

Nissan Chemical,
- where unique & solution meet

Presentation for Investors

1H FY2017 (April 1 – September 30, 2017) Financial Results

Presented by Junichi Miyazaki, Director and Senior Executive Vice President

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

NISSAN CHEMICAL INDUSTRIES, LTD.



NISSAN CHEMICAL INDUSTRIES, LTD.

1H FY2017 PL

(¥billion)

1H FY2017 Outlook as of May 2017

		1H FY2016			1H FY2017			Change	Change (%)		
	1Q	2Q	1H	1Q	2Q	1H	1Q	2Q	1H	1H	10
Sales	45.1	39.4	84.5	47.4	43.6	Record 91.0	+2.3	+4.2	+6.5	+8%	4
Operating Profit	9.5	5.2	14.7	10.0	7.3	Record 17.3	+0.5	+2.1	+2.6	+17%	
Non-Operating Income/Expenses	-0.1	-0.4	-0.5	0.9	-0.4	0.5	+1.0	+0.0	+1.0	-	
Ordinary Income	9.4	4.8	14.2	10.9	6.9	Record 17.8	+1.5	+2.1	+3.6	+25%	
Extraordinary Income/Loss	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%	
EBITDA (2)	11.5	7.3	18.8	12.2	9.8	22.0	+0.7	+2.5	+3.2	+17%	
EPS (¥)	44.31	24.69	69.00	52.22	35.18	87.40	+7.91	+10.49	+18.40	+27%	
Dividend (¥/share)	-	-	24	-	-	32	-	-	+8		
Total amount of Dividend	-	-	3.7	-	-	4.8	-	-	+1.1		
OP Margin	21.1%	13.3%	17.4%	21.2%	16.6%	19.0%	+0.1%	+3.3%	+1.6%		17.
ROE	-	-	-	-	-		-	-	-		
FX Rate (¥/\$)	108	102	105	111	111	111				l.	<i>-</i>
Naphtha (¥/KL) (3)	31,600	31,300	31,400	39,100	36,100	37,700					40,
Comprehensive Income	4.9	2.5	7.4	9.5	7.2	16.7					

	1Q	2Q	1H
3%	45.2	42.5	87.7
7%	8.1	6.9	15.0
-	0.5	-0.4	0.1
5%	8.6	6.5	15.1
-	0.0	0.0	0.0
4%	6.5	5.0	11.5
7%	-		19.9
7%	-		76.36
	-	-	28
	-		4.2
	17.9%	16.2%	17.1%
	-	-	-
	110	110	110
	40,700	40,700	40,700

- (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

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<vs. 1H FY2016>
                  (Sales) ♦Up
                                   ¥6.5 billion (+8%)
                                                       (+) Chemicals, Performance Materials, Agrochemicals, Trading
                                                       (-) Pharmaceuticals
                                   ¥2.6 billion (+17%)
                                                       (+) Performance Materials, Agrochemicals, Trading
                    (OP) ♦Up
                                                       (-) Chemicals, Pharmaceuticals
       (Ordinary Income) ◆Up
                                   ¥3.6 billion (+25%)
            (Net Income) • Up
                                   ¥2.6 billion (+24%)
                   (EPS) ◆Up
                                   ¥18.40 (+27%)
                                                          Sales renewed the highest results in 3 consecutive years
                                                          OP renewed the highest results in 5 consecutive years
                                                          Ordinary Income and Net Income renewed the highest results
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<vs. 1H FY2017 Outlook as of May 2017>
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(Sales) ♦Up
                                   ¥3.3 billion
                                                 (+) Performance Materials, Agrochemicals, Pharmaceuticals
                                                 (-) Chemicals, Trading
                    (OP) ♦Up
                                                  (+) Performance Materials, Agrochemicals, Pharmaceuticals
                                   ¥2.3 billion
                                                 (-) Chemicals, Trading
                                   ¥2.7 billion
       (Ordinary Income) ◆Up
            (Net Income) ◆Up
                                   ¥1.7 billion
                   (EPS) ◆Up
                                   ¥11.04
<Shareholders Return>
                          ◆ 1H ¥32/share, 2H ¥34/share
             (Dividend)
                             (1H up ¥8, 2H up ¥6 vs. FY2016)
                             (1H up ¥4, 2H up ¥2 vs. FY2017E as of May 2017)
     (Share Repurchase)
                          ♦ ¥5.0 billion, 1.3 million shares completed in June 2017
                           (Cancelled 3 million shares in May 2017 and August 2017)
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1H FY2017

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

renensive 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

(¥billion)

1H FY2017 Cash Flow

(¥billion)

	1H	1H
	FY2016	FY2017
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 (A)	2017/9 (B)	Change (B) - (A)
Current assets	120.4	140.5	128.5	-12.0
Cash	33.3	35.7	32.7	-3.0
Accounts 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 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	2017/3 (A)	2017/9 (B)	Change (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 available-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 Patio	75 A0/	60.00/	74 00/	

⁻ Equity Ratio 75.0% 69.9% 74.8%

(1)D/E Ratio = (Borrowings - Cash) / Shareholders' equity

⁻ D/E Ratio (1) -12.2% -3.2% -12.5%

⁻ Change in shareholders' equity +4.0

⁼ Net Income 13.2 - Dividend and others 9.2

FY2017 Outlook

(¥billion)

		FY2	016 Ac	tual				Y2017 (as of N o					(Change	е		Change (%) FY2017 Ou as of May			
	1H	(3Q)	(4Q)	2H	Total	1H Actual	(3Q)	(4Q)	2H	Tota	al	1H Actual	(3Q)	(4Q)	2H	Total	Total	1H	2H	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%	87.7	101.3	189.0
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%	15.0	17.5	32.5
Non-Operating Income/Expenses	-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	-	0.1	0.7	0.8
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%	15.1	18.2	33.3
Extraordinary Income/Loss	0.0	0.0	0.0	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%	11.5	13.7	25.2
EBITDA (2)	18.8	6.1	15.4	21.5	40.3	22.0		1	23.4		45.4	+3.2	-	-	+1.9	+5.1	+13%	19.9	23.7	43.6
EPS (¥/share) (3)	69.00	23.86	64.11	87.97	156.97	87.40	_		91.83	1	179.23	+18.40	-	-	+3.86	+22.26	+14%	76.36	91.18	167.54
Dividend (¥/share)	24		-	28	52	32	-		34		66	+8	-	-	+6	+14		28	32	60
Total amount of Dividend (3)	3.7			4.2	7.9	4.8			5.1		9.9	+1.1	-	-	+0.9	+2.0		4.2	4.8	9.0
OP Margin	17.4%	10.6%	21.9%	17.4%	17.4%	19.0%	10.7%	21.5%	17.1%	1	18.0%	+1.6%	0.1%	-0.4%	-0.3%	+0.6%		17.1%	17.3%	17.2%
ROE (3)	-	_	-	-	15.1%	_	_	1	-	1	15.9%					+0.8%			-	15.0%
FX Rate (¥/\$)	105		-	112		111		1 -1	112			,			-		-	110	110	
Naphtha (¥/kl)	31,400		_	38,200] '	37,700	-		36,500	1								40,700	40,700	l
Comprehensive Income	7.4	6.3	10.1	16.4	23.8	16.7	1													

- (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
                                                        (-) Pharmaceuticals
                    (OP) ◆Up
                                   ¥0.5 billion (+3%)
                                                       (+) Agrochemicals, Trading
                                                        (-) Chemicals, Performance Materials, Pharmaceuticals
       (Ordinary Income) \leftrightarrow Up
                                   ¥0.8 billion (+4%)
            (Net Income) ◆Up
                                   ¥0.4 billion (+3%)
                   (EPS) ◆Up
                                   ¥3.86 (+4%)
<vs. 2H FY2017 Outlook as of May 2017>
                  (Sales) ◆Down ¥0.3 billion
                                                        (+) Agrochemicals
                                                        (±) Chemicals
                                                        (-) Performance Materials, Pharmaceuticals, Trading
                                                        (+) Chemicals, Performance Materials
                    (OP) ◆Down ¥0.3 billion
                                                        (±) Trading
                                                        (-) Agrochemicals, Pharmaceuticals
       (Ordinary Income) ◆Up
                                   ¥0.1 billion
            (Net Income) ◆Up
                                   ¥0.1 billion
                   (EPS) ♦Up
                                   ¥0.65
  <Shareholders Return>
               (Dividend) • 1H ¥32/share, 2H ¥34/share
                              (1H up ¥8, 2H up ¥6 vs. FY2016)
                              (1H up ¥4, 2H up ¥2 vs. FY2017E as of May 2017)
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Full Year FY2017 Outlook

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(+) Chemicals, Performance Materials, Agrochemicals, Trading
<vs. FY2016>
                  (Sales) ◆Up
                                   ¥11.7 billion (+6%)
                                                       (-) Pharmaceuticals
                                   ¥3.1 billion (+10%)
                     (OP) ♦Up
                                                       (+) Performance Materials, Agrochemicals, Trading
                                                       (-) Chemicals, Pharmaceuticals
        (Ordinary Income) ◆Up
                                   ¥4.4 billion (+14%)
             (Net Income) ◆Up
                                   ¥3.0 billion (+12%)
                    (EPS) ♦Up
                                   ¥22.26 (+14%)
                   (ROE) ◆15.9%
                                   (+0.8\%)
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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

