

## November 6, 2017

# Presentation for Investors <br> 1H FY2017 (April 1 - September 30, 2017) Financial Results 

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Translation of presentation materials for the investor meeting held in Tokyo on November 6, 2017

NISSAN CHEMICAL INDUSTRIES, LTD.

|  | $\begin{gathered} \text { 1H } \\ \text { FY2016 } \end{gathered}$ |  |  | $\begin{gathered} \text { 1H } \\ \text { FY2017 } \end{gathered}$ |  |  | Change |  |  | Change (\%) | 1H FY2017 <br> Outlook as of May 2017 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1Q | 2Q | 1H | 1Q | 2Q | 1H | 1Q | 2Q | 1H | 1H | 1Q | 2Q | 1H |
| Sales | 45.1 | 39.4 | 84.5 | 47.4 | 43.6 | Record 91.0 | +2.3 | +4.2 | +6.5 | +8\% | 45.2 | 42.5 | 87.7 |
| Operating Profit | 9.5 | 5.2 | 14.7 | 10.0 | 7.3 | Record 17.3 | +0.5 | +2.1 | +2.6 | +17\% | 8.1 | 6.9 | 15.0 |
| Non-Operating Income/Expenses | -0.1 | -0.4 | -0.5 | 0.9 | -0.4 | 0.5 | +1.0 | +0.0 | +1.0 | - | 0.5 | -0.4 | 0.1 |
| Ordinary Income | 9.4 | 4.8 | 14.2 | 10.9 | 6.9 | Record 17.8 | +1.5 | +2.1 | +3.6 | +25\% | 8.6 | 6.5 | 15.1 |
| Extraordinary Income/Loss | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | - | - |  | 0.0 | 0.0 | 0.0 |
| Net Income (1) | 6.8 | 3.8 | 10.6 | 7.9 | 5.3 | Record 13.2 | +1.1 | +1.5 | +2.6 | +24\% | 6.5 | 5.0 | 11.5 |
| EBITDA (2) | 11.5 | 7.3 | 18.8 | 12.2 | 9.8 | 22.0 | +0.7 | +2.5 | +3.2 | +17\% | - | - | 19.9 |
| EPS ( $~(~) ~$ | 44.31 | 24.69 | 69.00 | 52.22 | 35.18 | 87.40 | +7.91 | +10.49 | +18.40 | +27\% | - | - | 76.36 |
| Dividend ( $¥ /$ share) | - | - | 24 | - | - | 32 | - | - | +8 |  | - | - | 28 |
| Total amount of Dividend | - | - | 3.7 | - | - | 4.8 | - | - | +1.1 |  | - | - | 4.2 |
| OP Margin | 21.1\% | 13.3\% | 17.4\% | 21.2\% | 16.6\% | 19.0\% | +0.1\% | +3.3\% | +1.6\% |  | 17.9\% | 16.2\% | 17.1\% |
| ROE | - | - | - | - | - | - | - | - | - |  | - | - | - |
| FX Rate ( $¥ 1$ (\$) | 108 | 102 | 105 | 111 | 111 | 111 |  |  |  |  | 110 | 110 | 110 |
| Naphtha ( $¥ / \mathrm{KL}$ ) (3) | 31,600 | 31,300 | 31,400 | 39,100 | 36,100 | 37,700 |  |  |  |  | 40,700 | 40,700 | 40,700 |


| Comprehensive Income | 4.9 | 2.5 | 7.4 | 9.5 | 7.2 | 16.7 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

(1) Net income $=$ Profit Attributable to Owners of Parent
(2) EBITDA = Operating Profit + Depreciation
(3) Based on Trade Statistics of Japan Ministry of Finance

## 1H FY2017 Review


<vs. 1H FY2017 Outlook as of May 2017>

| (Sales) | $\checkmark$ Up | $¥ 3.3$ billion | (+) Performance Materials, Agrochemicals, Pharmaceuticals $(-)$ Chemicals, Trading |
| :---: | :---: | :---: | :---: |
| (OP) | $\checkmark$ Up | ¥2.3 billion | (+) Performance Materials, Agrochemicals, Pharmaceuticals $(-)$ Chemicals, Trading |
| (Ordinary Income) | $\checkmark$ Up | ¥2.7 billion |  |
| (Net Income) | $\checkmark$ Up | $¥ 1.7$ billion |  |
| (EPS) | $\checkmark$ Up | ¥11.04 |  |

<Shareholders Return>
(Dividend) $\leqslant 1 \mathrm{H} \neq 32 /$ share, $2 \mathrm{H} ¥ 34 /$ share
( 1 H up $¥ 8,2 \mathrm{H}$ up $¥ 6$ vs. FY2016)
( 1 H up $¥ 4,2 \mathrm{H}$ up $¥ 2$ vs. FY2017E as of May 2017)
(Share Repurchase) $\geqslant 5.0$ billion, 1.3 million shares completed in June 2017
(Cancelled 3 million shares in May 2017 and August 2017)

## 1H FY2017

## Non-Operating Income/Expenses, Extraordinary Income/Loss,

 Comprehensive Income|  | FY2016 | FY2017 | Change |
| :---: | :---: | :---: | :---: |
| Non-Operating Income | 0.89 | 1.26 | +0.37 |
| Interest income, dividend income | 0.30 | 0.32 | +0.02 |
| Equity in earnings of affiliates | 0.15 | 0.45 | +0.30 |
| Foreign exchange gains | 0.00 | 0.16 | +0.16 |
| Others | 0.44 | 0.33 | -0.11 |
| Non-Operating Expenses | 1.41 | 0.69 | -0.72 |
| Interest expense | 0.09 | 0.07 | -0.02 |
| Foreign exchange losses | 0.63 | 0.00 | -0.63 |
| Loss on disposal of non-current assets | 0.26 | 0.22 | -0.04 |
| Others | 0.43 | 0.40 | -0.03 |
| Extraordinary Income | - |  | - |
| Extraordinary Loss | - | - | - |
| Comprehensive Income | 7.44 | 16.71 | +9.27 |
| Net income | 10.60 | 13.18 | +2.58 |
| Net income attributable to non-controlling interests | 0.07 | 0.12 | +0.05 |
| Valuation difference on available-for-sale securities | -2.32 | 3.56 | +5.88 |
| Foreign currencytranslation adjustment | -0.87 | -0.13 | +0.74 |
| Others | -0.04 | -0.02 | +0.02 |


|  | $\begin{gathered} \text { 1H } \\ \text { FY2016 } \end{gathered}$ | $\begin{gathered} \text { 1H } \\ \text { FY2017 } \end{gathered}$ |
| :---: | :---: | :---: |
| CF from operating activities | 29.4 | 30.0 |
| Income before income taxes \& non-controlling interests | 14.2 | 17.8 |
| Depreciation \& amortization | 4.1 | 4.7 |
| Income taxes paid | -4.9 | -3.7 |
| Working capital, others | 16.0 | 11.2 |
| CF from investing activities | -4.5 | -6.3 |
| Purchase of PPE | -5.3 | -6.4 |
| Others | 0.8 | 0.1 |
| CF from financing activities | -26.6 | -26.8 |
| Cash dividends paid | -4.0 | -4.3 |
| Borrowings | -17.5 | -17.5 |
| Share repurchase | -5.0 | -5.0 |
| Others | -0.1 | 0.0 |
| Effect of exchange rate change on cash \& cash equivalents | -0.3 | 0.1 |
| Change in cash \& cash equivalents | -2.0 | -3.0 |
| Cash \& cash equivalents at the end of period | 33.3 | 32.7 |

## Balance Sheets as of September 30, 2017

(¥billion)

|  | $2016 / 9$ | 2017/3 <br> (A) | $2017 / 9$ <br> (B) | Change <br> (B) - (A) |
| :--- | ---: | ---: | ---: | ---: |
| Current assets | 120.4 | 140.5 | 128.5 | -12.0 |
| Cash | 33.3 | 35.7 | 32.7 | -3.0 |
| Accounts <br> receivable | 43.6 | 60.1 | 50.4 | -9.7 |
| Inventories | 36.8 | 36.4 | 38.7 | +2.3 |
| Others | 6.7 | 8.3 | 6.7 | -1.6 |
| Fixed assets | 84.3 | 91.2 | 98.0 | +6.8 |
| Total PPE | 48.6 | 52.0 | 53.7 | +1.7 |
| Intangible assets | 1.5 | 1.6 | 1.7 | +0.1 |
| Investment <br> securities | 28.7 | 32.5 | 37.5 | +5.0 |
| Others | 5.5 | 5.1 | 5.1 | +0.0 |
| Total assets | 204.7 | 231.7 | 226.5 | -5.2 |


|  | 2016/9 | $\underset{\text { (A) }}{2017}$ | $\begin{gathered} 2017 / 9 \\ \text { (B) } \end{gathered}$ | Change <br> (B) - (A) |
| :---: | :---: | :---: | :---: | :---: |
| Liabilities | 49.7 | 68.0 | 55.4 | -12.6 |
| Accounts payable | 13.1 | 14.9 | 16.2 | +1.3 |
| Borrowings | 15.5 | 30.8 | 13.3 | -17.5 |
| Others | 21.1 | 22.3 | 25.9 | +3.6 |
| Net assets | 155.0 | 163.7 | 171.1 | +7.4 |
| Shareholders' equity | 145.6 | 151.3 | 155.3 | +4.0 |
| Valuation difference on av ailable-for-sale securities | 8.2 | 10.1 | 13.6 | +3.5 |
| Foreign currency translation adjustment | -0.7 | 0.2 | 0.1 | -0.1 |
| Non-controlling interests | 1.5 | 1.7 | 1.7 | +0.0 |
| Remeasurements of defined benefit plans | 0.4 | 0.4 | 0.4 | +0.0 |
| Total liabilities \& Net assets | 204.7 | 231.7 | 226.5 | -5.2 |
| - Equity Ratio | 75.0\% | 69.9\% | 74.8\% |  |
| - DIE Ratio (1) | -12.2\% | -3.2\% | -12.5\% |  |
| . Change in shareholders' equity +4.0 |  |  |  |  |

$=$ Net Income 13.2 - Dividend and others 9.2
(1)D/E Ratio $=($ Borrowings - Cash $) /$ Shareholders' equity

## FY2017 Outlook

|  | FY2016 Actual |  |  |  |  | FY2017 Outlook as of Nov. 2017 |  |  |  |  |  | Change |  |  |  |  | Change (\%) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1H | (3Q) | (4Q) | 2H | Total | $\begin{gathered} 1 \mathrm{H} \\ \text { Actual } \end{gathered}$ | (3Q) | (4Q) | 2H | Total |  | $\begin{gathered} 1 \mathrm{H} \\ \text { Actual } \end{gathered}$ | (3Q) | (4Q) | 2H | Total | Total |
| Sales | 84.5 | 37.6 | 58.2 | 95.8 | 180.3 | 91.0 | 41.3 | 59.7 | 101.0 | Record | 192.0 | +6.5 | +3.7 | +1.5 | +5.2 | +11.7 | +6\% |
| Operating Profit | 14.7 | 4.0 | 12.7 | 16.7 | 31.4 | 17.3 | 4.4 | 12.8 | 17.2 | Record | 34.5 | +2.6 | +0.4 | +0.1 | +0.5 | +3.1 | +10\% |
| $\begin{aligned} & \text { Non-Operating } \\ & \text { Income/Expenses } \\ & \hline \end{aligned}$ | -0.5 | 1.1 | -0.3 | 0.8 | 0.3 | 0.5 | 0.6 | 0.5 | 1.1 |  | 1.6 | +1.0 | -0.5 | +0.8 | +0.3 | +1.3 |  |
| Ordinary Income | 14.2 | 5.1 | 12.4 | 17.5 | 31.7 | 17.8 | 5.0 | 13.3 | 18.3 | Record | 36.1 | +3.6 | -0.1 | +0.9 | +0.8 | +4.4 | +14\% |
| Extraordinary Income/Loss | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | - | - | - | - | - |  |
| Net Income (1) | 10.6 | 3.6 | 9.8 | 13.4 | 24.0 | 13.2 | 3.9 | 9.9 | 13.8 | Record | 27.0 | +2.6 | +0.3 | +0.1 | +0.4 | +3.0 | +12\% |
| EBITDA (2) | 18.8 | 6.1 | 15.4 | 21.5 | 40.3 | 22.0 | - | - | 23.4 |  | 45.4 | +3.2 | - | - | +1.9 | +5.1 | +13\% |
| EPS ( $¥$ /share) (3) | 69.00 | 23.86 | 64.11 | 87.97 | 156.97 | 87.40 | - | - | 91.83 |  | 179.23 | +18.40 | - | - | +3.86 | +22.26 | +14\% |
| Dividend ( $¥ /$ share) | 24 | - | - | 28 | 52 | 32 | - | - | 34 |  | 66 | +8 | - | - | +6 | +14 |  |
| Total amount of Dividend (3) | 3.7 | - | - | 4.2 | 7.9 | 4.8 | - | - | 5.1 |  | 9.9 | +1.1 | - | - | +0.9 | +2.0 |  |
| OP Margin | 17.4\% | 10.6\% | 21.9\% | 17.4\% | 17.4\% | 19.0\% | 10.7\% | 21.5\% | 17.1\% |  | 18.0\% | +1.6\% | 0.1\% | -0.4\% | -0.3\% | +0.6\% |  |
| ROE (3) | - | - | - | - | 15.1\% | - | - | - | - |  | 15.9\% |  |  |  |  | +0.8\% |  |
| FX Rate ( $¥ /$ \$) | 105 | - | - | 112 |  | 111 | - | - | 112 |  |  |  |  |  |  |  |  |
| Naphtha ( $¥ / \mathrm{kl}$ ) | 31,400 | - |  | 38,200 |  | 37,700 | - |  | 36,500 |  |  |  |  |  |  |  |  |
| Comprehensive Income | 7.4 | 6.3 | 10.1 | 16.4 | 23.8 | 16.7 |  |  |  |  |  |  |  |  |  |  |  |


| FY2017 Outlook <br> as of May 2017 |  |  |
| ---: | ---: | ---: |
| 1 H | 2 H | Total |
| 87.7 | 101.3 | 189.0 |
| 15.0 | 17.5 | 32.5 |
| 0.1 | 0.7 | 0.8 |
| 15.1 | 18.2 | 33.3 |
| 0.0 | 0.0 | 0.0 |
| 11.5 | 13.7 | 25.2 |
| 19.9 | 23.7 | 43.6 |
| 76.36 | 91.18 | 167.54 |
| 28 | 32 | 60 |
| 4.2 | 4.8 | 9.0 |
| $17.1 \%$ | $17.3 \%$ | $17.2 \%$ |
|  | - | $15.0 \%$ |
| 110 | 110 |  |
| 40,700 | 40,700 |  |

