarding the subject companies covered in this report is available at [www.macquarie.com/research/disclosures](http://www.macquarie.com/research/disclosures), or contact your registered representative at 1-888-MAC-STOCK, or write to the Supervisory Analysts, Research Department, Macquarie Securities, 125 W.55th Street, New York, NY 10019.

© Macquarie Group

---

|   |   |  |  |  |   |  |
|---|---|--|--|--|---|--|
| <b>Auckland</b><br>Tel: (649) 377 6433  | <b>Bangkok</b><br>Tel: (662) 694 7999       | <b>Calgary</b><br>Tel: (1 403) 294 9541      | <b>Denver</b><br>Tel: (303) 952 2800           | <b>Frankfurt</b><br>Tel: (069) 509 578 000 | <b>Geneva</b><br>Tel: (41) 22 818 7777    | <b>Hong Kong</b><br>Tel: (852) 2823 3588 |
| <b>Jakarta</b><br>Tel: (62 21) 515 1818 | <b>Johannesburg</b><br>Tel: (2711) 583 2000 | <b>Kuala Lumpur</b><br>Tel: (60 3) 2059 8833 | <b>London</b><br>Tel: (44 20) 3037 2000        | <b>Manila</b><br>Tel: (63 2) 857 0888      | <b>Melbourne</b><br>Tel: (613) 9635 8139  | <b>Mumbai</b><br>Tel: (91 22) 6653 3000  |
| <b>Munich</b><br>Tel: (089) 2444 31800  | <b>New York</b><br>Tel: (1 212) 231 2500    | <b>Paris</b><br>Tel: (33 1) 7842 3823        | <b>Perth</b><br>Tel: (618) 9224 0888           | <b>Seoul</b><br>Tel: (82 2) 3705 8500      | <b>Shanghai</b><br>Tel: (86 21) 6841 3355 | <b>Singapore</b><br>Tel: (65) 6601 1111  |
| <b>Sydney</b><br>Tel: (612) 8232 9555   | <b>Taipei</b><br>Tel: (886 2) 2734 7500     | <b>Tokyo</b><br>Tel: (81 3) 3512 7900        | <b>Toronto</b><br><b>Tel: (1 416) 848 3500</b> | <b>Vancouver</b><br>Tel: (1 604) 605 3944  |   |  |

---

Available to clients on the world wide web at [www.macquarieresearch.com](http://www.macquarieresearch.com) and through Thomson Financial, FactSet, Reuters, Bloomberg, and CapitalIQ.





## Research

### Head of Equity Research

|                           |                 |
|---------------------------|-----------------|
| John O'Connell (Global)   | (612) 8232 7544 |
| Paul Checchin (Australia) | (612) 8232 4197 |

### Retail / Consumer

|               |                 |
|---------------|-----------------|
| Bryan Raymond | (612) 8232 2740 |
|---------------|-----------------|

### Energy

|            |                 |
|------------|-----------------|
| Kirit Hira | (612) 8232 9692 |
|------------|-----------------|

### ESG

|                |                 |
|----------------|-----------------|
| Deana Mitchell | (612) 8232 4576 |
|----------------|-----------------|

### Financials

#### Banks

|                |                 |
|----------------|-----------------|
| Michael Wiblin | (612) 8232 6089 |
| Anita Stanley  | (612) 8232 9869 |

#### Insurance & Diversified Financials

|               |                 |
|---------------|-----------------|
| Tim Lawson    | (612) 8237 7332 |
| Bryan Raymond | (612) 8232 2740 |

### Healthcare / Food & Bev

|                 |                 |
|-----------------|-----------------|
| Dr Craig Collie | (612) 8232 4130 |
| Ben Tedder      | (612) 8232 5387 |

### Industrials

#### Capital Goods

|              |                 |
|--------------|-----------------|
| John Purtell | (612) 8232 8633 |
|--------------|-----------------|

#### Infrastructure

|           |                 |
|-----------|-----------------|
| Ian Myles | (612) 8232 4157 |
|-----------|-----------------|