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<vs. FY2017 Outlook as of May 2017>
                   (Sales) ♦Up
                                    ¥3.0 billion
                                                       (+) Performance Materials, Agrochemicals, Pharmaceuticals
                                                       (-) Chemicals, Trading
                     (OP) ♦Up
                                    ¥2.0 billion
                                                       (+) Chemicals, Performance Materials, Pharmaceuticals
                                                       (±) Agrochemicals, Trading
        (Ordinary Income) ◆Up
                                    ¥2.8 billion
             (Net Income) ◆Up
                                    ¥1.8 billion
                    (EPS) ◆Up
                                    ¥11.69
                   (ROE) ◆15.9%
                                    (+0.9\%)
<Shareholders Return>
```

FY2017 Outlook Non-Operating Income/Expenses, Extraordinary Income/Loss

	FY2016 Actual	FY2017 Outlook as of Nov. 2017	Change
Non-Operating Income	2.25	2.90	+0.65
Interest income, dividend income	0.75	0.82	+0.07
Equity in earnings of affiliates	0.70	1.17	+0.47
Foreign exchange gains	0.00	0.16	+0.16
Others	0.80	0.75	-0.05
Non-Operating Expenses	1.98	1.30	-0.68
Interest expense	0.16	0.13	-0.03
Loss on disposal of non-current assets	0.60	0.59	-0.01
Loss on foreign exchange	0.31	0.00	-0.31
Others	0.91	0.58	-0.33
	0.00	0.00	
Extraordinary Income	0.00	0.00	-
Extraordinary Loss	0.00	0.00	_

(¥b	illi	on)
•		,

,
FY2017
Outlook as
of May. 2017
1.94
0.62
0.76
0.00
0.56
1.12
0.13
0.54
0.00
0.45
0.00
0.00

FY2017 Cash Flow Outlook

(¥billion)

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

FY2017 Outlook as of May 2017
36.6
33.3
0.0
11.1
-6.1
-1.7
-17.7
-17.1
0.0
-0.6
-15.6
-8.5
-2.1
-5.0
0.0
0.0
3.3
39.0

FY2017 Sales Outlook by Segment(1)

(¥billion)

				FY20	16 Act	ual						17 Out f N ov. 2						(hange)		
		1Q	2Q	1H	3Q	4Q	2H	Total	1Q	2Q	1H	3Q	4Q	2H	Total	1Q	2Q	1H	3Q	4Q	2H	Total
С	hem	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
	erfor- nance	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
Α	gro	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
Ρ	harma	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
Ti	rading	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
0	thers	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
	djust- nent	-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
To	otal	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

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1H	2H	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
	as o 1H 17.1 5.3 11.8 27.9 24.9 3.0 29.5 9.2 -23.9	17.1 18.4 5.3 5.1 11.8 13.3 27.9 29.7 24.9 31.4 3.0 3.9 29.5 32.0 9.2 12.5 -23.9 -26.6

(1) Including inter-segment sales/transfers

FY2017 OP Outlook by Segment

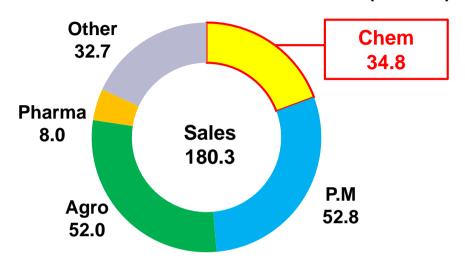
(¥billion)

			FY20	16 Act	ual			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	
Perfor- mance	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	
Adjust- ment	-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	

_	17 Out f May 2					
1H	2H	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

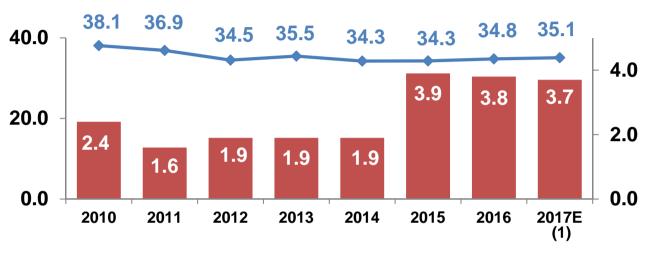
1. FY2016 Sales Distribution (¥billion)



3. Recent Financial Performance (¥billion)

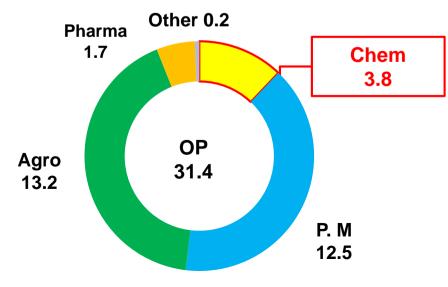
(1)Outlook as of Nov. 2017

15



→ Sales (left)

2. FY2016 OP Distribution (¥billion)

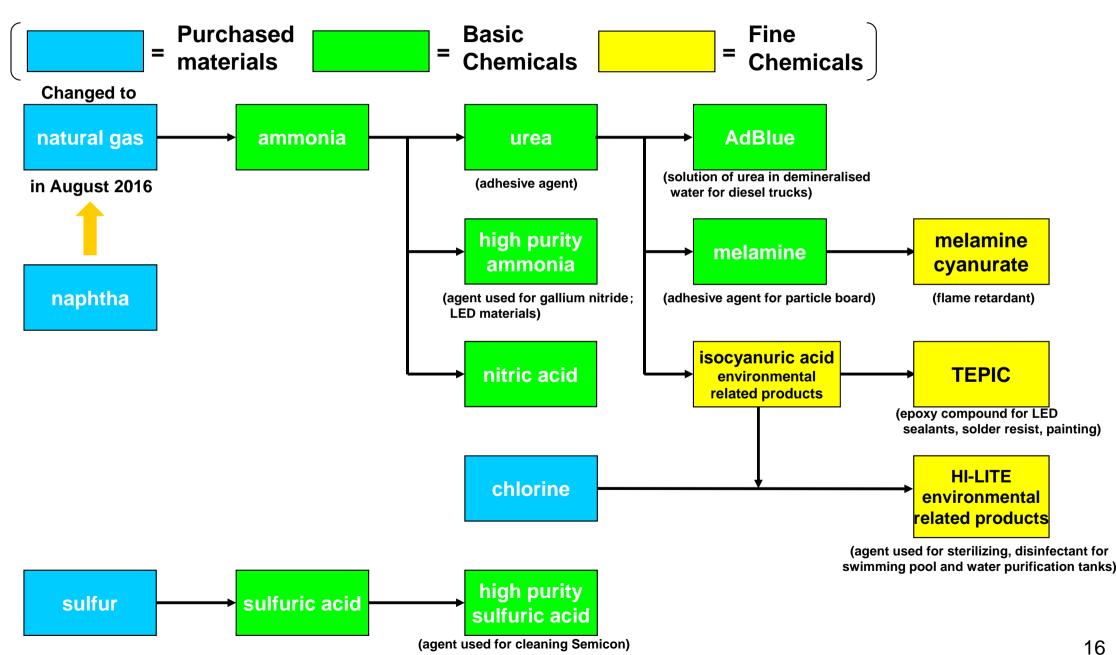




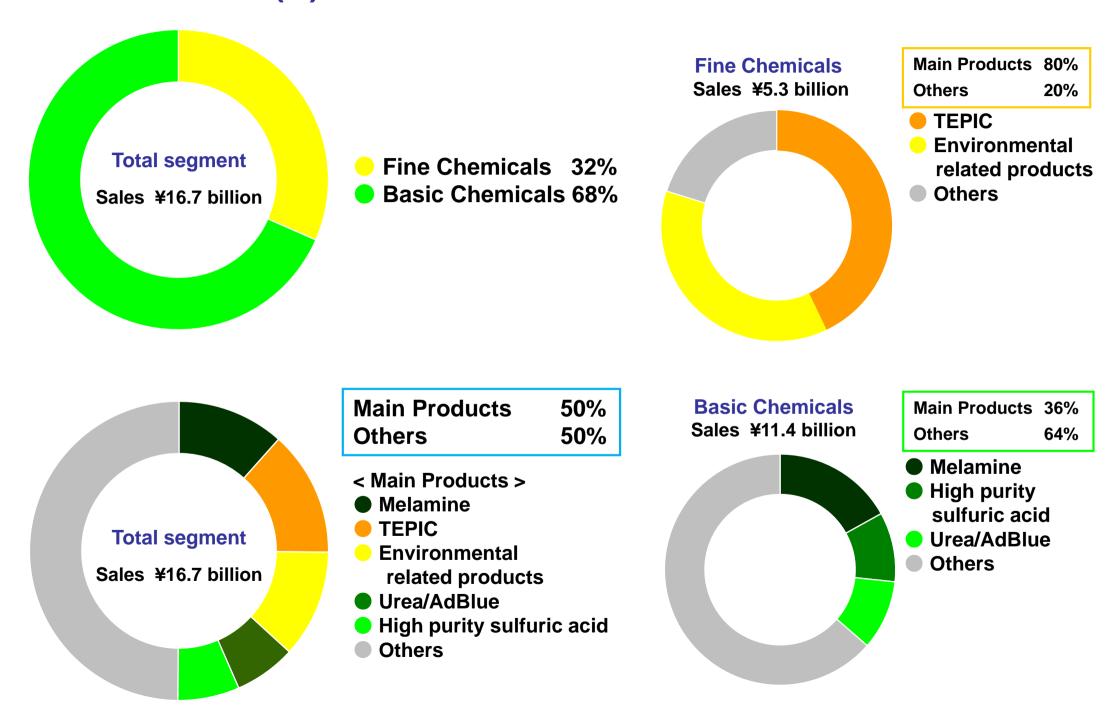
OP (right)

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

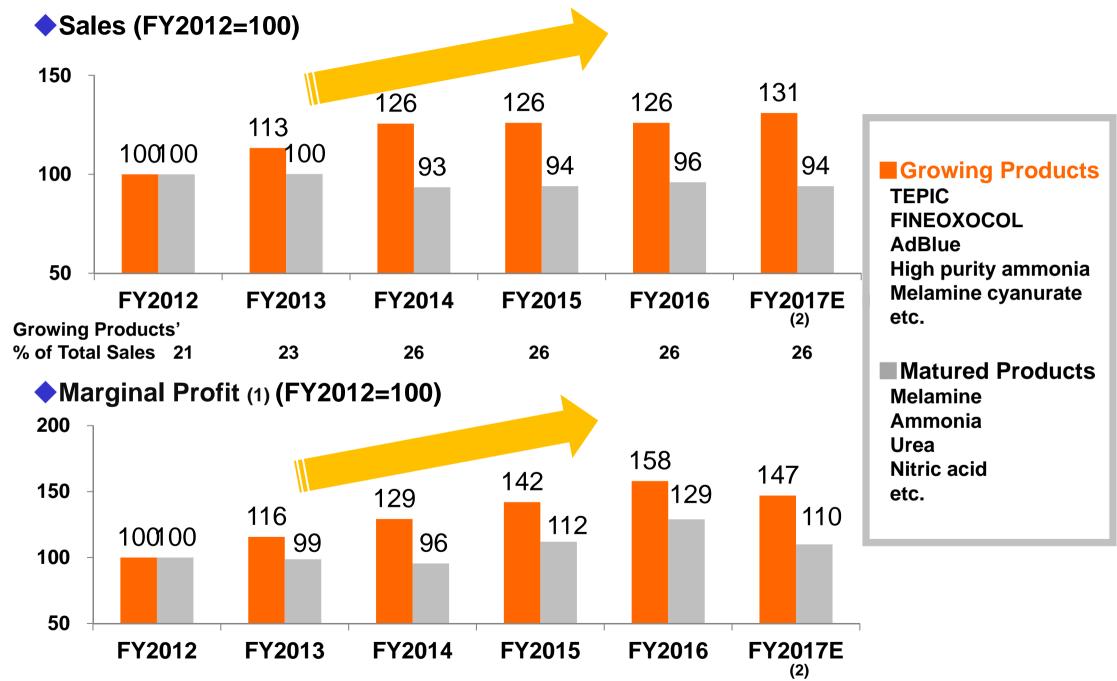
- Core products of Basic Chemicals: Ammonia related products and sulfuric acid related products
- ◆ FY2016 ammonia domestic production capacity share 11%, high percentage of self-consumption of ammonia



Chemicals – (C) 1H FY2017 Sales Distribution



Chemicals – (D) Growing Products



(1) Marginal Profit: Sales-Variable Cost (2) Outlook as of Nov. 2017

Chemicals – (E-1) Production Capacity

♦ Production Capacity (FY2012 Production Capacity = 100)

		FY2012 FY2013 FY2014 FY2015 FY2016 FY2017E	
	TEPIC	100 — 120	
Growing	AdBlue	100 150 160	1
Products	[Number of Plants(1)]	[2] [4] [5]	├ Increasing
	High purity ammonia	100 250	
Matured	Ammonia	100 ———— 80	_ Decreasing
Products	Nitric acid	100 -> 80 -> 70	Decreasing

(1) Including subcontractors

Completed Cost Saving Investments at Toyama Ammonia Related Plants

Construction Cost: ¥0.5 billion

Cost Savings: ¥0.2-0.3billion/year

Contents: Utility and manpower savings

Ammonia Feedstock Change ProjectSee Page E-2

Chemicals – (E-2) 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

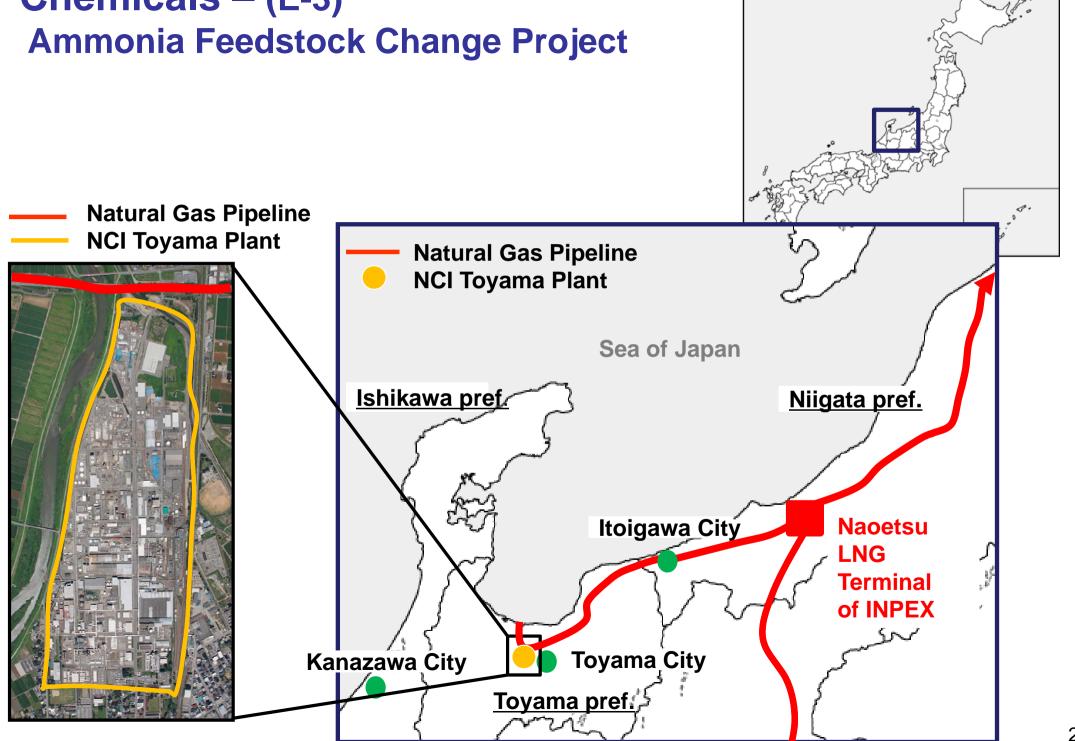
◆Completion Period:

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>

◆ 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 : Both applications above target

♦ Environmental related products : 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 : Domestic sales flat, export sales up

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

◆ TEPIC : Sales for general applications above target, sales for electronic materials in line with target

♦ Environmental related products : Domestic and export sales above target

					Sales	YOY C	hange			
	Main Products	FY2	016 Ac	tual		017 Out of May 2)17 Out f Nov . 2	
		1H	2H	Total	1H	2H	Total	1H Actual	2H	Total
Total Subsegment		-3%	+4%	+0%	-0%	-5%	-3%	-1%	-5%	-3%
TEPIC	 ◆ Epoxy compound for : (A) electronic materials (solder resist, LED sealant), (B) general applications such as powder coating agent for paint ◆ 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>