(1) Net income $=$ Profit Attributable to Owners of Parent
(2) EBITDA = Operating Profit + Depreciation
(3) FY2017 Outlook including effects of FY2017 share repurchase program ended on June, 2017

## 2H FY2017 Outlook

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<vs. 2H FY2016> (Sales) \Up \#5.2 billion (+5%) (+) Chemicals, Performance Materials, Agrochemicals, Trading

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<vs. 2H FY2016> (Sales) \Up \#5.2 billion (+5%) (+) Chemicals, Performance Materials, Agrochemicals, Trading
(-) Pharmaceuticals

```
```

                                    (-) Pharmaceuticals
    ```
```




```
```

                                (+) Agrochemicals, Trading
    ```
```

                                (+) Agrochemicals, Trading
                                (-) Chemicals, Performance Materials, Pharmaceuticals
    ```
```

                                (-) Chemicals, Performance Materials, Pharmaceuticals
    ```
```







<vs. 2H FY2017 Outlook as of May 2017>
(Sales) Down $¥ 0.3$ billion
(OP) Down $¥ 0.3$ billion

| (Ordinary Income) | Up | $¥ 0.1$ billion |
| :---: | :---: | :---: |
| (Net Income) | $\checkmark$ Up | $¥ 0.1$ billion |
| (EPS) | $\checkmark$ Up | $¥ 0.65$ |

(+) Agrochemicals
$( \pm)$ Chemicals
$(-)$ Performance Materials, Pharmaceuticals, Trading
(+) Chemicals, Performance Materials
$( \pm)$ Trading
$(-)$ Agrochemicals, Pharmaceuticals
<Shareholders Return>
(Dividend)

- $1 \mathrm{H} ¥ 32 /$ share, $2 \mathrm{H} ¥ 34 /$ share
( 1 H up $¥ 8,2 \mathrm{H}$ up $¥ 6$ vs. FY2016)
( 1 H up $¥ 4,2 \mathrm{H}$ up $¥ 2$ vs. FY2017E as of May 2017)


## Full Year FY2017 Outlook

<vs. FY2016> (Sales) 《Up $¥ 11.7$ billion (+6\%) (+) Chemicals, Performance Materials, Agrochemicals, Trading ( - ) Pharmaceuticals

| (OP) | $\checkmark$ Up | ¥3.1 billion (+10\%) | (+) Performance Materials, Agrochemicals, Trading <br> $(-)$ Chemicals, Pharmaceuticals |
| :---: | :---: | :---: | :---: |
| (Ordinary Income) | $\checkmark$ Up | ¥4.4 billion (+14\%) |  |
| (Net Income) | $\checkmark$ Up | $¥ 3.0$ billion (+12\%) |  |
| (EPS) | $\checkmark$ Up | ¥22.26 (+14\%) |  |
| (ROE) | -15.9\% | (+0.8\%) |  |

Sales expected to renew the highest results in 3 consecutive years
OP and Ordinary Income expected to renew the highest results in 4 consecutive years Net Income expected to renew the highest results in 5 consecutive years
<vs. FY2017 Outlook as of May 2017>

| (Sales) | $\diamond$ Up |
| ---: | :--- |
|  | $¥ 3.0$ billion |
| $(O P)$ | $\diamond U p$ |
|  | $¥ 2.0$ billion |
| (Ordinary Income) | $\diamond$ Up |
| $($ Net Income) | $¥ 2.8$ billion |
| $(E P S)$ | $¥ 1.8$ billion |
| $(R O E)$ | $\geqslant 15.9 \%$ |
|  | $(+0.9 \%)$ |

$(+)$ Performance Materials, Agrochemicals, Pharmaceuticals
$(-)$ Chemicals, Trading
(+) Chemicals, Performance Materials, Pharmaceuticals
$( \pm)$ Agrochemicals, Trading
<Shareholders Return>
(Dividend) $\downarrow 1 \mathrm{H} ¥ 32 /$ share, $2 \mathrm{H} ¥ 34 /$ share
( 1 H up $¥ 8,2 \mathrm{H}$ up $¥ 6$ vs. FY2016)
( 1 H up $¥ 4,2 \mathrm{H}$ up $¥ 2$ vs. FY2017E as of May 2017)
(Share Repurchase) $\geqslant ¥ 5.0$ billion, 1.3 million shares completed in June 2017
(Cancelled 3 million shares in May 2017 and August 2017)
(Total Shareholders
Return Target)

* 70\% (55.3\% based on the above Share Repurchase and Dividend)


## FY2017 Outlook <br> Non-Operating Income/Expenses, Extraordinary Income/Loss

|  | FY2016 Actual | FY2017 Outlook as of Nov. 2017 | Change | (¥billion) <br> FY2017 <br> Outlook as <br> of May. 2017 |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
| Non-Operating Income | 2.25 | 2.90 | +0.65 | 1.94 |
| Interest income, dividend income | 0.75 | 0.82 | +0.07 | 0.62 |
| Equity in earnings of affiliates | 0.70 | 1.17 | +0.47 | 0.76 |
| Foreign exchange gains | 0.00 | 0.16 | +0.16 | 0.00 |
| Others | 0.80 | 0.75 | -0.05 | 0.56 |
| Non-Operating Expenses | 1.98 | 1.30 | -0.68 | 1.12 |
| Interest expense | 0.16 | 0.13 | -0.03 | 0.13 |
| Loss on disposal of non-current assets | 0.60 | 0.59 | -0.01 | 0.54 |
| Loss on foreign exchange | 0.31 | 0.00 | -0.31 | 0.00 |
| Others | 0.91 | 0.58 | -0.33 | 0.45 |
| Extraordinary Income | 0.00 | 0.00 | - | 0.00 |
| Extraordinary Loss | 0.00 | 0.00 | - | 0.00 |

## FY2017 Cash Flow Outlook

|  | $\begin{gathered} \text { FY2016 } \\ \text { Actual } \end{gathered}$ | FY2017 Outlook as of Nov. 2017 | FY2017 Outlook as of May 2017 |
| :---: | :---: | :---: | :---: |
| CF from operating activities | 32.5 | 35.9 | 36.6 |
| Income before income taxes \& non-controlling interests | 31.7 | 36.1 | 33.3 |
| Impairment loss | 0.2 | 0.0 | 0.0 |
| Depreciation \& Amortization | 8.9 | 10.9 | 11.1 |
| Income taxes paid | -9.0 | -7.2 | -6.1 |
| Working capital, others | 0.7 | -3.9 | -1.7 |
| CF from investing activities | -13.1 | -18.3 | -17.7 |
| Purchase of PPE | -12.4 | -17.3 | -17.1 |
| Purchase and sales of investment securities | 2.2 | 0.1 | 0.0 |
| Others | -2.9 | -1.1 | -0.6 |
| CF from financing activities | -19.1 | -16.2 | -15.6 |
| Cash dividends paid | -7.7 | -9.1 | -8.5 |
| Borrowings | -2.3 | -2.1 | -2.1 |
| Share repurchase | -9.0 | -5.0 | -5.0 |
| Others | -0.1 | 0.0 | 0.0 |
| Effect of exchange rate change on cash \& cash equivalents | 0.4 | 0.0 | 0.0 |
| Change in cash \& cash equivalents | 0.4 | 1.4 | 3.3 |
| Cash \& cash equivalents at the end of period | 35.7 | 37.1 | 39.0 |

## FY2017 Sales Outlook by Segment(1)

(¥billion)

|  | FY2016 Actual |  |  |  |  |  |  | FY2017 Outlook as of Nov. 2017 |  |  |  |  |  |  | Change |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1Q | 2Q | 1H | 3Q | 4Q | 2H | Total | 1Q | 2Q | 1H | 3Q | 4Q | 2H | Total | 1Q | 2Q | 1H | 3Q | 4Q | 2H | Total |
| Chem | 8.5 | 8.0 | 16.5 | 9.1 | 9.2 | 18.3 | 34.8 | 8.8 | 7.9 | 16.7 | 9.2 | 9.2 | 18.4 | 35.1 | +0.3 | -0.1 | +0.2 | +0.1 | -0.0 | +0.1 | +0.3 |
| Fine | 2.8 | 2.5 | 5.3 | 2.7 | 2.7 | 5.4 | 10.7 | 2.8 | 2.5 | 5.3 | 2.6 | 2.5 | 5.1 | 10.4 | -0.0 | -0.0 | -0.0 | -0.1 | -0.2 | -0.3 | -0.3 |
| Basic | 5.7 | 5.5 | 11.2 | 6.4 | 6.5 | 12.9 | 24.1 | 6.0 | 5.4 | 11.4 | 6.6 | 6.7 | 13.3 | 24.7 | +0.3 | -0.1 | +0.2 | +0.2 | +0.2 | +0.4 | +0.6 |
| Performance | 12.6 | 12.9 | 25.5 | 13.8 | 13.5 | 27.3 | 52.8 | 14.1 | 15.0 | 29.1 | 14.6 | 14.8 | 29.4 | 58.5 | +1.5 | +2.1 | +3.6 | +0.8 | +1.3 | +2.1 | +5.7 |
| Agro | 14.5 | 9.5 | 24.0 | 4.2 | 23.8 | 28.0 | 52.0 | 14.6 | 11.5 | 26.1 | 7.0 | 25.1 | 32.1 | 58.2 | +0.1 | +2.0 | +2.1 | +2.8 | +1.3 | +4.1 | +6.2 |
| Pharma | 2.2 | 1.5 | 3.7 | 2.4 | 1.9 | 4.3 | 8.0 | 2.1 | 1.4 | 3.5 | 2.3 | 1.5 | 3.8 | 7.3 | -0.1 | -0.1 | -0.2 | -0.1 | -0.4 | -0.5 | -0.7 |
| Trading | 14.4 | 13.2 | 27.6 | 13.7 | 13.9 | 27.6 | 55.2 | 14.6 | 14.5 | 29.1 | 15.8 | 15.4 | 31.2 | 60.3 | +0.2 | +1.3 | +1.5 | +2.1 | +1.5 | +3.6 | +5.1 |
| Others | 4.0 | 4.6 | 8.6 | 5.8 | 9.6 | 15.4 | 24.0 | 5.4 | 4.3 | 9.7 | 4.5 | 7.2 | 11.7 | 21.4 | +1.4 | -0.3 | +1.1 | -1.3 | -2.4 | -3.7 | -2.6 |
| Adjustment | -11.1 | -10.3 | -21.4 | -11.4 | -13.7 | -25.1 | -46.5 | -12.2 | -11.0 | -23.2 | -12.1 | -13.5 | -25.6 | -48.8 | -1.1 | -0.7 | -1.8 | -0.7 | +0.2 | -0.5 | -2.3 |
| Total | 45.1 | 39.4 | 84.5 | 37.6 | 58.2 | 95.8 | 180.3 | 47.4 | 43.6 | 91.0 | 41.3 | 59.7 | 101.0 | 192.0 | +2.3 | +4.2 | +6.5 | +3.7 | +1.5 | +5.2 | +11.7 |


| FY2017 Outlook <br> as of May 2017 |  |  |
| :---: | ---: | ---: |
| 1 H | 2 H | Total |
| 17.1 | 18.4 | 35.5 |
| 5.3 | 5.1 | 10.4 |
| 11.8 | 13.3 | 25.1 |
| 27.9 | 29.7 | 57.6 |
| 24.9 | 31.4 | 56.3 |
| 3.0 | 3.9 | 6.9 |
| 29.5 | 32.0 | 61.5 |
| 9.2 | 12.5 | 21.7 |
| -23.9 | -26.6 | -50.5 |
| 87.7 | 101.3 | 189.0 |

## (1) Including inter-segment sales/transfers

## FY2017 OP Outlook by Segment

(¥billion)

|  | FY2016 Actual |  |  |  |  |  |  | FY2017 Outlook as of Nov. 2017 |  |  |  |  |  |  | Change |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1Q | 2Q | 1H | 3Q | 4Q | 2H | Total | 1Q | 2Q | 1H | 3Q | 4Q | 2H | Total | 1Q | 2Q | 1H | 3Q | 4Q | 2H | Total |
| Chem | 1.5 | -0.2 | 1.3 | 1.3 | 1.2 | 2.5 | 3.8 | 1.5 | -0.2 | 1.3 | 1.2 | 1.2 | 2.4 | 3.7 | +0.0 | -0.0 | -0.0 | -0.1 | +0.0 | -0.1 | -0.1 |
| Performance | 3.0 | 3.2 | 6.2 | 3.8 | 2.5 | 6.3 | 12.5 | 3.6 | 4.1 | 7.7 | 3.3 | 2.9 | 6.2 | 13.9 | +0.6 | +0.9 | +1.5 | -0.5 | +0.4 | -0.1 | +1.4 |
| Agro | 4.5 | 2.4 | 6.9 | -2.0 | 8.3 | 6.3 | 13.2 | 4.5 | 3.6 | 8.1 | -0.8 | 8.3 | 7.5 | 15.6 | +0.0 | +1.2 | +1.2 | +1.2 | -0.0 | +1.2 | +2.4 |
| Pharma | 0.6 | 0.0 | 0.6 | 0.8 | 0.3 | 1.1 | 1.7 | 0.5 | 0.0 | 0.5 | 0.5 | 0.0 | 0.5 | 1.0 | -0.1 | -0.0 | -0.1 | -0.3 | -0.3 | -0.6 | -0.7 |
| Trading | 0.4 | 0.4 | 0.8 | 0.5 | 0.4 | 0.9 | 1.7 | 0.4 | 0.5 | 0.9 | 0.6 | 0.5 | 1.1 | 2.0 | -0.0 | +0.1 | +0.1 | +0.1 | +0.1 | +0.2 | +0.3 |
| Others | 0.0 | 0.0 | 0.0 | 0.2 | 0.8 | 1.0 | 1.0 | 0.1 | 0.1 | 0.2 | 0.0 | 0.5 | 0.5 | 0.7 | +0.1 | +0.1 | +0.2 | -0.2 | -0.3 | -0.5 | -0.3 |
| $\begin{aligned} & \text { Adjust- } \\ & \text { ment } \end{aligned}$ | -0.5 | -0.6 | -1.1 | -0.6 | -0.8 | -1.4 | -2.5 | -0.6 | -0.8 | -1.4 | -0.4 | -0.6 | -1.0 | -2.4 | -0.1 | -0.2 | -0.3 | +0.2 | +0.2 | +0.4 | +0.1 |
| Total | 9.5 | 5.2 | 14.7 | 4.0 | 12.7 | 16.7 | 31.4 | 10.0 | 7.3 | 17.3 | 4.4 | 12.8 | 17.2 | 34.5 | +0.5 | +2.1 | +2.6 | +0.4 | +0.1 | +0.5 | +3.1 |


| FY2017 Outlook <br> as of May 2017 |  |  |
| ---: | ---: | ---: |
| 1 H | 2 H | Total |
| 1.5 | 2.1 | 3.6 |
| 6.3 | 6.0 | 12.3 |
| 7.6 | 8.0 | 15.6 |
| 0.1 | 0.8 | 0.9 |
| 0.9 | 1.1 | 2.0 |
| -0.1 | 0.6 | 0.5 |
| -1.3 | -1.1 | -2.4 |
| 15.0 | 17.5 | 32.5 |