#### Transportation

|            |                 |
|------------|-----------------|
| Sam Dobson | (612) 8232 9986 |
|------------|-----------------|

### Chemicals, D&C, Packaging, Builders, Steel

|              |                 |
|--------------|-----------------|
| John Purtell | (612) 8232 8633 |
| Peter Steyn  | (612) 8232 5144 |
| Pelen Ji     | (612) 8237 3523 |

### Resources

|                 |                 |
|-----------------|-----------------|
| Hayden Bairstow | (618) 9224 0838 |
| Ben Crowley     | (618) 9224 0839 |

### Real Estate

|               |                 |
|---------------|-----------------|
| Paul Checchin | (612) 8232 4197 |
| Rob Freeman   | (612) 8237 1152 |

### Telcos / Media / Tourism & Leisure

|                |                 |
|----------------|-----------------|
| Andrew Levy    | (612) 8232 5165 |
| Andrew Russell | (612) 8232 9390 |

### Utilities

|           |                 |
|-----------|-----------------|
| Ian Myles | (612) 8232 4157 |
|-----------|-----------------|

### Commodities & Precious Metals

|                         |                   |
|-------------------------|-------------------|
| Colin Hamilton (Global) | (44 20) 3037 4061 |
| Jim Lennon (London)     | (44 20) 3037 4271 |
| Graeme Train (Shanghai) | (8621) 2412 9035  |

### New Zealand

|                                  |                 |
|----------------------------------|-----------------|
| Stephen Hudson                   | (649) 363 1414  |
| Warren Doak                      | (649) 363 1416  |
| Daniel Frost                     | (649) 363 1474  |
| Nick Mar                         | (649) 363 1476  |
| Andrew Levy (Telecommunications) | (612) 8232 5165 |

### Emerging Leaders – Industrials

|                 |                 |
|-----------------|-----------------|
| Adam Simpson    | (612) 8232 4439 |
| Andrew Wackett  | (618) 9224 0867 |
| Jodie Bannan    | (612) 8232 2999 |
| Jennifer Kruk   | (612) 8232 6422 |
| Michael Higgins | (612) 8232 3208 |

### Quantitative

|                          |                   |
|--------------------------|-------------------|
| Gurvinder Brar (Global)  | (44 20) 3037 4036 |
| John Conomos (Australia) | (612) 8232 5157   |
| Jeremy Lamplough         | (612) 8232 1060   |

### Data Services

|                |                 |
|----------------|-----------------|
| Sheridan Duffy | (612) 8232 9786 |
|----------------|-----------------|

### Economics and Strategy

|                                   |                 |
|-----------------------------------|-----------------|
| Richard Gibbs (Head of Economics) | (612) 8232 3935 |
| James McIntyre (Australia)        | (612) 8232 8930 |
| Rikki Bannan (Strategy)           | (612) 8232 8676 |

### Find our research at

|                                    |  |
|------------------------------------|--|
| Macquarie:                         | <a href="http://www.macquarie.com.au/research">www.macquarie.com.au/research</a> |
| Thomson:                           | <a href="http://www.thomson.com/financial">www.thomson.com/financial</a>         |
| Reuters:                           | <a href="http://www.knowledge.reuters.com">www.knowledge.reuters.com</a>         |
| Bloomberg:                         | MAC GO   |
| Factset:                           | <a href="http://www.factset.com/home.aspx">http://www.factset.com/home.aspx</a>  |
| CapitalIQ                          | <a href="http://www.capitaliq.com">www.capitaliq.com</a>                         |
| Contact Gareth Warfield for access | (612) 8232 3207  |

### See and hear our analysts at

[www.macquarie.com.au/macquariedigital](http://www.macquarie.com.au/macquariedigital)

### Toll free from overseas

|           |               |
|-----------|---------------|
| Canada    | 1800 989 8159 |
| Hong Kong | 800 96 2049   |
| Japan     | 0053 161 6437 |
| New York  | 1888 622 7862 |
| Singapore | 800 616 1037  |