♦ Melamine : Domestic sales below target, export sales below target, temporary plant shutdown

♦ Urea/AdBlue : Urea above target and AdBlue below target

♦ High purity sulfuric acid : Above target

2H FY2017 Sales Outlook

<vs. 2H FY2016>

♦ Melamine : Both domestic and export sales up

◆Urea/AdBlue : Urea flat, AdBlue up

♦ High purity sulfuric acid : Up

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

♦ Melamine : Domestic sales below target, export sales below target

♦ Urea/AdBlue : Urea above target and AdBlue below target

♦High purity sulfuric acid : Above target

					Sales	YOY CI	hange			
	Main Products	FY2	016 Ac	tual	_	17 Out f May 2			17 Out f Nov . 2	
		1H	2H	Total	1H	2H	Total	1H Actual	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, plywood	+1%	+11%	+6%	+10%	+8%	+9%	-18%	+7%	-4%
Urea/AdBlue	 ◆ Urea: mainly used for urea formaldehyde resin, adhesive agent ◆ 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 ♦ 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 (1H estimated impact) sales down ¥0.67 billion, OP down ¥0.37 billion

Chemicals – (H) Profit Overview

(¥billion)

	FY2016 Actual (A) as of May 2017 as of Nov. 2017 (B)-							Chang (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
- ♦ Sales flat, OP flat

(Basic Chemicals)

- 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)

◆ Sales up ¥0.2billion, OP flat

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

(Fine Chemicals)

- **♦ TEPIC sales above target**
- Environmental related products sales below target
- Fixed cost above expectations
- ◆ 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)

♦ Sales down ¥0.4billion, OP down ¥0.2billion

2H FY2017 Outlook

<vs. 2H FY2016>

(Fine Chemicals)

- ◆ TEPIC sales down, environmental related products sales up
- ♦ Inventory adjustment cost down
- ♦ Sales down, OP flat

(Basic Chemicals)

- ◆ Sales of melamine, urea including AdBlue and high purity sulfuric acid up
- ◆ Feedstock cost up, fixed cost up
- ♦ Sales up, OP down

(Total Segment)

◆ Sales up ¥0.1billion, OP down ¥0.1billion

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

(Fine Chemicals)

- Sales of TEPIC and environmental related products above target, sales of other products below target
- Fixed cost and inventory adjustment cost above expectations
- Sales in line with target, OP below target

(Basic Chemicals)

- ◆ 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
- Sales in line with target, OP above target

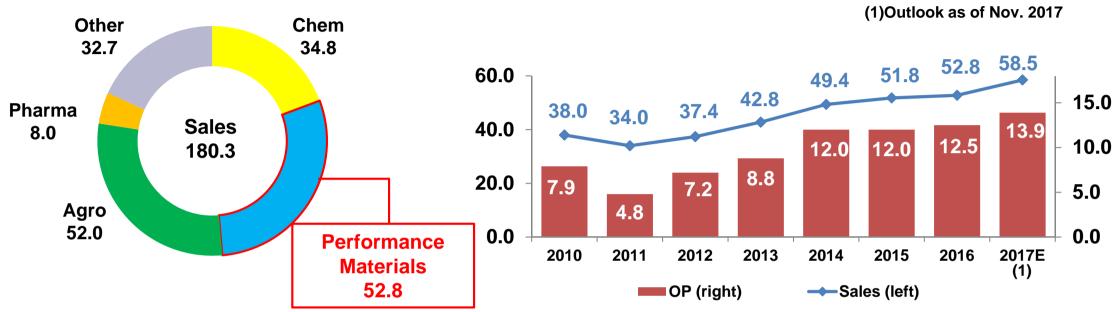
(Total Segment)

Sales flat, OP up ¥0.3billion

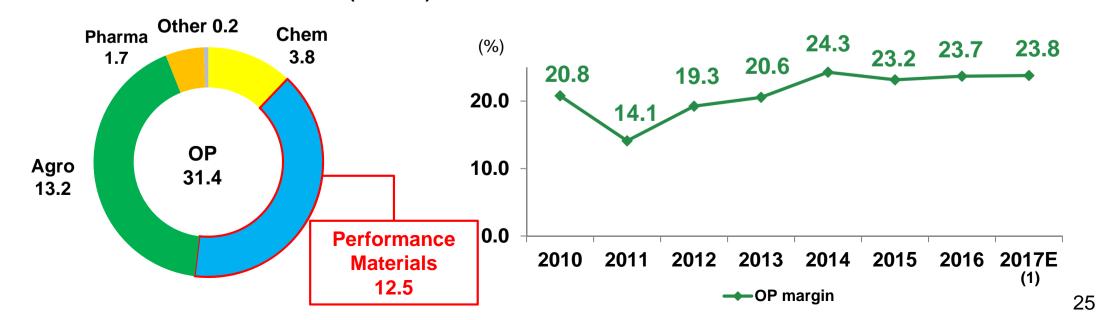
Performance Materials – (A) Recent Financial Performance

1. FY2016 Sales Distribution (¥billion)

3. Recent Financial Performance (¥billion)



2. FY2016 OP Distribution (¥billion)



Performance Materials – (B) Display Materials

1H FY2017 Sales Review

<vs. 1H FY2016>

- **♦ Total Display Materials up +11%**
- ◆ IPS/FFS and VA up, TN down
- ♦ Photo-alignment IPS SUNEVER sales increasing substantially

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

- **♦** Total Display Materials above target
- ◆ IPS/FFS 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
- 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**

	Sales YOY Change												
Main Products	FY2	2016 Act	ual		017 Outl of May 20			017 Outl of Nov . 2					
	1H	2H	Total	1H	2H	Total	1H Actual	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 Ch	ange			
Main Products	FY2	2016 Act	ual						
	1H	2H	Total	1H	2H	Total	1H Actual	2H	Total
KrF	-8%	+10%	+0%	+2%	-4%	-1%	+13%	-1%	+6%
ArF	-1%	+4%	+1%	+16%	+11%	+13%	+22%	+12%	+17%
ttom anti-reflective coating (ARC®) Total	-3%	+7%	+1%	+10%	+5%	+8%	+16%	+6%	+11%
ner Semis Materials (1)	-15%	+3%	-6%	+29%	+30%	+29%	+37%	+35%	+36%
tal Semis Materials	-6%	+6%	-0%	+14%	+10%	+12%	+20%	+11%	+16%
	KrF	TH KrF ArF -1% ttom anti-reflective coating (ARC®) Total -3% ner Semis Materials (1) -15%	1H 2H	Total	FY2016 Actual FY2 as of the second secon	FY2016 Actual FY2017 Outloas of May 20	ArF	FY2016 Actual FY2017 Outlook as of May 2017 as of M	FY2016 Actual FY2017 Outlook as of May 2017 as of Nov. 2017

⁽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)

27

Performance Materials – (D-1) Inorganic Materials

High performance inorganic colloidal materials

SNOWTEX

colloidal silica (water dispersed silica sol)

Organo/Monomer sol

organic solvent/monomer dispersed silica sol

Alumina sol

water dispersed alumina hydrate sol

SUNCOLLOID

high-refractive index metal oxide sol

Celnax

zinc antimonate sol

SNOWTEX Characteristics

High transparency
High hydrophilicity
High heat resistance
Better antistatic
High hardness
Control refractive index
Increase friction
Increase bonding
Increase viscosity



SNOWTEX
Key functions



Polishing

Coating

Binding







< Application Examples >

Polishing

silicon wafer, aluminum/glass hard discs •Coating for special steel sheet, plastic optical lenses, metals, plastic films

•Binding catalyst carrier, ceramics

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

1H FY2017 Sales Review

<vs. 1H FY2016>

◆ SNOWTEX : Up (sales for polishing materials and non-polishing materials up)

◆ Organo/Monomer sol: Up

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

◆ SNOWTEX : Above target (sales for polishing materials and non-polishing materials above target)

◆ Organo/Monomer sol : Above target

2H FY2017 Sales Outlook

<vs. 2H FY2016>

◆ SNOWTEX : Down (sales for polishing materials and non-polishing materials down)

◆ Organo/Monomer sol : Up

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

◆ SNOWTEX : Below target (sales for polishing materials above target, sales for non-polishing materials below target)