## Chemicals - (A) Recent Financial Performance

1. FY2016 Sales Distribution (¥billion)

2. Recent Financial Performance (¥billion)
(1)Outlook as of Nov. 2017

3. FY2016 OP Distribution (¥billion)
$\square$ OP (right) $\quad$ Sales (left)


## Chemicals - (B) Flow Chart of Selected Basic and Fine Chemicals Products

- Core products of Basic Chemicals : Ammonia related products and sulfuric acid related products
- FY2016 ammonia domestic production capacity share $11 \%$, high percentage of self-consumption of ammonia
 swimming pool and water purification tanks)


## Chemicals - (C) 1H FY2017 Sales Distribution



Fine Chemicals
Sales $¥ 5.3$ billion

Fine Chemicals 32\%
Basic Chemicals 68\%


Main Products 80\%
Others
20\%
TEPIC
Environmental related products
Others

## Basic Chemicals

Sales $¥ 11.4$ billion
Main Products 36\%
Others
64\%
< Main Products >

- Melamine

TEPIC

- Environmental related products
- Urea/AdBlue

High purity sulfuric acid
Others

## Chemicals - (D) Growing Products

## -Sales (FY2012=100)



Growing Products TEPIC FINEOXOCOL
AdBlue
High purity ammonia Melamine cyanurate etc.

Matured Products
Melamine
Ammonia
Urea
Nitric acid etc.
(1) Marginal Profit :Sales-Variable Cost (2) Outlook as of Nov. 2017

## Chemicals - (E-1) Production Capacity

Production Capacity (FY2012 Production Capacity $=100$ )

(1) Including subcontractors

Completed Cost Saving Investments at Toyama Ammonia Related Plants
Construction Cost: $¥ 0.5$ billion Cost Savings: $¥ 0.2-0.3$ billion/year Contents: Utility and manpower savings

- Ammonia Feedstock Change Project

See Page E-2

## Chemicals - (E-2) <br> Ammonia Feedstock Change Project

Project:
Change of feedstock for ammonia production at Toyama Plant from naphtha to natural gas
Purpose:
To pursue more stable profitability from ammonia and its derivative products by using natural gas

Construction Cost:
$¥ 1.09$ billion
Completion Period:
Completed in August 2016 as scheduled
Extraordinary Loss:
Extraordinary loss of $¥ 704$ million incurred in 3Q FY2014 (fiscal year ending in March 2015) as cost for dismantling the existing naphtha pipeline after completion of the project

## Chemicals - (E-3)

## Ammonia Feedstock Change Project

## Chemicals - (F) Fine Chemicals Subsegment

1H FY2017 Sales Review
<vs. 1H FY2016>
$\bullet$ TEPIC
: Sales for general applications up, sales for electronic materials up

- Environmental related products
: Domestic sales down (absence of one time large order in 1H FY2016), export sales up
<vs. 1H FY2017 Outlook as of May 2017>
- TEPIC
- Environmental related products
: Both applications above target
: Domestic sales below target, export sales below target


## 2H FY2017 Sales Outlook

<vs. 2H FY2016>

- TEPIC
: Sales for general applications down, sales for electronic materials down
- Environmental related products
<vs. 2H FY2017 Outlook as of May 2017>
$\checkmark$ TEPIC : Sales for general applications above target, sales for electronic materials in line with target
- Environmental related products
: Domestic and export sales above target

| Main Products |  | Sales YOY Change |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | FY2016 Actual |  |  | FY2017 Outlook as of May 2017 |  |  | FY2017 Outlook as of Nov. 2017 |  |  |
|  |  | 1H | 2H | Total | 1H | 2H | Total | $\begin{gathered} \text { 1H } \\ \text { Actual } \end{gathered}$ | 2H | Total |
| Total Subsegment |  | -3\% | +4\% | +0\% | -0\% | -5\% | -3\% | -1\% | -5\% | -3\% |
| TEPIC | Epoxy compound for : <br> (A) electronic materials (solder resist, LED sealant), <br> (B) general applications such as powder coating agent for paint <br> World largest producer | -9\% | +19\% | +5\% | +19\% | -10\% | +2\% | +24\% | -5\% | +8\% |
| Environmental related products | HI-LITE : made from chlorinated isocyanuric acid, used for sterilizing, disinfectant for swimming pool as well as water purification tank | +2\% | +8\% | +4\% | -3\% | +2\% | -0\% | -6\% | +5\% | -1\% |

Two products account for 75\% of total consolidated subsegment sales (FY2016)

## Chemicals - (G) Basic Chemicals Subsegment

## 1H FY2017 Sales Review

<vs. 1H FY2016>
Melamine
: Domestic sales down, export sales down, temporary plant shutdown(1)
-Urea/AdBlue
: Urea down, AdBlue up
-High purity sulfuric acid
: Up
<vs. 1H FY2017 Outlook as of May 2017>
: Domestic sales below target, export sales below target, temporary plant shutdown
Melamine
Urea/AdBlue
High purity sulfuric acid
-High purity sulfuric acid
: Urea above target and AdBlue below target
: Above target
2H FY2017 Sales Outlook

## <vs. 2H FY2016>

- Melamine
: Both domestic and export sales up
-Urea/AdBlue
High purity sulfuric acid
: Urea flat, AdBlue up
: Up
<vs. 2H FY2017 Outlook as of May 2017>

Melamine
-Urea/AdBlue
-High purity sulfuric acid
: Domestic sales below target, export sales below target
: Urea above target and AdBlue below target
: Above target

| Main Products |  | Sales YOY Change |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | FY2016 Actual |  |  | FY2017 Outlook as of May 2017 |  |  | FY2017 Outlook as of Nov. 2017 |  |  |
|  |  | 1H | 2H | Total | 1H | 2H | Total | $\begin{gathered} \hline 1 \mathrm{H} \\ \text { Actual } \end{gathered}$ | 2H | Total |
| Total Subsegment |  | -0\% | +3\% | +2\% | +5\% | +3\% | +4\% | +2\% | +3\% | +2\% |
| Melamine | Mainly used as adhesive agent for particle board, medium density fiberboard, plyw ood | +1\% | +11\% | +6\% | +10\% | +8\% | +9\% | -18\% | +7\% | -4\% |
| Urea/AdBlue | Urea: mainly used for urea formaldehyde resin, adhesive agent <br> AdBlue: solution of urea in demineralised water for diesel trucks to reduce Nox | +2\% | -9\% | -4\% | +3\% | +5\% | +4\% | +1\% | +5\% | +3\% |
| High purity sulfuric acid | -Used to clean semiconductors <br> Largest in domestic market | -1\% | +9\% | +4\% | +13\% | +1\% | +7\% | +23\% | +5\% | +14\% |

Three products account for 39\% of total consolidated subsegment sales(FY2016)
(1) From August to October 2017, melamine plant temporarily shutdown for total 37 days due to mechanical troubles and normalized on October 12, 2017 ( 1 H estimated impact) sales down $¥ 0.67$ billion, OP down $¥ 0.37$ billion

## Chemicals - (H) Profit Overview

(\#billion)

|  | FY2016 Actual (A) |  |  |  |  |  |  | FY2017 Outlook as of May 2017 |  |  |  |  | FY2017 Outlook(B) as of Nov. 2017 |  |  |  |  |  |  | Change$(B)-(A)$ |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1Q | 2Q | 1H | 3Q | 4Q | 2H | Total | 1Q | 2Q | 1H | 2H | Total | 1Q | 2Q | 1H | 3Q | 4Q | 2H | Total | 1Q | 2Q | 1H | 3Q | 4Q | 2H | Total |
| Sales | 8.5 | 8.0 | 16.5 | 9.1 | 9.2 | 18.3 | 34.8 | 8.4 | 8.7 | 17.1 | 18.4 | 35.5 | 8.8 | 7.9 | 16.7 | 9.2 | 9.2 | 18.4 | 35.1 | +0.3 | -0.1 | +0.2 | +0.1 | -0.0 | +0.1 | +0.3 |
| Fine | 2.8 | 2.5 | 5.3 | 2.7 | 2.7 | 5.4 | 10.7 | 2.6 | 2.7 | 5.3 | 5.1 | 10.4 | 2.8 | 2.5 | 5.3 | 2.6 | 2.5 | 5.1 | 10.4 | -0.0 | -0.0 | -0.0 | -0.1 | -0.2 | -0.3 | -0.3 |
| Basic | 5.7 | 5.5 | 11.2 | 6.4 | 6.5 | 12.9 | 24.1 | 5.8 | 6.0 | 11.8 | 13.3 | 25.1 | 6.0 | 5.4 | 11.4 | 6.6 | 6.7 | 13.3 | 24.7 | +0.3 | -0.1 | +0.2 | +0.2 | +0.2 | +0.4 | +0.6 |
| OP | 1.5 | -0.2 | 1.3 | 1.3 | 1.2 | 2.5 | 3.8 | 1.4 | 0.1 | 1.5 | 2.1 | 3.6 | 1.5 | -0.2 | 1.3 | 1.2 | 1.2 | 2.4 | 3.7 | +0.0 | -0.0 | -0.0 | -0.1 | +0.0 | -0.1 | -0.1 |

## 1H FY2017 Review

<vs. 1H FY2016>
(Fine Chemicals)

- TEPIC sales up, environmental related products sales down
$\checkmark$ Sales flat, OP flat
(Basic Chemicals)
$\checkmark$ Sales of melamine down
Sales of urea including AdBlue and high purity sulfuric acid up
Feedstock cost up, melamine trouble, inventory adjustment cost down
Sales up, OP down
(Total Segment)
$\checkmark$ Sales up $¥ 0.2$ billion, OP flat
<vs. 1H FY2017 Outlook as of May 2017>
(Fine Chemicals)
TEPIC sales above target
$\checkmark$ Environmental related products sales below target
- Fixed cost above expectations
$\checkmark$ Sales in line with target, OP below target
(Basic Chemicals)
Sales of melamine below target
-Sales of urea including AdBlue below target
Sales of high purity sulfuric acid above target
- Feedstock cost below expectations, melamine trouble, fixed cost above expectations
- Sales below target, OP below target
(Total Segment)
$\checkmark$ Sales down $¥ 0.4$ billion, OP down $¥ 0.2$ billion


## 2H FY2017 Outlook <br> <vs. 2H FY2016>

(Fine Chemicals)
TEPIC sales down, environmental related products sales up

- Inventory adjustment cost down
$\checkmark$ Sales down, OP flat
(Basic Chemicals)
$\checkmark$ Sales of melamine, urea including AdBlue and high purity sulfuric acid up
- Feedstock cost up, fixed cost up
$\checkmark$ Sales up, OP down
(Total Segment)
$\checkmark$ Sales up $¥ 0.1$ billion, OP down $¥ 0.1$ billion
<vs. 2H FY2017 Outlook as of May 2017>
(Fine Chemicals)
$\checkmark$ Sales of TEPIC and environmental related products above target, sales of other products below target
- Fixed cost and inventory adjustment cost above expectations
$\checkmark$ Sales in line with target, OP below target
(Basic Chemicals)
$\checkmark$ Sales of melamine below target
- Sales of urea including AdBlue in line with target

Sales of high purity sulfuric above target
Feedstock cost and inventory adjustment cost below expectations
$\checkmark$ Sales in line with target, OP above target
(Total Segment)
Sales flat, OP up $¥ 0.3$ billion

## Performance Materials - (A) Recent Financial Performance

1. FY2016 Sales Distribution (¥billion)

2. Recent Financial Performance (¥billion)
(1)Outlook as of Nov. 2017

3. FY2016 OP Distribution (¥billion)


## Performance Materials - (B) Display Materials

1H FY2017 Sales Review
$\begin{aligned} \text { <vs. 1H FY2016> } & \text { Total Display Materials up +11\% } \\ & \text { IPS/FFS and VA up, TN down } \\ & \text { Photo-alignment IPS SUNEVER sales increasing substantially }\end{aligned}$
<vs. 1H FY2017 Outlook as of May 2017>

- Total Display Materials above target
$\leftrightarrow$ IPSIFFS and VA above target, TN in line with target


## 2H FY2017 Sales Outlook

<vs. 2H FY2016>

- Total Display Materials up +9\%
- IPS/FFS and VA up, TN down
$\checkmark$ Photo-alignment IPS SUNEVER sales increasing substantially
<vs. 2H FY2017 Outlook as of May 2017>
- Total Display Materials below target
- VA above target, TN below target, IPS/FFS in line with target

| Main Products | Sales YOY Change |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | FY2016 Actual |  |  | FY2017 Outlook as of May 2017 |  |  | FY2017 Outlook as of Nov. 2017 |  |  |
|  | 1H | 2H | Total | 1H | 2H | Total |  | 2H | Total |
| Total SUNEVER | +4\% | +7\% | +5\% | +6\% | +9\% | +8\% | +11\% | +9\% | +10\% |
| Other Display Materials (1) | -3\% | +21\% | +9\% | +10\% | +27\% | +20\% | +21\% | +8\% | +14\% |
| Total Display Materials | +4\% | +7\% | +5\% | +6\% | +10\% | +8\% | +11\% | +9\% | +10\% |

(1) NHC(protective coating for touch panels), 3D TV materials, Elsource (hole injection layer materials for OLED), etc