### Email addresses

[FirstName.Surname@macquarie.com](mailto:FirstName.Surname@macquarie.com)

eg. [john.oconnell@macquarie.com](mailto:john.oconnell@macquarie.com)

## Sales

### Equities

|                              |                 |
|------------------------------|-----------------|
| Dan Ritchie (Australia)      | (612) 8232 3124 |
| Dave Robertson (New Zealand) | (649) 363 1498  |

### Sales

|  |                   |
|--|-------------------|
| Matt Nacard (Head of Sales)                | (612) 8232 8518   |
| Kristen Edmond (Australia)                 | (612) 8232 3111   |
| Gavin Maher (Australia)                    | (612) 8232 4151   |
| Nick Rehak (Australia)                     | (612) 8232 4053   |
| Charlotte Edelman (Australia)              | (612) 8232 4565   |
| Mike Johnson<br>(Desk Head – Hong Kong)    | (852) 3922 2050   |
| Adam Millhouse (Hong Kong)                 | (852) 3922 2055   |
| Dan Pittorino (Desk Head - London)         | (44 20) 3037 4831 |
| Andrew Haigh (London)                      | (44 20) 3037 4843 |
| Clare McCartney (London)                   | (44 20) 3037 4833 |
| Brendan Waller<br>(Desk Head - Melbourne)  | (613) 9635 8177   |
| Leighton Patrick<br>(Desk Head - New York) | (1 212) 231 2552  |
| Rowly Hirst (New York)                     | (1 212) 231 2553  |
| Michael McNair (New York)                  | (1 212) 231 2571  |

### Sales Trading

|                                      |                   |
|--------------------------------------|-------------------|
| Ben Clifford (Head of Sales Trading) | (612) 8232 4012   |
| Sam Molina (Sydney)                  | (612) 8232 5935   |
| John Ogle (Sydney)                   | (612) 8232 3118   |
| Francis Sarks (Sydney)               | (612) 8232 4458   |
| Ben Suttie (Sydney)                  | (612) 8232 0912   |
| Antony Kirwan (Sydney)               | (612) 8232 4003   |
| John Alessi (Melbourne)              | (613) 9635 9183   |
| Jon Holland (Auckland)               | (649) 363 1471    |
| Mike Keen (London)                   | (44 20) 3037 4905 |
| Andrew Donald (Melbourne)            | (613) 9635 8270   |

### Trading

|                                |                 |
|--------------------------------|-----------------|
| Tim Shaw (Desk Head – Sydney). | (612) 8232 4386 |
|--------------------------------|-----------------|

### Specialist Sales

|                                  |                 |
|----------------------------------|-----------------|
| Julia Thomas (Property)          | (613) 9635 9323 |
| Phil Zammit (Emerging Leaders)   | (612) 8232 3122 |
| Owen Johnston (Emerging Leaders) | (612) 8232 3328 |

### Alternative Strategies

|  |                 |
|--|-----------------|
| Kurt Dalton (Merger Arb)                 | (612) 8232 5943 |
| Greg Mann (Equity Finance)               | (612) 8232 1820 |
| Shannon Donohoe<br>(Stock Borrow & Loan) | (612) 8232 6997 |

### Syndication

|              |                 |
|--------------|-----------------|
| Paul Staines | (612) 8232 7781 |
| Angus Firth  | (612) 8232 4039 |
| Kate Herfort | (612) 8232 5956 |

### Fixed Income, Currencies & Commodities

|                                 |                   |
|---------------------------------|-------------------|
| James Mactier (Metals & Energy) | (618) 9224 0612   |
| Will Richardson (Currencies)    | (612) 8232 3666   |
| Sarah Milne (Fixed Income)      | (44 20) 3037 4625 |
| David Castle (Fixed Income)     | (612) 8232 8300   |
| Ian Miller (Futures)            | (612) 8232 3555   |