◆ Organo/Monomer sol : In line with target

				Consc	lidated	l Sales	YOY C	hange		
	Main Products			al (1)		17 Out f May 2			017 Out of Nov. 2	
		1H	2H	Total	1H	2H	Total	1H Actual	2H	Total
SNOWTEX	 Mainly Used for : (A) polishing materials (silicon wafer, aluminum and glass hard disk), (B) non-polishing materials (NOx reduction catalyst, automobile catalyst, special steel sheet) 	-4%	+6%	+1%	+3%	-3%	+0%	+7%	-4%	+1%
Organo/ Monomer sol	◆Used for : 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%	+9%
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Performance Materials – (E) Profit Overview

(¥billion)

	FY2016 Actual (A)							FY2016 Actual (A) FY2017 Outlook as of May 2017 FY2017 Outlook(B) as of Nov. 2017												hang (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

<vs. 1H FY2016>

- ♦ SUNEVER sales up (IPS/FFS 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)
- ◆ Fixed cost up ¥1.3billion
- ◆ Sales up ¥3.6billion, OP up ¥1.5billion

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

- SUNEVER sales above target (IPS/FFS 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 ¥0.4billion
- ◆ Sales up ¥1.2billion, OP up ¥1.4billion

2H FY2017 Outlook

<vs. 2H FY2016>

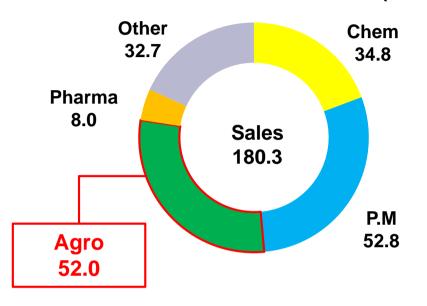
- ◆ SUNEVER sales up (IPS/FFS and VA up, TN down)
- ◆ Total Semis Materials sales up (KrF flat, ArF and other semis materials up)
- Inorganic Materials sales up (SNOWTEX up, Organo/Monomer sol up)
- ♦ Fixed cost up ¥2.1billion
- Sales up ¥2.1billion, OP down ¥0.1billion

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

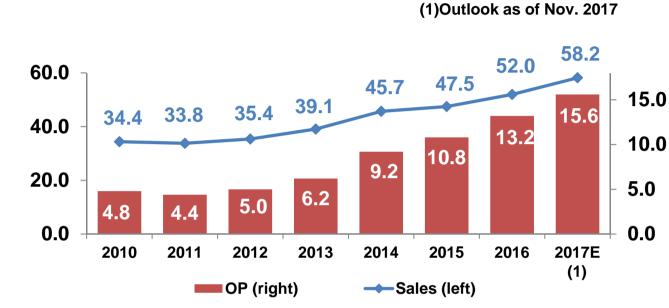
- SUNEVER sales in line with target
 (IPS/FFS in line with target, VA above target, TN below target)
- Total Semis Materials sales above target (KrF, ArF and semi materials above target)
- Inorganic Materials sales above target
 (SNOWTEX below target, Organo/Monomer sol in line with target)
- Selling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

Agrochemicals – (A) Recent Financial Performance

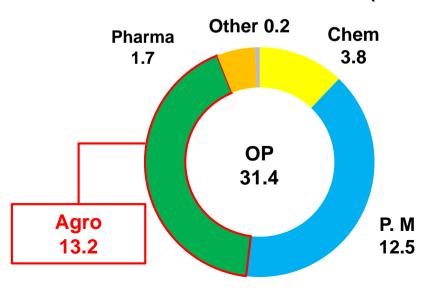
1. FY2016 Sales Distribution (¥billion)

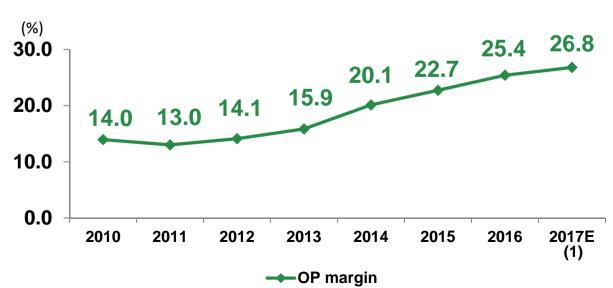


3. Recent Financial Performance (¥billion)



2. FY2016 OP Distribution (¥billion)





Agrochemicals – (B) Sales YOY Change (Before Discount)

			Sales YOY Change	е
Main Products (in order of FY2016 sales amount)		FY2016 /FY2015 (1)	FY2017E /FY2016 as of May2017(2)	FY2017E /FY2016 as of Nov.2017(2)
ROUNDUP	herbicide			
Fluralaner	Animal health products	1111	1111	
ALTAIR (NC-620)	herbicide			
TARGA	herbicide			
PERMIT	herbicide	W		
SIRIUS	herbicide			
LEIMAY/ORACLE	fungicide			
STARMITE	miticide			
PULSOR (THIFLUZAMIDE)	fungicide			
SANMITE	insecticide			

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%~	1111
+20~+30%	111
+10~+20%	11
+0~+10%	1
-0~-10%	1
-10~-20%	77
-20~-30%	777
-30%~	7777

- (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
          EXIREL/PRYROSSO (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)
                                                       MSD: MSD Animal Health, the global animal health business unit of Merck
FY2022
          General fungicide (in-house)
                                                       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 ¥1.4billion)
- ◆ 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

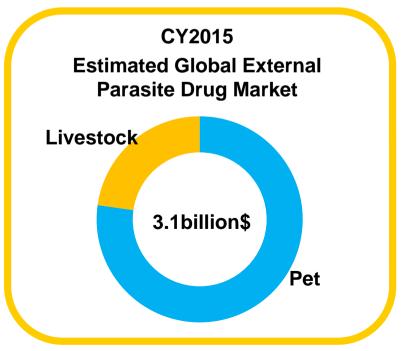
July 2016 EU(cats)

December 2016 USA(cats)

January 2017 USA, Germany, Austria(dogs)

◆EXZOLT

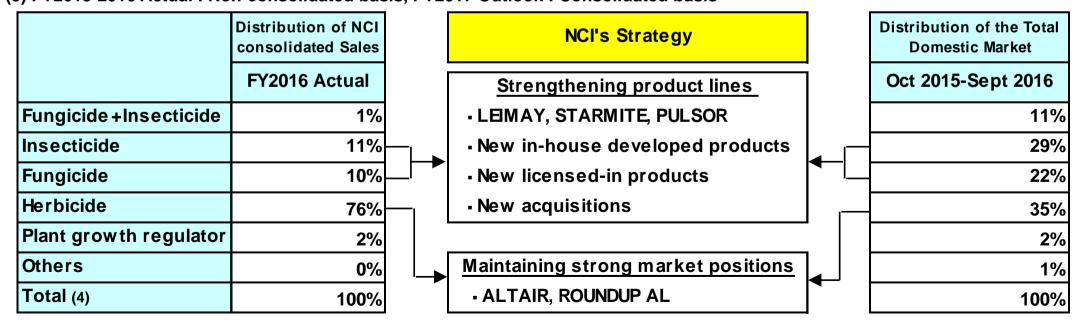
*For poultry red mites launched by MSD (administered via drinking water)
September 2017 EU



Agrochemicals – (E) Segment Sales (Before Discount)

		Sales YOY Change														
	FY2013 Actual	FY2014 Actual	FY2015 Actual	FY	2016 Actı	ıal		2017 Outlo of May 20		FY2017 Outlook as of Nov. 2017						
	Total	Total	Total	1H	2H	Total	1H	2H	Total	1H Actual	2H	Total				
ROUNDUP	-0%	+17%	-0%	+20%	+6%	+13%	-1%	-7%	-4%	+8%	-6%	+1%				
(ROUNDUP AL(1))	(+66%)	(+59%)	(+36%)	(+26%)	(+40%)	(+30%)	(+30%)	(-4%)	(+19%)	(+23%)	(+7%)	(+18%)				
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



Agrochemicals – (F) Profit Overview

(¥billion)

	FY2016 Actual (A)								FY2017 Outlook FY2017 Outlook(B) as of May 2017 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
ОР	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

<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
- ◆ 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)
- ♦ Sales up ¥1.2 billion, OP up ¥0.5 billion

2H FY 2017 Outlook

<vs. 2H FY2016>

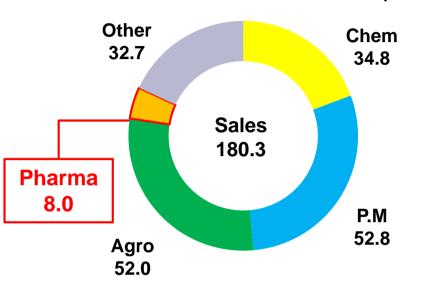
- Sales up : Fluralaner, PERMIT(export), PULSOR(export), TARGA(export), SANMITE(export), LEIMAY(export)
- Sales down: ROUNDUP(ML), ALTAIR
 (due to a change in domestic marketing strategy)
- ♦ Fixed costs up ¥0.5 billion
- Change in domestic marketing strategy (p32)
- Inventory adjustment cost up ¥0.4 billion
- ◆ Sales up ¥4.1 billion, OP up ¥1.2 billion

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

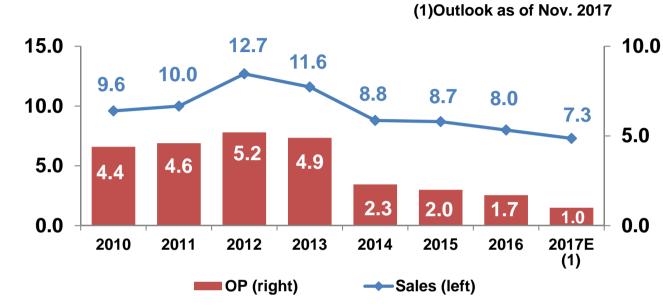
- Sales above target : TARGA, STARMITE(export), ROUNDUP(AL), LEIMAY(export)
- ◆ Sales below target : Fluralaner, ALTAIR, SIRIUS
- ◆ Fixed costs up ¥0.2 billion
- ◆ Inventory adjustment cost above expectations (¥0.6 billion)
- Sales up ¥0.7 billion, OP down ¥0.5 billion

Pharmaceuticals – (A) Recent Financial Performance

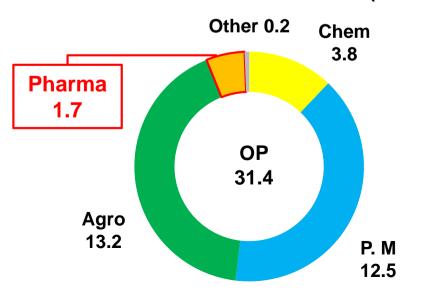
1. FY2016 Sales Distribution (¥billion)

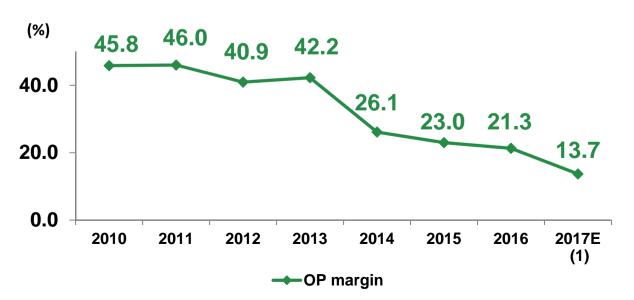


3. Recent Financial Performance (¥billion)



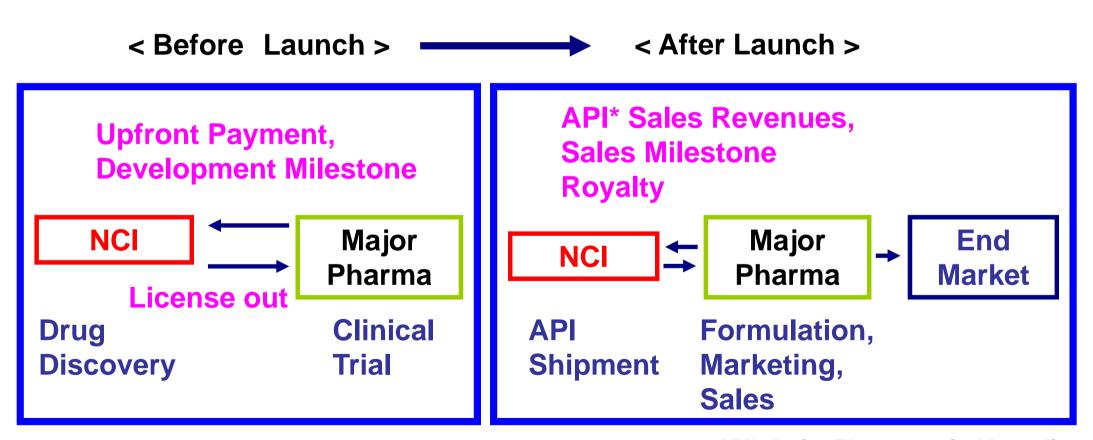
2. FY2016 OP Distribution (¥billion)





Pharmaceuticals – (B) NCI Business Model (New Drug)