Purchased patents and expertise of OLED hole injection and hole transport materials from Solvay (September 2016)
Established subsidiary in Suzhou, China for strengthening technical support, customer service and product development (July 2017)

## Performance Materials - (C) Semis Materials

## 1H FY2017 Sales Review

<vs. 1H FY2016>
Total Semis Materials sales up +20\%
<vs. 1H FY2017 Outlook as of May 2017>

- Total Semis Materials sales above target

KrF, ArF and other semis materials up
KrF, ArF and other semis materials above target

## 2H FY2017 Sales Outlook

<vs. 2H FY2016>

- Total Semis Materials sales up +11\%
<vs. 2H FY2017 Outlook as of May 2017>
- Total Semis Materials sales above target

KrF flat, ArF and other semis materials up
KrF, ArF and other semis materials above target

| Main Products | Sales YOY Change |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | FY2016 Actual |  |  | FY2017 Outlook as of May 2017 |  |  | FY2017 Outlook as of Nov. 2017 |  |  |
|  | 1H | 2H | Total | 1H | 2H | Total | $\begin{gathered} 1 \mathrm{H} \\ \text { Actual } \end{gathered}$ | 2H | Total |
| KrF | -8\% | +10\% | +0\% | +2\% | -4\% | -1\% | +13\% | -1\% | +6\% |
| ArF | -1\% | +4\% | +1\% | +16\% | +11\% | +13\% | +22\% | +12\% | +17\% |
| Bottom anti-reflective coating (ARC®) Total | -3\% | +7\% | +1\% | +10\% | +5\% | +8\% | +16\% | +6\% | +11\% |
| Other Semis Materials (1) | -15\% | +3\% | -6\% | +29\% | +30\% | +29\% | +37\% | +35\% | +36\% |
| Total Semis Materials | -6\% | +6\% | -0\% | +14\% | +10\% | +12\% | +20\% | +11\% | +16\% |

(1) Multi layer process materials (OptiStack®), microlens materials, etc

Semiconductor capex plan to capture long-term future business:
Main capex (approval basis): FY2014 Analyzing and evaluation R\&D equipment ( $¥ 1.1$ billion)
FY2015 Product development facilities( $¥ 2.8$ billion),
Analyzing and evaluation R\&D equipment ( $¥ 0.8$ billion),
Production capacity expansion ( $¥ 0.8$ billion), NCK ( $¥ 0.7$ billion),
Material Research Lab. ( $¥ 0.5$ billion)
FY2016 NCK production capacity expansion ( $¥ 3.2$ billion),
Analyzing and evaluation R\&D equipment ( $¥ 1.0$ billion), Material Research Lab. ( $¥ 0.5$ billion)
FY2017 Material Research Lab. ( $¥ 0.4$ billion)

Performance Materials - (D-1) Inorganic Materials


## Performance Materials - (D-2) SNOWTEX, Organo/Monomer sol

## 1H FY2017 Sales Review

<vs. 1H FY2016>
SNOWTEX $\quad$ : Up (sales for polishing materials and non-polishing materials up)
<vs. 1H FY2017 Outlook as of May 2017>
$\rightarrow$ SNOWTEX : Above target (sales for polishing materials and non-polishing materials above target)
$\checkmark$ Organo/Monomer sol : Above target

## 2H FY2017 Sales Outlook

<vs. 2H FY2016>
$\checkmark$ SNOWTEX : Down (sales for polishing materials and non-polishing materials down)

- Organo/Monomer sol : Up <vs. 2H FY2017 Outlook as of May 2017>
$\checkmark$ SNOWTEX : Below target (sales for polishing materials above target, sales for non-polishing materials below target)
$\bullet$ Organo/Monomer sol : In line with target

|  |  |  |  | Cons | lidate | Sales | YOY | hange |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Main Products | FY20 | Actua | (1) | $\begin{aligned} & \text { FY20 } \\ & \text { as o } \end{aligned}$ | 7 Out May 2 |  | FY20 | $7 \mathrm{Out}$ Nov. | $00 \mathrm{l}$ |
|  |  | 1H | 2H | Total | 1H | 2H | Total | $\begin{gathered} 1 \mathrm{H} \\ \text { Actual } \end{gathered}$ | 2H | Total |
| SNOWTEX | - Mainly Used for : <br> (A) polishing materials <br> (silicon wafer, aluminum and glass hard disk), <br> (B) non-polishing materials <br> ( NOx reduction catalyst, automobile catalyst, special steel sheet) | -4\% | +6\% | +1\% | +3\% | -3\% | +0\% | +7\% | -4\% | +1\% |
| Organol Monomer sol | - Used for : <br> hard coating materials, electronic information materials, resin additive | -7\% | -3\% | -5\% | +15\% | +5\% | +10\% | +21\% | +5\% | +12\% |

Two products account for 82\% of total consolidated subsegment sales (FY2016)

| Total Inorganic Materials | $-4 \%$ | $+4 \%$ | $-0 \%$ | $+10 \%$ | $+3 \%$ | $+6 \%$ | $+15 \%$ | $+3 \%$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

## Performance Materials - (E) Profit Overview

(¥billion)

|  | FY2016 Actual (A) |  |  |  |  |  |  | FY2017 Outlook as of May 2017 |  |  |  |  | FY2017 Outlook(B) as of Nov. 2017 |  |  |  |  |  |  | Change$(B)-(A)$ |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1Q | 2Q | 1H | 3Q | 4Q | 2H | Total | 1Q | 2Q | 1H | 2H | Total | 1Q | 2Q | 1H | 3Q | 4Q | 2H | Total | 1Q | 2Q | 1H | 3Q | 4Q | 2H | Total |
| Sales | 12.6 | 12.9 | 25.5 | 13.8 | 13.5 | 27.3 | 52.8 | 13.8 | 14.1 | 27.9 | 29.7 | 57.6 | 14.1 | 15.0 | 29.1 | 14.6 | 14.8 | 29.4 | 58.5 | +1.5 | +2.1 | +3.6 | +0.8 | +1.3 | +2.1 | +5.7 |
| OP | 3.0 | 3.2 | 6.2 | 3.8 | 2.5 | 6.3 | 12.5 | 3.2 | 3.1 | 6.3 | 6.0 | 12.3 | 3.6 | 4.1 | 7.7 | 3.3 | 2.9 | 6.2 | 13.9 | +0.6 | +0.9 | +1.5 | -0.5 | +0.4 | -0.1 | +1.4 |

## 1H FY2017 Review <br> <vs. 1H FY2016>

SUNEVER sales up (IPSIFFS up, VA up, TN down)
Total Semis Materials sales up
(KrF, ArF and other semis materials up)

- Inorganic Materials sales up
(SNOWTEX and Organo/Monomer sol up)
$\checkmark$ Fixed cost up $¥ 1.3$ billion
Sales up $¥ 3.6$ billion, OP up $¥ 1.5$ billion
<vs. 1H FY2017 Outlook as of May 2017>
$\checkmark$ SUNEVER sales above target
(IPSIFFS above target, VA above target, TN in line with target)
Total Semis Materials sales above target
(KrF, ArF and other semis materials above target)
- Inorganic Materials sales above target
(SNOWTEX and Organo/Monomer sol above target)
Fixed cost down $¥ 0.4$ billion
Sales up $¥ 1.2$ billion, OP up $¥ 1.4$ billion


## 2H FY2017 Outlook <br> <vs. 2H FY2016>

$\checkmark$ SUNEVER sales up (IPS/FFS and VA up, TN down)
Total Semis Materials sales up
(KrF flat, ArF and other semis materials up)

- Inorganic Materials sales up
(SNOWTEX up, Organo/Monomer sol up)
$\checkmark$ Fixed cost up $¥ 2.1$ billion
- Sales up $¥ 2.1$ billion, OP down $¥ 0.1$ billion


## <vs. 2H FY2017 Outlook as of May 2017>

$\checkmark$ SUNEVER sales in line with target
(IPSIFFS in line with target, VA above target, TN below target)

- Total Semis Materials sales above target
(KrF, ArF and semi materials above target)
- Inorganic Materials sales above target
(SNOWTEX below target, Organo/Monomer sol in line with target)
$\checkmark$ Selling TEPIC via NCA (USA subsidiary) abolished
(sales down $¥ 0.4$ billion)
- Inventory adjustment cost down $¥ 0.3$ billion
- Sales down $¥ 0.3$ billion, OP up $¥ 0.2$ billion


## Agrochemicals - (A) Recent Financial Performance

1. FY2016 Sales Distribution (¥billion)

2. FY2016 OP Distribution (¥billion)

3. Recent Financial Performance (¥billion)
(1)Outlook as of Nov. 2017


## Agrochemicals－（B）Sales YoY Change（Before Discount）

|  |  | Sales YOY Change |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Main Products <br> （in order of FY2016 <br> sales amount） |  | FY2016 <br> IFY2015 <br> （1） | FY2017E <br> IFY2016 <br> as of May2017（2） | FY2017E <br> IFY2016 |  |
| ROUNDUP | herbicide |  | nov．2017（2） |  |  |$|$

Domestic sales of all major products down due to a change in domestic shipment and pricing policies resulting in one－time sales shift from 2H FY2017 to 1Q FY2018（¥1．4billion）
（no change from FY2017 Outlook as of May 2017）

YOY Change

| ＋30\％～ | フアアイ |
| :---: | :---: |
| ＋20～＋30\％ | フアス |
| ＋10～＋20\％ | アア |
| ＋0～＋10\％ | 1 |
| －0～－10\％ | $\downarrow$ |
| －10～－20\％ | 4 |
| －20～－30\％ | 4．4 |
| －30\％～ | 4．4．4 |

（1）Non－consolidated basis
（2）Consolidated basis

## Agrochemicals - (C) Overview

Transforming from a stable profit sector into a high growth sector driven by ALTAIR, ROUNDUP and FLURALANER
Strengthening product portfolio by: in-house developed products, acquired products, licensed-in products
(launch) (products)
FY2002 ROUNDUP (herbicide, acquired domestic business from Monsanto)
FY2008 LEIMAY (fungicide, in-house)
STARMITE (miticide, in-house)
FY2009 PULSOR (THIFLUZAMIDE) (fungicide, acquired from Dow) PREVATHON (insecticide, licensed from DuPont)
FY2010 ROUNDUP AL for general household shower-type herbicide market, growing sharply
FY2011-12 ALTAIR (paddy rice herbicide, in-house) launched in Korea in FY2011 and in Japan in FY2012
FY2013 Fluralaner started to be supplied to MSD in July as scheduled
FY2014 BRAVECTO launched in several countries in EU in April and in the USA in June by MSD EXIRELIPRYROSSO (CYAZYPYR) launched (insecticide, licensed from DuPont)
FY2015 BRAVECTO launched in Japan in July by Intervet K.K
TREFANOCIDE (herbicide, acquired by Gowan from Dow, exclusive sales right in Japan transferred to NCI)
FY2017 ISOPYRAZAM (fungicide, licensed from Syngenta)
ISOCLAST (SULFOXAFLOR) (insecticide, licensed from Dow)
FY2019 GRACIA (Insecticide, in-house)
FY2022 General fungicide (in-house)
MSD: MSD Animal Health, the global animal health business unit of Merck Intervet K.K: a Japanese subsidiary of MSD

Expanded Fluralaner production capacity at two outsourced factories (March 2017)

- Full reconstruction of Biological Research Laboratories for Agro and Pharma segments completed (April 2017)

FY2010-2017 total capex $¥ 6.4$ billion

- Construction of GRACIA plant started in May 2017 (to be completed in July 2018, capex $¥ 1.4$ billion)
- Acquired 3\% share of IHARABRÁS (leading agro company in Brazil) in September 2011

Established subsidiaries in China (April 2014), Brazil (Aug. 2016) and India (Aug. 2017) for sales support and product development

- Export sales account for $32 \%$ of FY2016 consolidated segment sales
(Asia:25\%, Europe/Africa:64\%, North/Central/South America:11\%) *Including Fluralaner


## Agrochemicals - (D) Fluralaner

-Fluralaner
Invented by NCI and supplied to MSD as
the active pharmaceutical ingredient of BRAVECTO
-BRAVECTO
*Developed by MSD

*Veterinary medical product providing unique immediate and persistent tick and flea killing activity for dogs for 12 weeks, longer than currently available once-monthly commercialized products
*Chewable tablet for dogs launched by MSD
April 2014 Germany, Spain, Italy, France, the Netherlands, UK
June 2014 USA
July 2015 Japan
Currently, available in more then 85 countries
*Spot-On-Solution for dogs and cats launched by MSD
July 2016 EU(cats)
December 2016 USA(cats)
January 2017 USA, Germany, Austria(dogs)

- EXZOLT
*For poultry red mites launched by MSD (administered via drinking water)
September 2017 EU


## Agrochemicals - (E) Segment Sales (Before Discount)

|  | Sales YOY Change |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | FY2013 <br> Actual | FY2014 <br> Actual | FY2015 <br> Actual | FY2016 Actual |  |  | FY2017 Outlook as of May 2017 |  |  | FY2017 Outlook as of Nov. 2017 |  |  |
|  | Total | Total | Total | 1H | 2H | Total | 1H | 2H | Total | $\begin{gathered} 1 \mathrm{H} \\ \text { Actual } \end{gathered}$ | 2H | Total |
| ROUNDUP <br> (ROUNDUP AL(1)) | $\begin{array}{r} \hline-0 \% \\ (+66 \%) \end{array}$ | $\begin{aligned} & +17 \% \\ & (+59 \%) \end{aligned}$ | $\begin{array}{r} -0 \% \\ (+36 \%) \end{array}$ | $\begin{aligned} & \hline+20 \% \\ & (+26 \%) \end{aligned}$ | $\begin{array}{r} +6 \% \\ (+40 \%) \end{array}$ | $\begin{aligned} & \hline+13 \% \\ & (+30 \%) \end{aligned}$ | $\begin{array}{r} \hline-1 \% \\ (+30 \%) \end{array}$ | $\begin{aligned} & -7 \% \\ & (-4 \%) \end{aligned}$ | $\begin{array}{r} \hline-4 \% \\ (+19 \%) \end{array}$ | $\begin{array}{r} +8 \% \\ (+23 \%) \end{array}$ | $\begin{array}{r} -6 \% \\ (+7 \%) \end{array}$ | $\begin{array}{r} \hline+1 \% \\ (+18 \%) \end{array}$ |
| Others(2) | +14\% | +13\% | +5\% | +12\% | +6\% | +9\% | +5\% | +14\% | +10\% | +9\% | +16\% | +13\% |
| Total Segment | +11\% | +14\% | +4\% | +14\% | +6\% | +10\% | +3\% | +10\% | +7\% | +9\% | +11\% | +10\% |