Unique ethical pharma business model without sales force

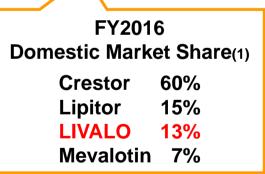


API*: Active Pharmaceutical Ingredient

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

	FY2013 Actual	FY2014 Actual	FY2015 Actual	FY2016 Actual	FY2017 Outlook as of May 2017	FY2017 Outlook 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 (¥billion)	10.2	6.9	5.8	5.2	4.3	4.6
Our Domestic and Export API Sales YOY Change	-2%	-32%	-15%	-11%	-17%	-12%
(Our Domestic API Sales YOY Change)	(-2%)	(-46%)	(-27%)	(-42%)	(-40%)	(-70%)

- (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
- Domestic market share 13% in FY2016
- ◆FY2016 NHI drug price cut about -7~-9%
- ◆Full 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) receptor activation	- Thrombocytopenia	 Terminated the license agreement with Ono in April 2014 Entered into the license agreement with Yakult in October 2015 Completed a Phase I clinical trial in Japan in July 2017
NT-702	· Phosphodiesterase (PDE)3 inhibition	Intermittent claudicationAsthma	 Terminated the license agreement with Taisho Under consideration regarding seeking new partners
NTC-801	 Acetylcholine-activated K⁺ channel current (IKACh) inhibition 	- Arrhythmia (Atrial fibrillation)	 Terminated the license agreement with Teijin and BMS in September 2015 Under consideration regarding seeking new partners

- 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														
FY2	2016 Act	ual		017 Outl of May 20		FY2017 Outlook as of Nov. 2017									
1H	2H	Total	1H	2H	Total	1H Actual	2H	Total							
+10%	+2%	+6%	% -10% +17% +6% +9% +11% +10%												

Pharmaceuticals – (F) Profit Overview

(¥billion)

		ı	FY201	6 Actı	ual (A	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	8.0	0.3	1.1	1.7	0.1	0.0	0.1	8.0	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

<vs. 1H FY2016>

- **♦ LIVALO** sales down (domestic down due to GE, export up)
- Custom Chemicals sales up
- ◆ Fixed cost down ¥0.1billion
- ◆ Sales down ¥0.2billion, OP down ¥0.1billion

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

- LIVALO sales above target (domestic sales below target, export above target)
- Custom Chemicals sales above target
- ◆ Sales up ¥0.5billion, OP up ¥0.4billion

2H FY 2017 Outlook

<vs. 2H FY2016>

- **♦ LIVALO** sales down (domestic down due to GE, export up)
- Custom Chemicals sales up
- Absence of up-front payment (received in 2H FY2016)
- ♦ Fixed cost down ¥0.2 billion
- ◆ Inventory adjustment cost up ¥0.2 billion
- ◆ Sales down ¥0.5billion, OP down ¥0.6billion

<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 ¥0.1billion, OP down ¥0.3billion

Capex/Depreciation/R&D by Segment

(¥billion)

		Capex (1)					Depr	eciati	on (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

Actual - Acceptance basis

Outlook - Production commencement basis

(2) Depreciation Method
SUNEVER, ARC®, OptiStack®
- 4 year declining balance method
(50.0% of initial capex amount in the 1st year)

Other products - 8 year declining balance method (25.0% of initial capex amount in the 1st year)

R&D Personnel (Sept. 2017) -A	440
Total Professionals (Sept. 2017) –B	1,120
A/B	39%

R&D expenses/Sales 8.7% 8.7% 8.9% 8.9% 9.0%

%Parent company only

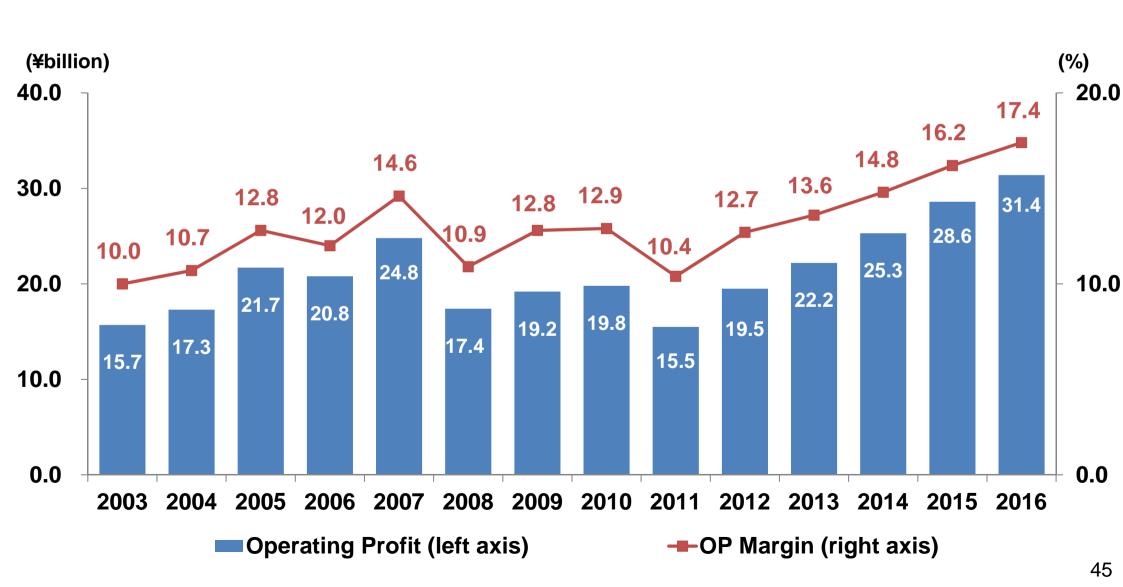
%Round number

Main Capex Items (Approval Basis)

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 (Production facilities)	1.4	
Semis (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 (Formulation facilities)	1.2	Semis (Analyzing and evaluation R&D equipment)	1.0	Chemical Research Lab. (Instruments)	0.6	
Electronic Materials Lab. (Instruments)	0.9	SUNEVER (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 (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 (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				4.4	

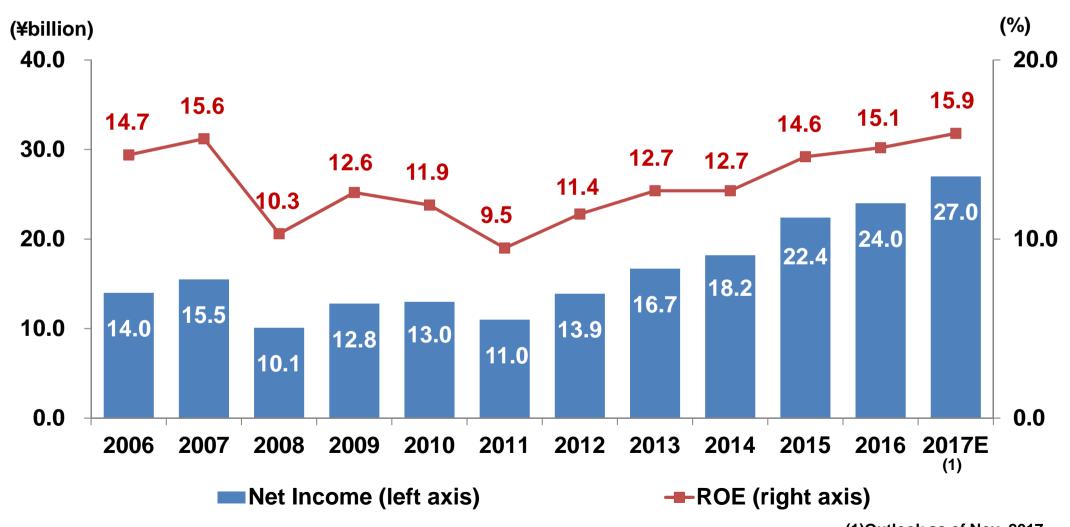
Our Characteristics - (A) Recording Stable OP Margin

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



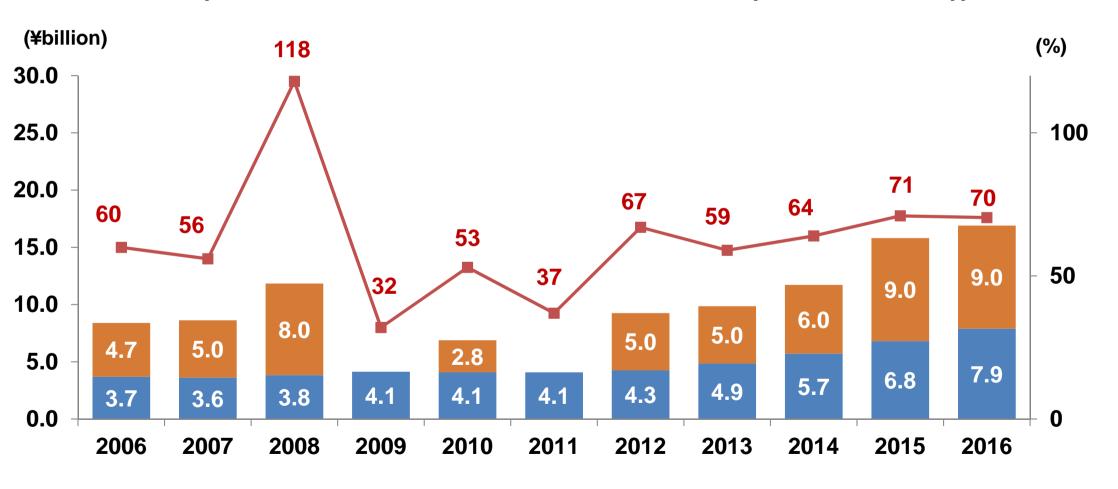
Our Characteristics - (B) High ROE

- 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

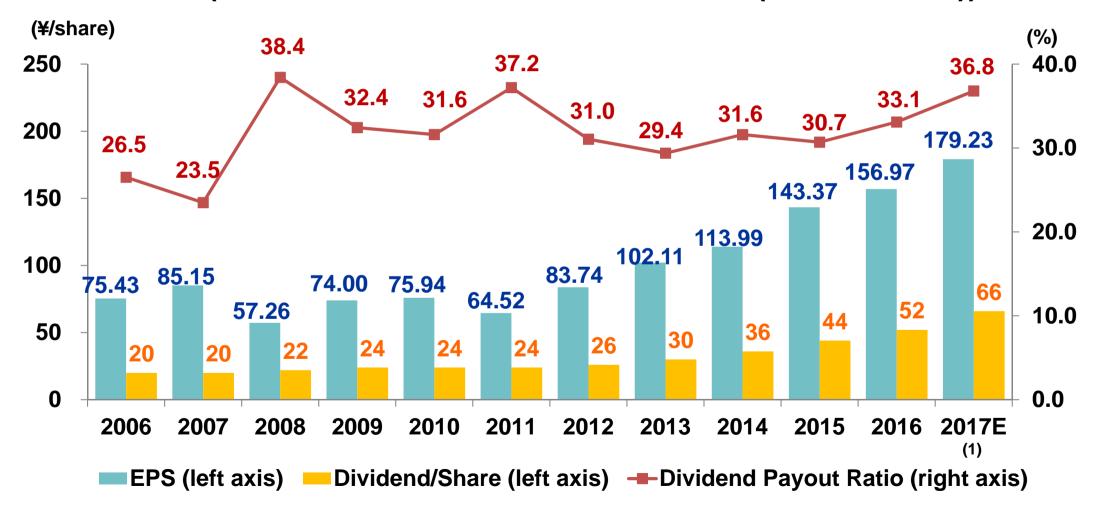
- Maintaining an aggressive shareholders return policy
- Target: Maintain 70% total payout ratio (70.4% in FY2016)(Mid-Term Business Plan Vista 2021 (FY2016-2021))



—Share Repurchase Amount (left axis) —Total Dividend Amount (left axis) —Total Payout Ratio (right axis)

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 (18.5% 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 :1.3 million shares

Total amount :¥5.0 billion

• Period of repurchase :From May 15, 2017 to June 1, 2017

FY2017 cancellation of shares

May 9, 2017
 2.0 million shares

August 31, 2017
 1.0 million shares

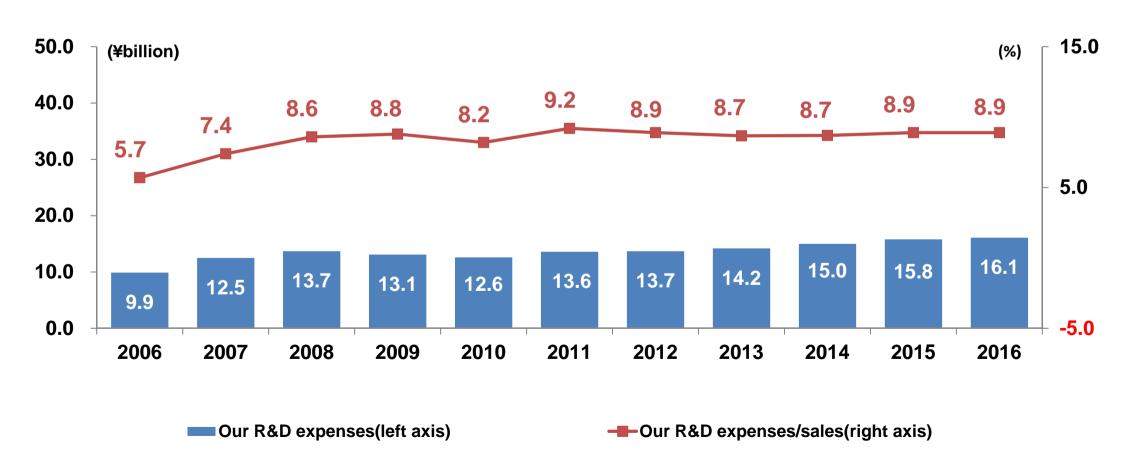
Cash Management Policy

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

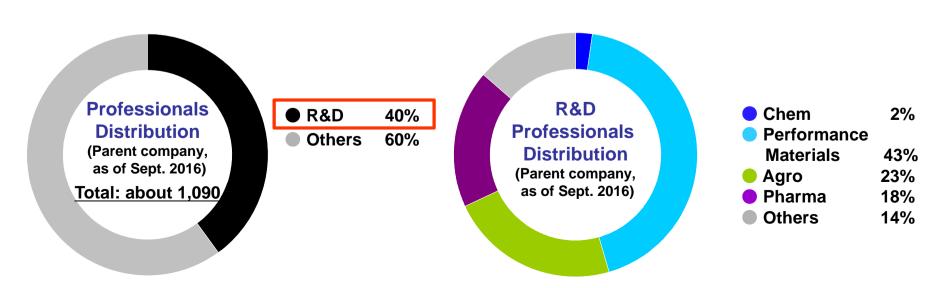
Our Characteristics- (F) R&D Oriented Chemical Company

- 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 Characteristics- (G) R&D Oriented Chemical Company

D by segmen	t			FY2016		
Segment	Main Products	Sales (¥billion)	OP (¥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 (includin	g others and adjustment)	180.3	31.4	17.4%	16.1	8.9%



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Mid-Term Business Plan Vista 2021 (FY2016-2021) announced in May 2016 -Financial Indicators (A)

4 DI	Act	ual	Plan							
1. PL	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)	1H 48,000	2H 37,700	1H 31,400 2H 38,200	35,400	FY2017 onward 51,100

		Act	ual				Pl	an			(¥billion)
2. Segment(1)	Sa	les	0	P		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

Mid-Term Business Plan Vista 2021 (FY2016-2021) (1) announced in May 2016 -Financial Indicators (B)

- OP Margin : Maintain above 15% (FY2016 Actual 17.4%)
- ♦ 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
- R&D expenses/sales : above 8% (FY2016 Actual 8.9%)

Mid-Term Business Plan Vista 2021 (FY2016-2021) (1) Sources of Sales Growth for Stage I (FY2016-2018)(C)

		.	(1) A	nnounced in May 2016
	Growth (1) <mark>18 vs FY2015)</mark>	Below ¥1.0 billion	¥1.0 to ¥3.0 billion	Above ¥3.0 billion
	Chem	AdBlue High purity ammonia	TEPIC	
	Display		VA	Photo-alignment IPS
Performance Materials	Semis	3D packaging materials (TMAT), New lithography materials	Bottom anti-reflective coating materials (ARC®) Multi layer process materials	
nance ials	Inorganic		Oilfield Materials	
	New Field	OLED materials Sensor materials Light control film materials HYPERTECH		
	Agro	New Insecticide (in-house) New licensed-in product	ROUNDUP	Fluralaner Export
ı	Pharma	LIVALO(export) Custom chemicals Development of pipeline products		
Nev	v Products	Other new products		55

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

Initiatives for 2019 onwards

Information & Communications

Developing materials for:

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

Creating next-generation display

Creating next-generation semis materials

Life Sciences

Developing:

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

Developing NIP-022 (platelet increasing agent)

Promoting research collaboration of antifungal drug

Upgrading cell culture materials to the global standardized product

invironmen & Energy

Developing materials for:

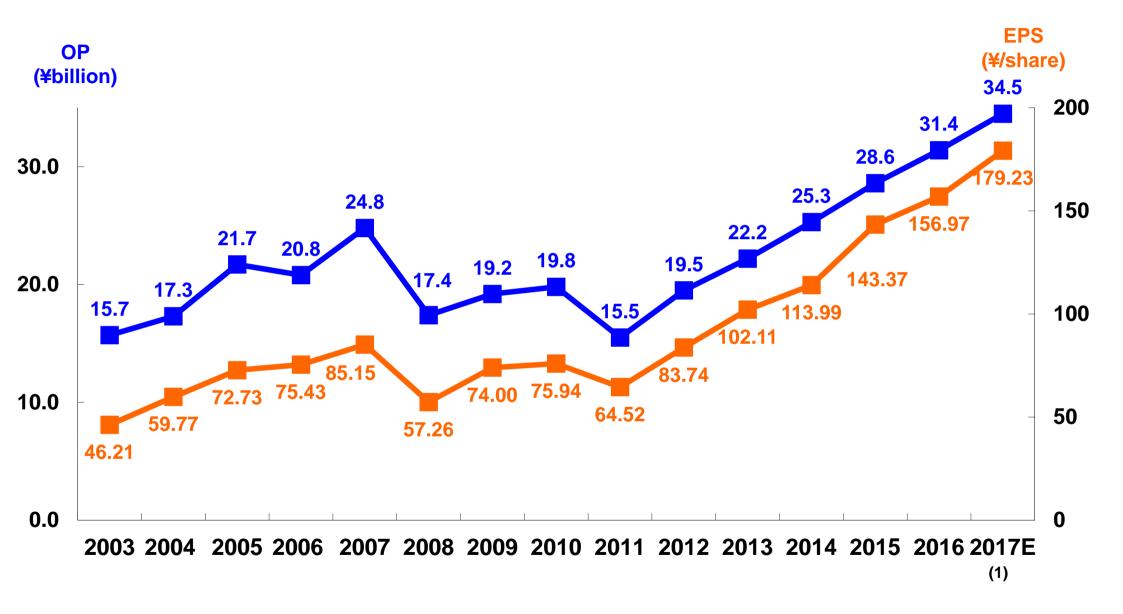
- Secondary batteries
- ·Fuel cells

Creating energy harvesting materials

R&D

Acquiring seeds in the biomedical materials field

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 (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(¥/share)	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
Dividend(¥/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)

			FY	2011 Act	ual			FY	2012 Act	ual		FY2013	Actual
		1Q	2Q	3Q	4Q	Total	1Q	2Q	3Q	4Q	Total	1Q	2Q
Ch	em	9.4	9.2	9.0	9.3	36.9	9.1	8.8	8.9	9.8	36.6	9.5	9.1
Ī	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
	rformance terials	8.7	8.3	8.6	8.4	34.0	9.5	9.3	9.5	9.1	37.4	10.3	10.3
Ag	ro	7.1	5.4	3.7	17.6	33.8	8.3	5.1	4.6	17.4	35.4	9.9	6.1
Ph	arma	2.9	2.3	2.4	2.4	10.0	3.5	1.8	3.1	2.2	10.6	2.9	2.8
Tra	ading	11.6	10.9	10.8	11.5	44.8	11.9	10.8	12.5	11.4	46.6	12.7	11.8
Ot	hers	4.6	4.7	4.3	6.4	20.0	3.9	6.3	4.6	6.4	21.2	4.6	5.1
Ad	justment	-7.7	-7.6	-7.3	-8.3	-30.9	-7.8	-9.4	-8.6	-8.2	-34.0	-9.7	-9.0
To	tal	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)

											\1		
		FY2	2011 Actu	ual			FY2	2012 Acti	ual		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	8.0	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)

																				`	<u> </u>
	FY2013 Actual					FY2	014 A	ctual			FY2	015 A	ctual		FY2016 Actual					FY2017 Actual	
1Q	2Q	3Q	4Q	Total	1Q	2Q	3Q	4Q	Total	1Q	2Q	3Q	4Q	Total	1Q	2Q	3Q	4Q	Total	1Q	2Q
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
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
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
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
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
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
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
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
-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
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
	9.3 2.7 6.6 10.3 9.9 3.1 12.7 4.6 -9.7	1Q 2Q 9.3 8.6 2.7 2.6 6.6 6.0 10.3 10.3 9.9 6.1 3.1 3.3 12.7 11.8 4.6 5.1 -9.7 -9.0	1Q 2Q 3Q 9.3 8.6 8.8 2.7 2.6 2.3 6.6 6.0 6.5 10.3 10.3 11.1 9.9 6.1 5.5 3.1 3.3 3.0 12.7 11.8 12.8 4.6 5.1 4.9 -9.7 -9.0 -8.9	1Q 2Q 3Q 4Q 9.3 8.6 8.8 8.8 2.7 2.6 2.3 2.3 6.6 6.0 6.5 6.5 10.3 10.3 11.1 11.1 9.9 6.1 5.5 17.6 3.1 3.3 3.0 2.2 12.7 11.8 12.8 13.4 4.6 5.1 4.9 6.8 -9.7 -9.0 -8.9 -9.8	1Q 2Q 3Q 4Q Total 9.3 8.6 8.8 8.8 35.5 2.7 2.6 2.3 2.3 9.9 6.6 6.0 6.5 6.5 25.6 10.3 10.3 11.1 11.1 42.8 9.9 6.1 5.5 17.6 39.1 3.1 3.3 3.0 2.2 11.6 12.7 11.8 12.8 13.4 50.7 4.6 5.1 4.9 6.8 21.4 -9.7 -9.0 -8.9 -9.8 -37.4	1Q 2Q 3Q 4Q Total 1Q 9.3 8.6 8.8 8.8 35.5 8.5 2.7 2.6 2.3 2.3 9.9 2.7 6.6 6.0 6.5 6.5 25.6 5.8 10.3 10.3 11.1 11.1 42.8 11.8 9.9 6.1 5.5 17.6 39.1 12.3 3.1 3.3 3.0 2.2 11.6 2.5 12.7 11.8 12.8 13.4 50.7 14.1 4.6 5.1 4.9 6.8 21.4 3.8 -9.7 -9.0 -8.9 -9.8 -37.4 -10.5	1Q 2Q 3Q 4Q Total 1Q 2Q 9.3 8.6 8.8 8.8 35.5 8.5 8.2 2.7 2.6 2.3 2.3 9.9 2.7 2.6 6.6 6.0 6.5 6.5 25.6 5.8 5.6 10.3 10.3 11.1 11.1 42.8 11.8 12.4 9.9 6.1 5.5 17.6 39.1 12.3 6.2 3.1 3.3 3.0 2.2 11.6 2.5 2.5 12.7 11.8 12.8 13.4 50.7 14.1 13.2 4.6 5.1 4.9 6.8 21.4 3.8 4.7 -9.7 -9.0 -8.9 -9.8 -37.4 -10.5 -9.8	1Q 2Q 3Q 4Q Total 1Q 2Q 3Q 9.3 8.6 8.8 8.8 35.5 8.5 8.2 9.1 2.7 2.6 2.3 2.3 9.9 2.7 2.6 2.8 6.6 6.0 6.5 6.5 25.6 5.8 5.6 6.3 10.3 10.3 11.1 11.1 42.8 11.8 12.4 13.0 9.9 6.1 5.5 17.6 39.1 12.3 6.2 5.7 3.1 3.3 3.0 2.2 11.6 2.5 2.5 2.1 12.7 11.8 12.8 13.4 50.7 14.1 13.2 14.1 4.6 5.1 4.9 6.8 21.4 3.8 4.7 4.6 -9.7 -9.0 -8.9 -9.8 -37.4 -10.5 -9.8 -10.7	1Q 2Q 3Q 4Q Total 1Q 2Q 3Q 4Q 9.3 8.6 8.8 8.8 35.5 8.5 8.2 9.1 8.5 2.7 2.6 2.3 2.3 9.9 2.7 2.6 2.8 2.5 6.6 6.0 6.5 6.5 25.6 5.8 5.6 6.3 6.0 10.3 10.3 11.1 11.1 42.8 11.8 12.4 13.0 12.2 9.9 6.1 5.5 17.6 39.1 12.3 6.2 5.7 21.5 3.1 3.3 3.0 2.2 11.6 2.5 2.5 2.1 1.7 12.7 11.8 12.8 13.4 50.7 14.1 13.2 14.1 13.0 4.6 5.1 4.9 6.8 21.4 3.8 4.7 4.6 7.8 -9.7 -9.0 -8.9 -9.8 -37.4 -10.5 -9.8 -10.7 -11.3	1Q 2Q 3Q 4Q Total 1Q 2Q 3Q 4Q Total 9.3 8.6 8.8 8.8 35.5 8.5 8.2 9.1 8.5 34.3 2.7 2.6 2.3 2.3 9.9 2.7 2.6 2.8 2.5 10.6 6.6 6.0 6.5 6.5 25.6 5.8 