(1) ROUNDUP for general household, launched in FY2010, accounting for 15\% of FY2015 ROUNDUP sales
(2) Including Fluralaner
(3) FY2013-2016 Actual : Non-consolidated basis, FY2017 Outlook : Consolidated basis

|  | Distribution of NCI consolidated Sales | NCI's Strategy | Distribution of the Total Domestic Market |
| :---: | :---: | :---: | :---: |
|  | FY2016 Actual | Strengthening product lines | Oct 2015-Sept 2016 |
| Fungicide + Insecticide | 1\% | - LEMAY, STARMITE, PULSOR | 11\% |
| Insecticide | 11\% | - New in-house developed products | 29\% |
| Fungicide |  | - New licensed-in products | 22\% |
| Herbicide | 76\% | - New acquisitions | 35\% |
| Plant growth regulator | 2\% |  | 2\% |
| Others | 0\% | Maintaining strong market positions | 1\% |
| Total (4) | 100\% | - ALTAIR, ROUNDUP AL | 100\% |

(4) Excluding Fluralaner

## Agrochemicals - (F) Profit Overview

(¥billion)

|  | FY2016 Actual (A) |  |  |  |  |  |  | FY2017 Outlook as of May 2017 |  |  |  |  | FY2017 Outlook(B) as of Nov. 2017 |  |  |  |  |  |  | Change$(B)-(A)$ |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1Q | 2Q | 1H | 3Q | 4Q | 2H | Total | 1Q | 2Q | 1H | 2H | Total | 1Q | 2Q | 1H | 3Q | 4Q | 2H | Total | 1Q | 2Q | 1H | 3Q | 4Q | 2H | Total |
| Sales | 14.5 | 9.5 | 24.0 | 4.2 | 23.8 | 28.0 | 52.0 | 13.5 | 11.4 | 24.9 | 31.4 | 56.3 | 14.6 | 11.5 | 26.1 | 7.0 | 25.1 | 32.1 | 58.2 | +0.1 | +2.0 | +2.1 | +2.8 | +1.3 | +4.1 | +6.2 |
| OP | 4.5 | 2.4 | 6.9 | -2.0 | 8.3 | 6.3 | 13.2 | 3.8 | 3.8 | 7.6 | 8.0 | 15.6 | 4.5 | 3.6 | 8.1 | -0.8 | 8.3 | 7.5 | 15.6 | +0.0 | +1.2 | +1.2 | +1.2 | -0.0 | +1.2 | +2.4 |

## 1H FY 2017 Review <br> <vs. 1H FY2016>

- Sales up : Fluralaner, ALTAIR, ROUNDUP(ML,AL), LEIMAY(export)
Sales down : PERMIT(export), SIRIUS, PULSOR(export)
Fixed costs up $¥ 0.4$ billion
$\checkmark$ Sales up $¥ 2.1$ billion, OP up $¥ 1.2$ billion
<vs. 1H FY2017 Outlook as of May 2017>
- Sales above target : Fluralaner, ALTAIR, ROUNDUP(ML), TARGA(export), SANMITE(export)
Sales below target : PULSOR(export)
$\checkmark$ Sales up $¥ 1.2$ billion, OP up $¥ 0.5$ billion


## 2H FY 2017 Outlook <vs. 2H FY2016>

- Sales up : Fluralaner, PERMIT(export), PULSOR(export),

TARGA(export), SANMITE(export), LEIMAY(export)

- Sales down: ROUNDUP(ML), ALTAIR
(due to a change in domestic marketing strategy)
- Fixed costs up $¥ 0.5$ billion
$\checkmark$ Change in domestic marketing strategy (p32)
- Inventory adjustment cost up $¥ 0.4$ billion
- Sales up $¥ 4.1$ billion, OP up $¥ 1.2$ billion
<vs. 2H FY2017 Outlook as of May 2017>
$\checkmark$ Sales above target : TARGA, STARMITE(export), ROUNDUP(AL), LEIMAY(export)
$\checkmark$ Sales below target : Fluralaner, ALTAIR, SIRIUS
- Fixed costs up $¥ 0.2$ billion
- Inventory adjustment cost above expectations ( $¥ 0.6$ billion)

Sales up $¥ 0.7$ billion, OP down $¥ 0.5$ billion

Pharmaceuticals - (A) Recent Financial Performance

1. FY2016 Sales Distribution (¥billion)

2. FY2016 OP Distribution (¥billion)

3. Recent Financial Performance (¥billion)
(1)Outlook as of Nov. 2017


## Pharmaceuticals - (B) NCI Business Model (New Drug)

$\checkmark$ Unique ethical pharma business model without sales force


API*: Active Pharmaceutical Ingredient

## Pharmaceuticals - (C) LIVALO (Anti-Cholesterol Drug)

|  | FY2013 <br> Actual | FY2014 <br> Actual | FY2015 <br> Actual | FY2016 <br> Actual | FY2017 <br> Outlook <br> as of May <br> 2017 | FY2017 <br> Outlook <br> as of Nov. 2017 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Domestic End Market Sales (NHI drug price basis, $¥$ billion) | 52.6 | 34.5 | 29.7 | 23.9 | - | - |
| Domestic End Market Share (1) | 21\% | 16\% | 15\% | 13\% | - | - |
| Our Domestic and Export API Sales ( $\ddagger$ billion) | 10.2 | 6.9 | 5.8 | 5.2 | 4.3 | 4.6 |
| Our Domestic and Export API Sales YOY Change (Our Domestic API Sales YOY Change) | $\begin{array}{r} \hline-2 \% \\ (-2 \%) \\ \hline \end{array}$ |  |  | $\begin{array}{r} -11 \% \\ (-42 \%) \end{array}$ |  |  |

(1) Excluding generic

- August 2013, domestic compound patent expired

April 2014, filed complaints against certain companies in USA which had submitted Abbreviated New Drug Application(ANDA) with FDA

| FY2016 |  |
| :---: | :---: |
| Domestic Market Share(1) |  |
| Crestor | $60 \%$ |
| Lipitor | $15 \%$ |
| LIVALO | $13 \%$ |
| Mevalotin | $7 \%$ |

Domestic market share 13\% in FY2016
-FY2016 NHI drug price cut about -7~-9\%
FFull reconstruction of Biological Research Laboratories completed (April 2017)
Currently, available in 25 countries

## Pharmaceuticals - (D) Pipeline

| Product | Mechanism of action | Expected indications | Development partners |
| :--- | :--- | :--- | :--- |
| NIP-022 | - Thrombopoietin (TPO) <br> receptor activation | - Thrombocytopenia | - Terminated the license agreement <br> with Ono in April 2014 <br> - Entered into the license agreement <br> with Yakult in October 2015 |
| - Completed a Phase I clinical trial in Japan in July 2017 |  |  |  |

- Strategic research collaboration
- With Shionogi for discovering novel antifungal drug candidates(Started in January 2016)
- With Mitsubishi Tanabe Pharma to create novel drug candidates for autoimmune diseases(Started in March 2017)
- With Shionogi for discovering novel analgesic drug candidates(Started in April 2017)
- Novel drug discovery research

To create innovative medicines by using the strategic chemical library, the precise organic
synthesis technology and the state-of-the-art evaluation technology;

- In-house research : Focusing on cardiovascular disease and neurological disease as core therapeutic areas.
- Collaborative research : Utilizing open innovation effectively (e.g. Shionogi)


## Pharmaceuticals - (E) Custom Chemicals

- Custom manufacturing and process researching services for pharmaceutical ingredients and intermediates from pre-clinical to commercial production stages
- October 2013, Custom Chemicals shifted from Chemicals Segment to Pharma Segment to seek synergy of the two divisions (organic synthesis technology, R\&D/manufacturing/quality control systems)
- Focusing on obtaining new contracts including high activity and high-valued added GE API products (Prostaglandin and vitamin D3, etc.)


## 1H FY2017 Sales Review

<vs. 1H FY2016>

- Up due to volume increase in existing products and new contracts
<vs. 1H FY2017 Outlook as of May 2017>
- Above target (existing products sales above target, new contracts above target)


## 2H FY2017 Sales Outlook

<vs. 2H FY2016>

- Up due to volume increase in existing products
<vs. 2H FY2017 Outlook as of May 2017>
- Below target (existing products sales below target)

| Sales YOY Change |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FY2016 Actual |  | FY2017 Outlook <br> as of May 2017 |  | FY2017 Outlook <br> as of Nov. 2017 |  |  |  |  |
| 1 H | 2 H | Total | 1 H | 2 H | Total | 1 H <br> Actual | 2 H | Total |
| $+10 \%$ | $+2 \%$ | $+6 \%$ | $-10 \%$ | $+17 \%$ | $+6 \%$ | $+9 \%$ | $+11 \%$ | $+10 \%$ |

## Pharmaceuticals - (F) Profit Overview

(¥billion)

|  | FY2016 Actual (A) |  |  |  |  |  |  | FY2017 Outlook as of May 2017 |  |  |  |  | FY2017 Outlook(B) as of Nov. 2017 |  |  |  |  |  |  | Change(B)-(A) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1Q | 2Q | 1H | 3Q | 4Q | 2H | Total | 1Q | 2Q | 1H | 2H | Total | 1Q | 2Q | 1H | 3Q | 4Q | 2H | Total | 1Q | 2Q | 1H | 3Q | 4Q | 2H | Total |
| Sales | 2.2 | 1.5 | 3.7 | 2.4 | 1.9 | 4.3 | 8.0 | 1.5 | 1.5 | 3.0 | 3.9 | 6.9 | 2.1 | 1.4 | 3.5 | 2.3 | 1.5 | 3.8 | 7.3 | -0.1 | -0.1 | -0.2 | -0.1 | -0.4 | -0.5 | -0.7 |
| OP | 0.6 | 0.0 | 0.6 | 0.8 | 0.3 | 1.1 | 1.7 | 0.1 | 0.0 | 0.1 | 0.8 | 0.9 | 0.5 | 0.0 | 0.5 | 0.5 | 0.0 | 0.5 | 1.0 | -0.1 | -0.0 | -0.1 | -0.3 | -0.3 | -0.6 | -0.7 |

## 1H FY 2017 Review <br> <vs. 1H FY2016>

$\checkmark$ LIVALO sales down (domestic down due to GE, export up)

- Custom Chemicals sales up
$\checkmark$ Fixed cost down $¥ 0.1$ billion
Sales down $¥ 0.2$ billion, OP down $¥ 0.1$ billion
<vs. 1H FY2017 Outlook as of May 2017>
- LIVALO sales above target
(domestic sales below target, export above target)
$\bullet$ Custom Chemicals sales above target
$\checkmark$ Sales up $¥ 0.5$ billion, OP up $¥ 0.4$ billion


## 2H FY 2017 Outlook <br> <vs. 2H FY2016>

LIVALO sales down (domestic down due to GE, export up)

- Custom Chemicals sales up
$\checkmark$ Absence of up-front payment (received in 2H FY2016)
- Fixed cost down $¥ 0.2$ billion
- Inventory adjustment cost up $¥ 0.2$ billion
- Sales down $¥ 0.5$ billion, OP down $¥ 0.6$ billion
<vs. 2H FY2017 Outlook as of May 2017>
- LIVALO sales below target
(domestic sales below target, export above target)
- Custom Chemicals sales below target
- Inventory adjustment cost above expectations ( $¥ 0.2$ billion)

Sales down $¥ 0.1$ billion, OP down $¥ 0.3$ billion

## Capex/Depreciation/R\&D by Segment

(¥billion)

|  | Capex (1) |  |  |  |  | Depreciation (2) |  |  |  |  | R\&D expenses |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2013 | 2014 | 2015 | 2016 | 2017E | 2013 | 2014 | 2015 | 2016 | 2017E | 2013 | 2014 | 2015 | 2016 | 2017E | \% of Sales |
| Chem | 1.2 | 1.4 | 2.3 | 2.0 | 2.7 | 1.4 | 1.4 | 1.4 | 1.6 | 1.8 | 0.4 | 0.5 | 0.5 | 0.5 | 0.6 | 1.7\% |
| Performance M. | 4.3 | 5.2 | 5.4 | 8.4 | 8.8 | 3.2 | 3.6 | 5.2 | 4.8 | 6.2 | 6.3 | 6.7 | 7.4 | 7.9 | 8.4 | 14.4\% |
| Agro | 1.3 | 1.8 | 1.3 | 2.4 | 1.4 | 2.0 | 1.8 | 1.4 | 1.3 | 1.4 | 3.5 | 3.5 | 3.9 | 3.8 | 4.2 | 7.2\% |
| Pharma | 0.6 | 0.4 | 0.4 | 0.9 | 0.6 | 1.2 | 0.9 | 0.8 | 0.7 | 0.7 | 2.9 | 2.7 | 2.4 | 2.2 | 2.6 | 35.6\% |
| Trading | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Others | 1.4 | 0.1 | 0.8 | 0.6 | 0.7 | 0.6 | 0.7 | 0.8 | 0.4 | 0.7 | 1.1 | 1.6 | 1.6 | 1.7 | 1.6 |  |
| Total | 8.8 | 9.8 | 10.2 | 14.3 | 14.3 | 8.5 | 8.5 | 9.7 | 8.9 | 10.9 | 14.2 | 15.0 | 15.8 | 16.1 | 17.4 |  |
| (1) Capex |  |  |  |  |  |  | R\&D | expe | nsesl | Sales | 8.7\% | 8.7\% | 8.9\% | 8.9\% | 9.0\% |  |
| Actual - Acceptance | sis |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | mmenc | ment ba |  |  | R\&D | Pers | onnel | (Sep | 2017 | - -A |  |  |  |  | 440 |  |
| (2) Depreciation Metho SUNEVER, ARC®, O | tack® |  |  |  | Tota | Prof | ession | nals ( | Sept. | 2017) |  |  |  |  | 1,120 |  |
| -4 year declining ba ( $50.0 \%$ of initial cap | amount | in the 1 |  |  | A/B |  |  |  |  |  |  |  |  |  | 39\% |  |
| Other products - 8 ye | declinin | b balanc | e meth |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ( $25.0 \%$ of initial cap | mount | the $1^{\text {s }}$ |  |  | $\begin{aligned} & \text { ※Pa } \\ & \text { ※Ro } \end{aligned}$ | $\begin{aligned} & \text { rent } \\ & \text { und } \end{aligned}$ | ompa | ny on |  |  |  |  |  |  |  |  |

## Main Capex Items (Approval Basis)

(¥billion)

| FY2014 Actual |  | FY2015 Actual |  | FY2016 Actual |  | FY2017 Outlook |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Reconstruction of Biological Research Lab. The fifth stage (Facilities) | 1.3 | Semis (Product development facilities) | 2.8 | NCK Semis (Production capacity expansion) | 3.2 | Agro <br> (Production facilities) | 1.4 |
| Semis <br> (Analyzing and evaluation R\&D equipment) | 1.1 | Material Research Lab. (Instruments) | 1.7 | Material Research Lab. (Instruments) | 1.3 | Material Research Lab. (Instruments) | 1.1 |
| Ammonia Feedstock Change Project | 1.1 | Agro <br> (Formulation facilities) | 1.2 | Semis <br> (Analyzing and evaluation R\&D equipment) | 1.0 | Chemical Research Lab. (Instruments) | 0.6 |
| Electronic Materials Lab. (Instruments) | 0.9 | SUNEVER <br> (Raw materials products) | 1.0 | Chemical Research Lab. (Instruments) | 0.6 | Display (Test facilities) | 0.3 |
| Quality improvement of Inorganic Materials products | 0.7 | Semis <br> (Analyzing and evaluation R\&D equipment) | 0.8 | SNOWTEX (Production capacity expansion) | 0.5 | Biological Research Lab. (Instruments) | 0.3 |
| Chemical Research Lab. (Instruments) | 0.6 | Semis (Production capacity expansion) | 0.8 | NCK SUNEVER (Production capacity expansion) | 0.3 | Display <br> (production facilities) | 0.3 |
| NCK R\&D Center (Instruments) | 0.3 | NCK Semis (Production capacity expansion) | 0.7 | SNOWTEX (Production capacity expansion) | 0.3 |  |  |
|  |  | Custom Chemicals (Production capacity expansion) | 0.4 | NCK R\&D Center (Instruments) | 0.2 |  |  |
|  |  | TEPIC (Production capacity expansion) | 0.3 | Biological Research Lab. (Instruments) | 0.2 |  |  |
|  |  | Biological Research Lab. (Instruments) | 0.2 |  |  |  |  |
|  |  | NCK R\&D Center (Instruments) | 0.2 |  |  |  |  |
|  |  |  |  |  |  |  | 44 |

## Our Characteristics - (A) Recording Stable OP Margin

NCI has recorded more than 10\% OP margin in 14 consecutive years (FY2003-2016)


## Our Characteristics - (B) High ROE

- The most important financial indicator for a long time
- Target : Maintain above 14\% (15.1\% in FY2016)
(Mid-Term Business Plan Vista 2021 (FY2016-2021))



## Our Characteristics - (C) Shareholders Return Policy

- Maintaining an aggressive shareholders return policy
- Target : Maintain 70\% total payout ratio (70.4\% in FY2016)
(Mid-Term Business Plan Vista 2021 (FY2016-2021))




## Our Characteristics - (D) Shareholders Return Policy - Dividend

- Maintaining about 30\% dividend payout ratio in recent years
- Target : Gradually increase to 40\% in FY2018 (Mid-Term Business Plan Vista 2021 (FY2016-2021))



## Our Characteristics - (E) Shareholders Return Policy - Share Repurchase

- Started share repurchase in 2006 only to enhance ROE

Repurchased $¥ 54.5$ billion, 34.8 million shares ( $\mathbf{1 8 . 5 \%}$ of shares issued) in total from FY2006 to FY2016

- Cancelled all repurchased shares

Target : Continue to repurchase shares to achieve the 70\% total payout ratio
Shareholders Return FY2006-2016

| Fiscal year | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Shares purchased (thousand shares) | 3,500 | 3,399 | 7,355 | 0 | 2,167 | 0 | 6,372 | 3,263 | 2,764 | 3,333 | 2,621 | 34,774 |
| Purchase costs ( $¥$ billion) | 4.7 | 5.0 | 8.0 | 0.0 | 2.8 | 0.0 | 5.0 | 5.0 | 6.0 | 9.0 | 9.0 | 54.5 |
| Shares cancelled (thousand shares) | 3,000 | 3,635 | 7,000 | 0 | 3,000 | 0 | 6,000 | 4,000 | 3,000 | 2,000 | 2,000 | 33,635 |
| Shares issued at FY end (million shares) | 185 | 181 | 174 | 174 | 171 | 171 | 165 | 161 | 158 | 156 | 154 |  |
| Treasury shares at FY end (thousand shares) | 1,367 | 1,233 | 1,660 | 1,709 | 885 | 886 | 1,258 | 522 | 287 | 1,621 | 2,242 |  |

- FY2017 share repurchase program
- Total number of shares repurchased
- Total amount
- Period of repurchase
:1.3 million shares
: $¥ 5.0$ billion
:From May 15, 2017 to June 1, 2017
- FY2017 cancellation of shares
- May 9, $2017 \quad 2.0$ million shares
- August 31, $2017 \quad 1.0$ million shares


## Cash Management Policy

Aiming to control cash balance around the level of
$=$ Minimum required level
$+1 / 3$ of annual scheduled long-term borrowings repayment
$+1 / 3$ of short-term borrowings outstanding + Contingent risk reserves

## Our Characteristics- (F) R\&D Oriented Chemical Company

FY2016 R\&D expenses/sales: 8.9\% 31 companies average : 4.4\%

- Target: Maintain above 8\% R\&D expenses/sales
(Mid-Term Business Plan Vista 2021 (FY2016-2021))
- 40\% of profession staff assigned to R\&D centers


Our R\&D expenses(left axis)
$\neg$ Our R\&D expenses/sales(right axis)

## Our Characteristics- (G) R\&D Oriented Chemical Company

| D by segme |  | FY2016 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Segment | Main Products | Sales ( $¥$ billion) | OP <br> ( $¥$ billion) | OP margin | R\&D expenses ( $¥$ billion) | \% of Sales |
| Chem | Ammonia related products, sulfuric acid related products, fine chemicals | 34.8 | 3.8 | 10.9\% | 0.5 | 1.4\% |
| Performance Materials | LCD alignment coating, Bottom anti-reflective coating for semicon Inorganic materials | 52.8 | 12.5 | 23.7\% | 7.9 | 15.0\% |
| Agro | Agrochemical | 52.0 | 13.2 | 25.4\% | 3.8 | 7.3\% |
| Pharma | LIVALO (anti-cholesterol drug), Custom Chemicals | 8.0 | 1.7 | 21.3\% | 2.2 | 27.5\% |
| Others |  | - | - | - | 1.7 | - |
| Total (including others and adjustment) |  | 180.3 | 31.4 | 17.4\% | 16.1 | 8.9\% |



- Chem
2\%
- Performance Materials 43\%
Agro 23\%
- Pharma 18\%
Others
(Blank)

| Mid-Term Business plan Vista 2021 (EY2016-2021) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| announced in May 2016 -Financial Indicators (A) |  |  |  |  | (¥billion) |
| 1. PL | Actual |  | Plan |  |  |
|  | 2015 | 2016 | 2016 | 2018 | 2021 |
| Sales | 176.9 | 180.3 | 187.5 | 217.0 | 250.0 |
| Operating Profit | 28.6 | 31.4 | 29.7 | 35.0 | 40.0 |
| Ordinary Income | 29.5 | 31.7 | 30.4 | 35.6 | 40.8 |
| Net Income | 22.4 | 24.0 | 23.0 | 27.1 | 31.0 |
| OP Margin | 16.2\% | 17.4\% | 15.8\% | 16.1\% | 16.0\% |
| ROE | 14.6\% | 15.1\% | 14.3\% | above 14\% | above 14\% |
| Dividend Payout Ratio | 30.7\% | 33.1\% | 33.3\% | 40\% | 40\% |
| Total Payout Ratio | 70.8\% | 70.4\% | maintain 70\% | maintain 70\% | maintain 70\% |


| FX Rate (V\$) | 1H 122 | 2H 118 | 1H 105 | 2H 112 | FY2016 onward 115 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Naphtha (VKL) | 1H48,000 | 2H 37,700 | 1H 31,400 | 2H 38,200 | 35,400 | FY2017 onward 51,100 |


| 2. Segment(1) | Actual |  |  |  | Plan |  |  |  |  |  | (\#billion) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Sales |  | OP |  | Sales |  |  | OP |  |  |  |
|  | 2015 | 2016 | 2015 | 2016 | 2016 | 2018 | 2021 | 2016 | 2018 | 2021 |  |
| Chem | 34.3 | 34.8 | 3.9 | 3.8 | 35.4 | 38.0 | 40.5 | 4.9 | 4.0 | 4.5 |  |
| Performance M. | 51.8 | 52.8 | 12.0 | 12.5 | 55.3 | 68.0 | 82.9 | 11.7 | 15.4 | 18.4 |  |
| Agro | 47.5 | 52.0 | 10.8 | 13.2 | 52.1 | 58.6 | 67.0 | 11.3 | 12.9 | 16.7 |  |
| Pharma | 8.7 | 8.0 | 2.0 | 1.7 | 7.4 | 8.1 | 8.3 | 1.4 | 2.0 | 2.4 |  |
| Trading,Others,Adjustment | 34.6 | 32.7 | -0.1 | 0.2 | 37.3 | 44.3 | 51.3 | 0.4 | 0.7 | -2.0 |  |
| Total | 176.9 | 180.3 | 28.6 | 31.4 | 187.5 | 217.0 | 250.0 | 29.7 | 35.0 | 40.0 |  |

(1) Including inter-segment sales/transfers

- OP Margin : Maintain above 15\% (FY2016 Actual 17.4\%)
$\checkmark$ ROE : Maintain above 14\% (FY2016 Actual 15.1\%)
Dividend Payout Ratio :
Gradually increase to 40\% in FY2018 (FY2016 Actual 33.1\%)
- Total Payout Ratio Maintain 70\% (FY2016 Actual 70.4\%) New indicator
$\checkmark$ R\&D expenses/sales : above 8\% (FY2016 Actual 8.9\%)


# Mid-Term Business Plan Vista 2021 (FY2016-2021) Sources of Sales Growth for Stage I (FY2016-2018)(C) 



## Mid-Term Business Plan Vista 2021 (FY2016-2021) announced in May 2016 -Initiatives for 2019 Onwards(D)

Initiatives for 2019 onwards


Developing materials for:

- Heat-resistant lenses
- Light control film
- Optical interconnect


## Developing :

- NC-515(insecticide)
- New fungicide
- New paddy rice herbicide

Developing materials for:

- Secondary batteries
-Fuel cells

Creating next-generation display

Creating next-generation semis materials

Developing NIP-022 (platelet increasing agent)
Promoting research collaboration of antifungal drug

Upgrading cell culture materials to the global standardized product

Creating energy harvesting materials

## Long-term Financial Performance Trend


(1)Outlook as of Nov. 2017

## Long Term Financial Performance Trend

(¥billion)

|  | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017E <br> (1) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sales | 155.9 | 161.4 | 169.1 | 174.4 | 169.2 | 160.2 | 149.0 | 154.2 | 148.6 | 153.8 | 163.7 | 171.2 | 176.9 | 180.3 | 192.0 |
| Operating Profit | 15.7 | 17.3 | 21.7 | 20.8 | 24.8 | 17.4 | 19.2 | 19.8 | 15.5 | 19.5 | 22.2 | 25.3 | 28.6 | 31.4 | 34.5 |
| Ordinary Income | 14.6 | 17.4 | 21.3 | 21.2 | 24.4 | 16.9 | 19.2 | 19.4 | 15.9 | 20.5 | 23.7 | 26.4 | 29.5 | 31.7 | 36.1 |
| Net Income | 8.7 | 11.3 | 13.7 | 14.0 | 15.5 | 10.1 | 12.8 | 13.0 | 11.0 | 13.9 | 16.7 | 18.2 | 22.4 | 24.0 | 27.0 |
| EBITDA | 26.1 | 26.9 | 31.6 | 30.5 | 34.5 | 27.6 | 30.1 | 30.2 | 25.9 | 29.0 | 30.8 | 33.8 | 38.3 | 40.3 | 45.4 |
| OP Margin | 10.0\% | 10.7\% | 12.8\% | 12.0\% | 14.6\% | 10.9\% | 12.8\% | 12.9\% | 10.4\% | 12.7\% | 13.6\% | 14.8\% | 16.2\% | 17.4\% | 18.0\% |
| ROE | 13.4\% | 15.2\% | 16.1\% | 14.7\% | 15.6\% | 10.3\% | 12.6\% | 11.9\% | 9.5\% | 11.4\% | 12.7\% | 12.7\% | 14.6\% | 15.1\% | 15.9\% |
| EPS(\#/s hare) | 46.21 | 59.77 | 72.73 | 75.43 | 85.15 | 57.26 | 74.00 | 75.94 | 64.52 | 83.74 | 102.11 | 113.99 | 143.37 | 156.97 | 179.23 |
| Divide ${ }^{\text {d }}$ ( $¥ /$ share) | 11 | 11 | 15 | 20 | 20 | 22 | 24 | 24 | 24 | 26 | 30 | 36 | 44 | 52 | 66 |
| Dividend Payout Ratio | 23.8\% | 18.4\% | 20.6\% | 26.5\% | 23.5\% | 38.4\% | 32.4\% | 31.6\% | 37.2\% | 31.0\% | 29.4\% | 31.6\% | 30.7\% | 33.1\% | 36.8\% |
| Share Repurchase | - | - | - | 4.7 | 5.0 | 8.0 | - | 2.8 | - | 5.0 | 5.0 | 6.0 | 9.0 | 9.0 | 5.0 |
| Total Assets | 172.6 | 169.4 | 183.2 | 177.3 | 172.7 | 172.3 | 181.4 | 183.4 | 190.1 | 199.2 | 208.0 | 223.9 | 228.2 | 231.7 | - |
| Net Assets | 69.2 | 78.5 | 92.0 | 98.1 | 100.1 | 95.7 | 106.5 | 112.4 | 119.6 | 126.7 | 137.8 | 151.3 | 156.9 | 163.7 | - |
| Cash | 5.9 | 4.3 | 8.5 | 11.0 | 7.6 | 9.7 | 14.8 | 21.1 | 27.9 | 31.9 | 30.8 | 31.3 | 35.3 | 35.7 | - |
| Liabilities with Interest | 57.4 | 44.6 | 41.5 | 32.4 | 34.4 | 45.5 | 42.1 | 39.9 | 38.9 | 38.1 | 36.1 | 35.1 | 33.1 | 30.8 | - |
| D/E Ratio | 78.0\% | 53.7\% | 38.5\% | 23.2\% | 27.2\% | 37.1\% | 26.0\% | 16.9\% | 9.3\% | 5.0\% | 4.1\% | 2.7\% | -1.6\% | -3.2\% | - |
| Equity Ratio | 40.1\% | 46.4\% | 50.2\% | 55.3\% | 58.0\% | 55.5\% | 58.7\% | 60.7\% | 62.4\% | 63.0\% | 65.7\% | 66.9\% | 68.1\% | 69.9\% | - |
| Capex | 6.6 | 6.6 | 9.2 | 12.1 | 10.9 | 13.9 | 10.1 | 9.6 | 8.3 | 8.1 | 8.8 | 9.8 | 10.2 | 14.3 | 14.3 |
| Depreciation | 10.4 | 9.6 | 9.9 | 9.7 | 9.7 | 10.2 | 11.0 | 10.4 | 10.5 | 9.5 | 8.5 | 8.5 | 9.7 | 8.9 | 10.9 |
| R\&D Expenses | 8.7 | 8.6 | 9.2 | 9.9 | 12.5 | 13.7 | 13.1 | 12.6 | 13.6 | 13.7 | 14.2 | 15.0 | 15.8 | 16.1 | 174.0 |
| R\&D Expenses/Sales | 5.6\% | 5.3\% | 5.4\% | 5.7\% | 7.4\% | 8.6\% | 8.8\% | 8.2\% | 9.2\% | 8.9\% | 8.7\% | 8.7\% | 8.9\% | 8.9\% | 9.0\% |