5.6 6.3 6.0 23.7 10.3 10.3 11.1 11.1 42.8 11.8 12.4 13.0 12.2 49.4 9.9 6.1 5.5 17.6 39.1 12.3 6.2 5.7 21.5 45.7 3.1 3.3 3.0 2.2 11.6 2.5 2.5 2.1 1.7 8.8 12.7 11.8 12.8 13.4 50.7 14.1 13.2 14.1 13.0 54.4 4.6 5.1 4.9 6.8 21.4 3.8 4.7 4.6 7.8 20.9 -9.7 -9.0 -8.9 -9.8 -37.4 -10.5 -9.8 -10.7 -11.3 -42.3	1Q 2Q 3Q 4Q Total 1Q 2Q 3Q 4Q Total 1Q 9.3 8.6 8.8 8.8 35.5 8.5 8.2 9.1 8.5 34.3 8.7 2.7 2.6 2.3 2.3 9.9 2.7 2.6 2.8 2.5 10.6 3.0 6.6 6.0 6.5 6.5 25.6 5.8 5.6 6.3 6.0 23.7 5.7 10.3 10.3 11.1 11.1 42.8 11.8 12.4 13.0 12.2 49.4 13.0 9.9 6.1 5.5 17.6 39.1 12.3 6.2 5.7 21.5 45.7 13.6 3.1 3.3 3.0 2.2 11.6 2.5 2.5 2.1 1.7 8.8 2.1 12.7 11.8 12.8 13.4 50.7 14.1 13.2 14.1 13.0 54.4 14.7	1Q 2Q 3Q 4Q Total 1Q 2Q 3Q 4Q Total 1Q 2Q 9.3 8.6 8.8 8.8 35.5 8.5 8.2 9.1 8.5 34.3 8.7 8.0 2.7 2.6 2.3 2.3 9.9 2.7 2.6 2.8 2.5 10.6 3.0 2.5 6.6 6.0 6.5 6.5 25.6 5.8 5.6 6.3 6.0 23.7 5.7 5.5 10.3 10.3 11.1 11.1 42.8 11.8 12.4 13.0 12.2 49.4 13.0 13.0 9.9 6.1 5.5 17.6 39.1 12.3 6.2 5.7 21.5 45.7 13.6 7.5 3.1 3.3 3.0 2.2 11.6 2.5 2.5 2.1 1.7 8.8 2.1 1.6 12.7 11.8 12.8 13.4 50.7 <t< td=""><td>1Q 2Q 3Q 4Q Total 1Q 2Q 3Q 4Q Total 1Q 2Q 3Q 4Q Total 1Q 2Q 3Q 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 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 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 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 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 3.1 3.3 3.0 2.2 11.6 2.5 2.5 2.1</td><td>1Q 2Q 3Q 4Q Total 1Q 2Q 3Q 4Q 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 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 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 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 9.9 6.1 5.5 17.6 39.1 12.3 6.2 5.7 21.5 45.7 13.6 7.5<</td><td>1Q 2Q 3Q 4Q Total 1Q 2Q 3Q 4Q Total 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 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 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 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 9.9 6.1 5.5 17.6 39.1 12.3 6</td><td>1Q 2Q 3Q 4Q Total 1Q 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 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 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 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 9.9 6.1<</td><td>1Q 2Q 3Q 4Q Total 1Q 2Q 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 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 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 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 9.9 6.</td><td>1Q 2Q 3Q 4Q Total 1Q 2Q 3Q 9Q 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 6.6 6.0 6.5 6.5 5.6 5.8 5.6 6.3 6.0 23.7 5.7 5.5 6.5 6.0 23.7 5.7 5.5 6.5 6.0 23.7 5.7 5.5 6.5 6.0 23.7 5.7 5.5 6.6 23.7 5.7<!--</td--><td>1Q 2Q 3Q 4Q Total 1Q 2Q 3Q 4Q 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 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 6.6 6.0 6.5 6.5 25.6 5.8 5.6 6.3 6.0 23.7 5.5 6.5 6.0 23.7 5.7 5.5 6.4 6.5 10.3 10.3 11.1 11.1 42.8 11.8 12.4 13.0</td><td>1Q 2Q 3Q 4Q Total 1Q 2Q 3Q 4Q Total 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 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 6.6 6.0 6.5 6.5 25.6 5.8 5.6 6.3 6.0 23.7 5.5 6.5 6.0 23.7 5.7 5.5 6.4 6.5 24.1 10.3 10.3 11.1 11.1</td><td>FY2013 Actual FY2014 Actual FY2015 Actual FY2016 Actual FY2016 Actual FY2016 Actual Actual FY2016 Actual Actual FY2016 Actual Actual Actual FY2016 Actual Actual Actual FY2016 Actual Actual Actual FY2016 Actual Actual Actual Actual Actual Actual Actual Actual Actual FY2016 Actual FY2016 Actual Ac</td></td></t<>	1Q 2Q 3Q 4Q Total 1Q 2Q 3Q 4Q Total 1Q 2Q 3Q 4Q Total 1Q 2Q 3Q 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 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 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 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 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 3.1 3.3 3.0 2.2 11.6 2.5 2.5 2.1	1Q 2Q 3Q 4Q Total 1Q 2Q 3Q 4Q 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 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 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 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 9.9 6.1 5.5 17.6 39.1 12.3 6.2 5.7 21.5 45.7 13.6 7.5<	1Q 2Q 3Q 4Q Total 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 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 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 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 9.9 6.1 5.5 17.6 39.1 12.3 6	1Q 2Q 3Q 4Q Total 1Q 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 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 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 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 9.9 6.1<	1Q 2Q 3Q 4Q Total 1Q 2Q 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 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 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 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 9.9 6.	1Q 2Q 3Q 4Q Total 1Q 2Q 3Q 9Q 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 6.6 6.0 6.5 6.5 5.6 5.8 5.6 6.3 6.0 23.7 5.7 5.5 6.5 6.0 23.7 5.7 5.5 6.5 6.0 23.7 5.7 5.5 6.5 6.0 23.7 5.7 5.5 6.6 23.7 5.7 </td <td>1Q 2Q 3Q 4Q Total 1Q 2Q 3Q 4Q 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 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 6.6 6.0 6.5 6.5 25.6 5.8 5.6 6.3 6.0 23.7 5.5 6.5 6.0 23.7 5.7 5.5 6.4 6.5 10.3 10.3 11.1 11.1 42.8 11.8 12.4 13.0</td> <td>1Q 2Q 3Q 4Q Total 1Q 2Q 3Q 4Q Total 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 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 6.6 6.0 6.5 6.5 25.6 5.8 5.6 6.3 6.0 23.7 5.5 6.5 6.0 23.7 5.7 5.5 6.4 6.5 24.1 10.3 10.3 11.1 11.1</td> <td>FY2013 Actual FY2014 Actual FY2015 Actual FY2016 Actual FY2016 Actual FY2016 Actual Actual FY2016 Actual Actual FY2016 Actual Actual Actual FY2016 Actual Actual Actual FY2016 Actual Actual Actual FY2016 Actual Actual Actual Actual Actual Actual Actual Actual Actual FY2016 Actual FY2016 Actual Ac</td>	1Q 2Q 3Q 4Q Total 1Q 2Q 3Q 4Q 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 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 6.6 6.0 6.5 6.5 25.6 5.8 5.6 6.3 6.0 23.7 5.5 6.5 6.0 23.7 5.7 5.5 6.4 6.5 10.3 10.3 11.1 11.1 42.8 11.8 12.4 13.0	1Q 2Q 3Q 4Q Total 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 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 6.6 6.0 6.5 6.5 25.6 5.8 5.6 6.3 6.0 23.7 5.5 6.5 6.0 23.7 5.7 5.5 6.4 6.5 24.1 10.3 10.3 11.1 11.1	FY2013 Actual FY2014 Actual FY2015 Actual FY2016 Actual FY2016 Actual FY2016 Actual Actual FY2016 Actual Actual FY2016 Actual Actual Actual FY2016 Actual Actual Actual FY2016 Actual Actual Actual FY2016 Actual Actual Actual Actual Actual Actual Actual Actual Actual FY2016 Actual FY2016 Actual Ac

FY2012-2Q FY2017 Quarterly OP by Segment

(New Segmentation)

		FY2013 Actual					FY20)14 Ac	Actual FY2015 Actual FY2016 Actual							FY2017 Actual						
	1Q	2Q	3Q	4Q	Total	1Q	2Q	3Q	4Q	Total	1Q	2Q	3Q	4Q	Total	1Q	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)

		11	1 FY201	16		/2017 Ou		11	H FY201	
		1Q	Actual 2Q	Total	1Q	of May 2 2Q	Total	1Q	Actual 2Q	Total
		IQ	24	TOtal	IQ	20	TOtal	IW	20	TOtal
С	hem	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
	erformance aterials	12.6	12.9	25.5	13.8	14.1	27.9	14.1	15.0	29.1
A	gro	14.5	9.5	24.0	13.5	11.4	24.9	14.6	11.5	26.1
Ρ	harma	2.2	1.5	3.7	1.5	1.5	3.0	2.1	1.4	3.5
Tr	rading	14.4	13.2	27.6	15.2	14.3	29.5	14.6	14.5	29.1
0	thers	4.0	4.6	8.6	4.7	4.5	9.2	5.4	4.3	9.7
A	djustment	-11.1	-10.3	-21.4	-11.9	-12.0	-23.9	-12.2	-11.0	-23.2
To	otal	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

		l FY201 Actual			/2017 Ou of May 2		1H FY2017 Actual			
	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	8.0	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)

		FY2	010	FY2	011	FY2	012	FY2	013	FY2	014	FY2	015	FY2	016	FY201	7E (1)			
	Chem	38.1	24.7%	36.9	24.8%	34.5	22.4%	35.5	21.7%	34.3	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%			
တ္တ	Agro	34.4	22.3%	33.8	22.7%	35.4	23.0%	39.1	23.9%	45.7	26.7%	47.5	26.9%	52.0	28.8%	58.2	30.3%			
Sales	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%			
\mathbf{E}	Others	27.0	17.5%	20.0	13.5%	21.2	13.8%	21.4	13.1%	20.9	12.2%	20.9	11.8%	24.0	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%		FY2	016
			-		-				-		•		-		-				1 12	010
	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%	S	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%	egment	48.0	20.7%
	Agro	4.8	24.2%	4.4	28.4%	5.0	25.6%	6.2	27.9%	9.2	36.4%	10.8	37.8%	13.2	42.0%	15.6	45.2%	ne	55.6	24.0%
무	Pharma	4.4	22.2%	4.6	29.7%	5.2	26.7%	4.9	22.1%	2.3	9.1%	2.0	7.0%	1.7	5.4%	1.0	2.9%		10.2	4.4%
(B)	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%	Assets	19.8	8.5%
	Others	1.0	5.1%	0.3	1.9%	0.7	3.6%	8.0	3.6%	0.6	2.4%	0.5	1.7%	1.0	3.2%	0.7	2.0%	set	10.7	4.6%
	Adj	-2.1	-10.6%	-1.5	-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%	D)	231.7	100%
	Chem		6.3%		4.3%		5.5%		5.4%		5.5%		11.4%		10.9%		10.5%			14.6%
$\frac{1}{2}$	Perf		20.8%		14.1%		19.3%		20.6%		24.3%		23.2%		23.7%		23.8%	(E)		26.0%
C) =	Agro		14.0%		13.0%		14.1%		15.9%		20.1%		22.7%		25.4%		26.8%			23.7%
Wal	Pharma		45.8%		46.0%		40.9%		42.2%		26.1%		23.0%		21.3%		13.7%	=(B		16.7%
viargin (B)/(A)			3.2%		2.9%		3.0%		3.0%		3.1%		3.2%		3.1%		3.3%	OA (B)/(D)		8.6%
B 3	Others		3.7%		1.5%		3.3%		3.7%		2.9%		2.4%		4.2%		3.3%	ڪ		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	TEPIC							
	Chemicals	Melamine cyanurate							
		HI-LITE							
		Custom Chemicals							
	Basic	Melamine							
	Chemicals	Urea, AdBlue							
		Ammonia, Sulfuric acid, Nitric acid							
		High purity chemicals							
	T								
Performance	SUNEVER,								
Materials	•	om anti-reflective coating)							
	OptiStack® (Multi layer process materials)								
	Micro lens								
	•	Organo silica sol							
		, SUNCOLLOID							
	CELNAX								
Agro	Agro	Herbicides							
Agio	Agio	Insecticides							
		Fungicide							
	Active substa	ance of Veterinary medical product							
		, , , , , , , , , , , ,							
Pharma	LIVALO								
	•	_							
Trading	Nissei Corporation								
Others	Nissan Butsuryu, Nissan Green & Landscape,								
	Nissan Engineering, Fertilizer								
Adjustment	_	of Advanced Materials & Planning Dept.							
included									

New Segmentation

Segment		Main Products						
Chem	Fine	TEPIC						
	Chemicals	Melamine cyanurate						
		HI-LITE						
	Basic	Melamine						
	Chemicals	Urea, AdBlue						
		Ammonia, Sulfuric acid, Nitric acid						
		High purity chemicals						

Performance	SUNEVER, NHC,
Materials	ARC® (Bottom anti-reflective coating)
	OptiStack® (Multi layer process materials)
	Micro lens
	SNOWTEX, Organo silica sol
	Alumina sol, SUNCOLLOID
	CELNAX

Agro	Agro	Herbicides
		Insecticides
		Fungicide
	Active substance of Veterinary medical product	

Pharma	LIVALO	
	Custom Chemicals	

Trading	Nissei Corporation	Nissei Corporation		
-	1			
Others	Nissan Butsuryu, Nissan Green & Landscape,			
	Nissan Engineering, Fertilizer			

Adjustment	R&D expenses of Advanced Materials & Planning Dept.
	included

Main Products by Segment (New Segmentation)

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

Change of Company Name

1. New company name Nissan Chemical Corporation

Current company name 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.