(1)Outlook as of Nov. 2017

FY2011-2Q FY2013 Quarterly Sales by Segment ${ }_{(1)}$
(Former Segmentation)
( $¥$ billion)

|  | FY2011 Actual |  |  |  |  | FY2012 Actual |  |  |  |  | FY2013 Actual |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1Q | 2Q | 3Q | 4Q | Total | 1Q | 2Q | 3Q | 4Q | Total | 1Q | 2Q |
| Chem | 9.4 | 9.2 | 9.0 | 9.3 | 36.9 | 9.1 | 8.8 | 8.9 | 9.8 | 36.6 | 9.5 | 9.1 |
| Fine | 3.0 | 2.9 | 2.4 | 2.6 | 10.9 | 2.9 | 2.7 | 2.4 | 3.2 | 11.2 | 2.9 | 3.1 |
| Basic | 6.4 | 6.3 | 6.6 | 6.7 | 26.0 | 6.2 | 6.1 | 6.5 | 6.6 | 25.4 | 6.6 | 6.0 |
| Performance Materials | 8.7 | 8.3 | 8.6 | 8.4 | 34.0 | 9.5 | 9.3 | 9.5 | 9.1 | 37.4 | 10.3 | 10.3 |
| Agro | 7.1 | 5.4 | 3.7 | 17.6 | 33.8 | 8.3 | 5.1 | 4.6 | 17.4 | 35.4 | 9.9 | 6.1 |
| Pharma | 2.9 | 2.3 | 2.4 | 2.4 | 10.0 | 3.5 | 1.8 | 3.1 | 2.2 | 10.6 | 2.9 | 2.8 |
| Trading | 11.6 | 10.9 | 10.8 | 11.5 | 44.8 | 11.9 | 10.8 | 12.5 | 11.4 | 46.6 | 12.7 | 11.8 |
| Others | 4.6 | 4.7 | 4.3 | 6.4 | 20.0 | 3.9 | 6.3 | 4.6 | 6.4 | 21.2 | 4.6 | 5.1 |
| Adj ustment | -7.7 | -7.6 | -7.3 | -8.3 | -30.9 | -7.8 | -9.4 | -8.6 | -8.2 | -34.0 | -9.7 | -9.0 |
| Total | 36.6 | 33.2 | 31.5 | 47.3 | 148.6 | 38.4 | 32.7 | 34.6 | 48.1 | 153.8 | 40.2 | 36.2 |

(1) Including inter-segment sales/transfers

FY2011-2Q FY2013 Quarterly OP by Segment (Former Segmentation)

|  | FY2011 Actual |  |  |  |  | FY2012 Actual |  |  |  |  | FY2013 Actual |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1Q | 2Q | 3Q | 4Q | Total | 1Q | 2Q | 3Q | 4Q | Total | 1Q | 2Q |
| Chem | 1.0 | -0.2 | 0.6 | 0.2 | 1.6 | 0.8 | 0.0 | 0.4 | 0.7 | 1.9 | 0.8 | 0.0 |
| Performance Materials | 1.7 | 0.9 | 1.1 | 1.1 | 4.8 | 2.1 | 2.0 | 1.6 | 1.5 | 7.2 | 2.1 | 2.3 |
| Agro | 1.2 | -0.4 | -1.5 | 5.1 | 4.4 | 1.6 | -0.3 | -1.1 | 4.8 | 5.0 | 2.3 | 0.1 |
| Pharma | 1.4 | 1.2 | 1.0 | 1.0 | 4.6 | 1.9 | 0.7 | 1.6 | 1.0 | 5.2 | 1.6 | 1.5 |
| Trading | 0.4 | 0.3 | 0.3 | 0.3 | 1.3 | 0.4 | 0.3 | 0.4 | 0.3 | 1.4 | 0.4 | 0.3 |
| Others | 0.0 | 0.0 | -0.1 | 0.4 | 0.3 | -0.1 | 0.2 | 0.1 | 0.5 | 0.7 | 0.1 | 0.1 |
| Adjustment | -0.5 | -0.4 | -0.4 | -0.2 | -1.5 | -0.4 | -0.6 | -0.5 | -0.4 | -1.9 | -0.6 | -0.4 |
| Total | 5.2 | 1.4 | 1.0 | 7.9 | 15.5 | 6.3 | 2.3 | 2.5 | 8.4 | 19.5 | 6.7 | 3.9 |
| OP Margin | 14.3\% | 4.0\% | 3.4\% | 16.6\% | 10.4\% | 16.5\% | 6.8\% | 7.5\% | 17.4\% | 12.7\% | 16.7\% | 10.6\% |

## FY2012-2Q FY2017 Quarterly Sales by Segment (1) (New Segmentation)

(¥billion)

|  | FY2013 Actual |  |  |  |  | FY2014 Actual |  |  |  |  | FY2015 Actual |  |  |  |  | FY2016 Actual |  |  |  |  | $\begin{gathered} \text { FY2017 } \\ \text { Actual } \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 Q | 2Q | 3Q | 4Q | Total | 1Q | 2Q | 3 Q | 4Q | Total | 1Q | 2Q | 3Q | 4Q | Total | 1 Q | 2Q | 3Q | 4Q | Total | 19 | 2Q |
| Chem | 9.3 | 8.6 | 8.8 | 8.8 | 35.5 | 8.5 | 8.2 | 9.1 | 8.5 | 34.3 | 8.7 | 8.0 | 9.0 | 8.6 | 34.3 | 8.5 | 8.0 | 9.1 | 9.2 | 34.8 | 8.8 | 7.9 |
| Fine | 2.7 | 2.6 | 2.3 | 2.3 | 9.9 | 2.7 | 2.6 | 2.8 | 2.5 | 10.6 | 3.0 | 2.5 | 2.5 | 2.6 | 10.6 | 2.8 | 2.5 | 2.7 | 2.7 | 10.7 | 2.8 | 2.5 |
| Basic | 6.6 | 6.0 | 6.5 | 6.5 | 25.6 | 5.8 | 5.6 | 6.3 | 6.0 | 23.7 | 5.7 | 5.5 | 6.5 | 6.0 | 23.7 | 5.7 | 5.5 | 6.4 | 6.5 | 24.1 | 6.0 | 5.4 |
| Perf | 10.3 | 10.3 | 11.1 | 11.1 | 42.8 | 11.8 | 12.4 | 13.0 | 12.2 | 49.4 | 13.0 | 13.0 | 13.6 | 12.2 | 51.8 | 12.6 | 12.9 | 13.8 | 13.5 | 52.8 | 14.1 | 15.0 |
| Agro | 9.9 | 6.1 | 5.5 | 17.6 | 39.1 | 12.3 | 6.2 | 5.7 | 21.5 | 45.7 | 13.6 | 7.5 | 5.0 | 21.4 | 47.5 | 14.5 | 9.5 | 4.2 | 23.8 | 52.0 | 14.6 | 11.5 |
| Pharma | 3.1 | 3.3 | 3.0 | 2.2 | 11.6 | 2.5 | 2.5 | 2.1 | 1.7 | 8.8 | 2.1 | 1.6 | 3.5 | 1.5 | 8.7 | 2.2 | 1.5 | 2.4 | 1.9 | 8.0 | 2.1 | 1.4 |
| Trading | 12.7 | 11.8 | 12.8 | 13.4 | 50.7 | 14.1 | 13.2 | 14.1 | 13.0 | 54.4 | 14.7 | 12.8 | 14.9 | 13.2 | 55.6 | 14.4 | 13.2 | 13.7 | 13.9 | 55.2 | 14.6 | 14.5 |
| Others | 4.6 | 5.1 | 4.9 | 6.8 | 21.4 | 3.8 | 4.7 | 4.6 | 7.8 | 20.9 | 4.1 | 4.8 | 4.7 | 7.3 | 20.9 | 4.0 | 4.6 | 5.8 | 9.6 | 24.0 | 5.4 | 4.3 |
| Adjust | -9.7 | -9.0 | -8.9 | -9.8 | -37.4 | -10.5 | -9.8 | -10.7 | -11.3 | -42.3 | -11.0 | -9.2 | -11.0 | -10.7 | -41.9 | -11.1 | -10.3 | -11.4 | -13.7 | -46.5 | -12.2 | -11.0 |
| Total | 40.2 | 36.2 | 37.2 | 50.1 | 163.7 | 42.5 | 37.4 | 37.9 | 53.4 | 171.2 | 45.2 | 38.5 | 39.7 | 53.5 | 176.9 | 45.1 | 39.4 | 37.6 | 58.2 | 180.3 | 47.4 | 43.6 |

(1) Including inter-segment sales/transfers

## FY2012-2Q FY2017 Quarterly OP by Segment (New Segmentation)

( $¥$ billion)

|  | FY2013 Actual |  |  |  |  | FY2014 Actual |  |  |  |  | FY2015 Actual |  |  |  |  | FY2016 Actual |  |  |  |  | FY2017Actual |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1Q | 2Q | 3Q | 4Q | Total | 1Q | 2Q | 3Q | 4Q | Total | 19 | 2 Q | 3 Q | 4Q | Total | 19 | 2Q | 3Q | 4Q | Total | 1Q | 2Q |
| Chem | 1.0 | -0.2 | 0.6 | 0.5 | 1.9 | 1.0 | -0.6 | 0.6 | 0.9 | 1.9 | 1.5 | -0.1 | 1.2 | 1.3 | 3.9 | 1.5 | -0.2 | 1.3 | 1.2 | 3.8 | 1.5 | -0.2 |
| Perf | 2.1 | 2.3 | 2.3 | 2.1 | 8.8 | 3.3 | 3.4 | 3.2 | 2.1 | 12.0 | 3.4 | 2.9 | 3.6 | 2.1 | 12.0 | 3.0 | 3.2 | 3.8 | 2.5 | 12.5 | 3.6 | 4.1 |
| Agro | 2.3 | 0.1 | -0.8 | 4.6 | 6.2 | 4.0 | 0.0 | -0.5 | 5.7 | 9.2 | 4.4 | 1.8 | -1.3 | 5.9 | 10.8 | 4.5 | 2.4 | -2.0 | 8.3 | 13.2 | 4.5 | 3.6 |
| Pharma | 1.4 | 1.7 | 1.4 | 0.4 | 4.9 | 0.8 | 0.8 | 0.4 | 0.3 | 2.3 | 0.4 | 0.2 | 1.6 | -0.2 | 2.0 | 0.6 | 0.0 | 0.8 | 0.3 | 1.7 | 0.5 | 0.0 |
| Trading | 0.4 | 0.3 | 0.4 | 0.4 | 1.5 | 0.5 | 0.4 | 0.5 | 0.3 | 1.7 | 0.5 | 0.4 | 0.5 | 0.4 | 1.8 | 0.4 | 0.4 | 0.5 | 0.4 | 1.7 | 0.4 | 0.5 |
| Others | 0.1 | 0.1 | 0.1 | 0.5 | 0.8 | -0.1 | 0.0 | 0.1 | 0.6 | 0.6 | 0.0 | 0.0 | 0.0 | 0.5 | 0.5 | 0.0 | 0.0 | 0.2 | 0.8 | 1.0 | 0.1 | 0.1 |
| Adjust | -0.6 | -0.4 | -0.5 | -0.4 | -1.9 | -0.6 | -0.4 | -0.7 | -0.7 | -2.4 | -0.8 | -0.3 | -0.7 | -0.6 | -2.4 | -0.5 | -0.6 | -0.6 | -0.8 | -2.5 | -0.6 | -0.8 |
| Total | 6.7 | 3.9 | 3.5 | 8.1 | 22.2 | 8.9 | 3.6 | 3.6 | 9.2 | 25.3 | 9.4 | 4.9 | 4.9 | 9.4 | 28.6 | 9.5 | 5.2 | 4.0 | 12.7 | 31.4 | 10.0 | 7.3 |
| OPMargin | 16.7\% | 10.6\% | 9.3\% | 16.4\% | 13.6\% | 21.0\% | 9.6\% | 9.6\% | 17.2\% | 14.8\% | 20.9\% | 12.6\% | 12.5\% | 17.6\% | 16.2\% | 21.1\% | 13.3\% | 10.6\% | 21.9\% | 17.4\% | 21.2\% | 16.6\% |

## 1H FY2017 Sales by Segment (1)

(¥billion)

|  | 1H FY2016 <br> Actual |  |  | 1H FY2017 Outlook as of May 2017 |  |  | 1H FY2017 <br> Actual |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1Q | 2Q | Total | 1Q | 2Q | Total | 1Q | 2Q | Total |
| Chem | 8.5 | 8.0 | 16.5 | 8.4 | 8.7 | 17.1 | 8.8 | 7.9 | 16.7 |
| Fine | 2.8 | 2.5 | 5.3 | 2.6 | 2.7 | 5.3 | 2.8 | 2.5 | 5.3 |
| Basic | 5.7 | 5.5 | 11.2 | 5.8 | 6.0 | 11.8 | 6.0 | 5.4 | 11.4 |
| Performance Materials | 12.6 | 12.9 | 25.5 | 13.8 | 14.1 | 27.9 | 14.1 | 15.0 | 29.1 |
| Agro | 14.5 | 9.5 | 24.0 | 13.5 | 11.4 | 24.9 | 14.6 | 11.5 | 26.1 |
| Pharma | 2.2 | 1.5 | 3.7 | 1.5 | 1.5 | 3.0 | 2.1 | 1.4 | 3.5 |
| Trading | 14.4 | 13.2 | 27.6 | 15.2 | 14.3 | 29.5 | 14.6 | 14.5 | 29.1 |
| Others | 4.0 | 4.6 | 8.6 | 4.7 | 4.5 | 9.2 | 5.4 | 4.3 | 9.7 |
| Adj ustment | -11.1 | -10.3 | -21.4 | -11.9 | -12.0 | -23.9 | -12.2 | -11.0 | -23.2 |
| Total | 45.1 | 39.4 | 84.5 | 45.2 | 42.5 | 87.7 | 47.4 | 43.6 | 91.0 |

(1) Including inter-segment sales/transfers

## 1H FY2017 OP by Segment

(¥billion)

|  | $\begin{gathered} \text { 1H FY2016 } \\ \text { Actual } \end{gathered}$ |  |  | 1H FY2017 Outlook as of May 2017 |  |  | $\begin{gathered} \text { 1H FY2017 } \\ \text { Actual } \end{gathered}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1Q | 2Q | Total | 1Q | 2Q | Total | 1Q | 2Q | Total |
| Chem | 1.5 | -0.2 | 1.3 | 1.4 | 0.1 | 1.5 | 1.5 | -0.2 | 1.3 |
| Performance Materials | 3.0 | 3.2 | 6.2 | 3.2 | 3.1 | 6.3 | 3.6 | 4.1 | 7.7 |
| Agro | 4.5 | 2.4 | 6.9 | 3.8 | 3.8 | 7.6 | 4.5 | 3.6 | 8.1 |
| Pharma | 0.6 | 0.0 | 0.6 | 0.1 | 0.0 | 0.1 | 0.5 | 0.0 | 0.5 |
| Trading | 0.4 | 0.4 | 0.8 | 0.4 | 0.5 | 0.9 | 0.4 | 0.5 | 0.9 |
| Others | 0.0 | 0.0 | 0.0 | -0.1 | 0.0 | -0.1 | 0.1 | 0.1 | 0.2 |
| Adjustment | -0.5 | -0.6 | -1.1 | -0.7 | -0.6 | -1.3 | -0.6 | -0.8 | -1.4 |
| Total | 9.5 | 5.2 | 14.7 | 8.1 | 6.9 | 15.0 | 10.0 | 7.3 | 17.3 |

## Sales and Operating Profit by Segment (¥billion)

|  |  | FY2010 | FY2011 | FY2012 | FY2013 | FY2014 | FY2015 | FY2016 | FY2017E(1) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Chem | 38.1 24.7\% | 36.9 24.8\% | 34.5 22.4\% | 35.5 21.7\% | $34.3 \quad 20.0 \%$ | 34.3 19.4\% | 34.8 19.3\% | 35.1 18.3\% |  |  |
|  | Perf | 38.0 24.6\% | 34.0 22.9\% | 37.4 24.3\% | 42.8 26.1\% | 49.4 28.9\% | 51.8 29.3\% | 52.8 29.3\% | 58.5 30.5\% |  |  |
|  | Agro | 34.4 22.3\% | 33.8 22.7\% | $35.4 \quad 23.0 \%$ | 39.1 23.9\% | $45.7 \quad 26.7 \%$ | 47.5 26.9\% | 52.0 28.8\% | 58.2 3 30.3\% |  |  |
|  | Pharma | 9.6 6.2\% | 10.0 6.7\% | 12.7 8.3\% | 11.6 7.1\% | 8.8 5.1\% | 8.7 4.9\% | 8.0 4.4\% | 7.3 3.8\% |  |  |
|  | Trading | 44.1 28.6\% | 44.8 30.1\% | 46.6 30.3\% | 50.7 31.0\% | 54.4 31.8\% | 55.6 31.4\% | 55.2 30.6\% | 60.3 31.4\% |  |  |
|  | Others | $27.0 \quad 17.5 \%$ | $20.0 \quad 13.5 \%$ | 21.2 13.8\% | 21.4 13.1\% | 20.9 12.2\% | 20.9 11.8\% | $24.0 \quad 13.3 \%$ | 21.4 11.1\% |  |  |
|  | Adj | -37.0-24.0\% | -30.9-20.8\% | -34.0-22.1\% | -37.4-22.8\% | -42.3-24.7\% | -41.9-23.7\% | -46.5-25.8\% | -48.8-25.4\% |  |  |
|  | Total | 154.2 100\% | 148.6 100\% | 153.8 100\% | 163.7 100\% | 171.2 100\% | 176.9 100\% | 180.3 100\% | 192.0 100\% |  | FY2016 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & \text { O } \\ & \text { ర } \\ & \text { ■ } \end{aligned}$ | Chem | 2.4 12.1\% | 1.6 10.3\% | 1.9 9.7\% | 1.9 8.6\% | 1.9 7.5\% | 3.9 13.6\% | 3.8 12.1\% | 3.7 10.7\% | 0 <br> 0 <br> 0 <br> 3 <br> 0 <br> 2 <br> 3 <br> $D$ <br> 0 <br> 0 <br> 0 <br> 0 <br> 0 <br> 0 | 26.1 11.3\% |
|  | Perf | 7.9 39.9\% | 4.8 31.0\% | 7.2 36.9\% | 8.8 39.6\% | 12.0 47.4\% | 12.0 42.0\% | 12.5 39.8\% | 13.9 40.3\% |  | $48.0 \quad 20.7 \%$ |
|  | Agro | 4.8 24.2\% | 4.4 28.4\% | $5.0 \quad 25.6 \%$ | 6.2 27.9\% | 9.2 36.4\% | $10.8 \quad 37.8 \%$ | 13.2 42.0\% | 15.6 45.2\% |  | 55.6 24.0\% |
|  | Pharma | 4.4 22.2\% | 4.6 29.7\% | $5.2 \quad 26.7 \%$ | $4.9 \quad 22.1 \%$ | 2.3 9.1\% | 2.0 7.0\% | 1.7 5.4\% | 1.0 2.9\% |  | 10.2 $4.4 \%$ |
|  | Trading | 1.4 7.1\% | 1.3 8.4\% | 1.4 7.2\% | 1.5 6.8\% | 1.7 6.7\% | 1.8 6.3\% | 1.7 5.4\% | 2.0 5.8\% |  | 19.8 8.5\% |
|  | Others | 1.0 5.1\% | 0.3 1.9\% | 0.7 3.6\% | 0.8 3.6\% | 0.6 2.4\% | 0.5 1.7\% | 1.0 3.2\% | 0.7 2.0\% |  | 10.7 4.6\% |
|  | Adj | -2.1-10.6\% | -1.5 $\quad-9.7 \%$ | -1.9 -9.7\% | -1.9 -8.6\% | -2.4 -9.5\% | -2.4 -8.4\% | -2.5 -8.0\% | -2.4 $-7.0 \%$ |  | 61.3 26.5\% |
|  | Total | 19.8 100\% | 15.5 100\% | 19.5 100\% | 22.2 100\% | 25.3 100\% | 28.6 100\% | 31.4 100\% | 34.5 100\% |  | 231.7 100\% |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  | Chem | 6.3\% | 4.3\% | 5.5\% | 5.4\% | 5.5\% | 11.4\% | 10.9\% | 10.5\% |  | 14.6\% |
|  | Perf | 20.8\% | 14.1\% | 19.3\% | 20.6\% | 24.3\% | 23.2\% | 23.7\% | 23.8\% |  | 26.0\% |
|  | Agro | 14.0\% | 13.0\% | 14.1\% | 15.9\% | 20.1\% | 22.7\% | 25.4\% | 26.8\% |  | 23.7\% |
|  | Pharma | 45.8\% | 46.0\% | 40.9\% | 42.2\% | 26.1\% | 23.0\% | 21.3\% | 13.7\% |  | 16.7\% |
|  | Trading | 3.2\% | 2.9\% | 3.0\% | 3.0\% | 3.1\% | 3.2\% | 3.1\% | 3.3\% |  | 8.6\% |
|  | Others | 3.7\% | 1.5\% | 3.3\% | 3.7\% | 2.9\% | 2.4\% | 4.2\% | 3.3\% |  | 9.3\% |
|  | Total | 12.9\% | 10.4\% | 12.7\% | 13.6\% | 14.8\% | 16.2\% | 17.4\% | 18.0\% |  | 13.6\% |

FY2010-2011 : Former Segmentation, FY2012-: New Segmentation
(1)Outlook as of Nov. 2017

New Segmentation (From October 1, 2013)

| Former Segmentation |  |  |
| :---: | :--- | :--- |
| Segment | Main Products |  |
| Chem | Fine <br> Chemicals | TEPIC <br> Melamine cyanurate <br> HI-LITE <br> Custom Chemicals |
|  | Basic <br> Chemicals | Melamine <br> Urea, AdBlue <br> Ammonia, Sulfuric acid, Nitric acid <br> High purity chemicals |


| Performance <br> Materials | SUNEVER, NHC, <br> ARC® (Bottom anti-reflective coating) <br> OptiStack® (Multi layer process materials) <br> Micro lens <br> SNOWTEX, Organo silica sol <br> Alumina sol, SUNCOLLOID <br> CELNAX |
| :--- | :--- |
| Agro | Agro |
|  | Herbicides <br> Insecticides <br> Fungicide |
| Pharma | LIVALO |
| Trading | Nissei Corporation |
| Others | Nissan Butsuryu, Nissan Green \& Landscape, <br> Nissan Engineering, Fertilizer |


| Adjustment | R\&D expenses of Advanced Materials \& Planning Dept. <br> included |
| :--- | :--- |

## Main Products by Segment (New Segmentation)

| Segment | Products | Main Applications |
| :---: | :---: | :---: |
| Chem | Fine Chemicals TEPIC Melamine cyanurate Environmental product | epoxy compound for LED sealants, solder resist, painting flame retardant <br> HI-LITE (chlorinated isocyanuric acid for sterilizing) |
|  | Basic Chemicals <br> Melamine <br> AdBlue <br> Ammonia, Sulfuric acid, Nitric acid High purity chemicals | adhesive agent for plywood solution of urea in demineralised water for diesel trucks to reduce NOX agents used for cleaning semiconductors |
| Performance Materials | Electronic Materials <br> SUNEVER <br> ARC ${ }^{8}$ <br> OptiStack ${ }^{\circledR}$ <br> NHC <br> OPTIFOCUS <br> ELSOURCE | LCD alignment coating bottom anti-reflective coating for semiconductors multi layer process material for semiconductors (Si-HM/SOC) *ARC® and OptiStack ${ }^{\circledR}$ are registered trade mark of Brewer Science, Inc. protective coating for touch panel microlens material for image sensor application hole injection layer materials for OLED |
|  | Inorganic Materials SNOWTEX <br> Organo silica sol Monomer sol Alumina sol SUNCOLLOID CELNAX | water dispersed colloidal silica sol for polishing silicon wafers, special steel sheets, NOX reduction catalyst, electronic printing materials film coating, antistatic interference shielding, electronic printing materials resin additive automotive catalyst, electronic printing materials high refractive sol for lens antistatic sol for film |
| Agro | Herbicide <br> TARGA <br> PERMIT <br> SIRIUS, ALTAIR <br> ROUNDUP <br> Insecticide <br> STARMITE, SANMITE, MITOKOHNE <br> Fungicide <br> LEIMAYIORACLE <br> PULSOR, IKARUGA, GREAT AM <br> (THIFLUZAMIDE) <br> - Animal health products <br> Fluralaner | soybean, rapeseed, sugarbeet <br> corn, sugarcane, rice <br> paddy rice <br> non-selective herbicide for orchard, noncrop land <br> fruits, tea, vegetables <br> vegetables, potato, fruits <br> potato, grape, turf <br> active substance of BRAVECTO (veterinary medical product for dogs and cats) and EXZOLT (for poultry red mites) |
| Pharma | LIVALO Custom Chemicals | anti-cholesterol drug custom manufacturing and process services for pharmaceutical companies |
| Trading | Nissei Corporation |  |
| Others | Transportation, Landscaping, Engine | ng, Fertilizer |

## Change of Company Name

## 1. New company name

 Current company nameNissan Chemical Corporation
Nissan Chemical Industries, Ltd.

## 2. Effective date July 1, 2018

## 3. Reason for the change of company name

The Company was founded in 1887 as Tokyo Jinzo Hiryo, Japan's first chemical fertilizer manufacturer. Subsequently, through repeated mergers, the Company eventually changed its name to Dainippon Jinzo Hiryo, and then in 1937 to Nissan Chemical Industries, Ltd., as it is known today.
Since its founding, the Company has been pursuing innovative technologies that promote social evolution, thereby taking on new business challenges. Currently, the Company provides products and services globally by the four business domains of Information \& Communication, Life Sciences, Environment \& Energy and Chemicals \& Affiliates.
In April 2016, based on the understanding that the critical issue for the Nissan Chemical Group to achieve sustainable growth is expansion of its business areas, the Company launched the long-term business plan "Progress2030" with a perspective toward fiscal 2030.
As described, the Company has already been transcending the framework of industry in the development of its business and will accelerate this effort toward the future. To adapt the name of the Company to its business content, the name of the Company will be changed from Nissan Chemical Industries, Ltd. to Nissan Chemical Corporation.

## Forward Looking Statements

The forward looking statements in this material are based on information available at the time of preparation of the material. Although they reflect our current expectations, these statements are not guarantees of future performance, but include a number of risks and uncertainties. Actual results may largely differ from these statements due to various factors which may be beyond company control.

No information in this material is provided as an offer to buy or sell the shares of the company. We urge users of the material to make investment decision based upon own judgment.

