

May 15, 2019

Presentation for Investors

FY2018 (April 1 – March 31, 2019) Financial Results

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Nissan Chemical
CORPORATION

**Institutional
Investor**
2018 - ALL-JAPAN EXECUTIVE TEAM

FY2018 PL⁽¹⁾

(¥billion)

	FY2017			FY2018			Change			Change (%)	FY2018 Outlook as of Nov. 2018		
	1H	2H	Total	1H	2H	Total	1H	2H	Total	Total	1H Actual	2H	Total
Sales	91.0	102.4	193.4	98.0	106.9	Record 204.9	+7.0	+4.5	+11.5	+6%	98.0	107.5	205.5
Operating Profit	17.3	17.7	35.0	19.4	17.7	Record 37.1	+2.1	-0.0	+2.1	+6%	19.4	18.7	38.1
Non-Operating Income/Expenses	0.5	0.7	1.2	1.2	0.8	2.0	+0.7	+0.1	+0.8	-	1.2	0.8	2.0
Ordinary Income	17.8	18.4	36.2	20.6	18.5	Record 39.1	+2.8	+0.1	+2.9	+8%	20.6	19.5	40.1
Extraordinary Income/Loss	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	0.0	0.0	0.0
Net Income (2)	13.2	13.9	27.1	15.4	14.0	Record 29.4	+2.2	+0.1	+2.3	+8%	15.4	14.6	30.0
EBITDA (3)	22.0	23.5	45.5	24.4	23.6	48.0	+2.4	+0.1	+2.5	+6%	24.4	24.8	49.2
EPS (¥/share)	87.40	92.90	180.30	103.53	94.14	197.67	+16.13	+1.24	+17.37	+10%	103.53	98.26	201.79
Dividend (¥/share)	32	36	68	40	42	82	+8	+6	+14		40	42	82
Total amount of Dividend	4.8	5.4	10.2	5.9	6.2	12.1	+1.1	+0.8	+1.9		5.9	6.3	12.2
OP Margin	19.0%	17.3%	18.1%	19.8%	16.6%	18.1%	+0.8%	-0.7%	+0.0%		19.8%	17.4%	18.5%
ROE	-	-	16.1%	-	-	16.6%	-	-	+0.5%		-	-	16.5%
FX Rate (¥/\$)	111	111	111	110	112	111					110	110	
Naphtha (¥/kl) (4)	37,700	46,200	42,100	51,200	48,400	49,700					51,200	52,400	
Comprehensive Income	16.7	14.1	30.8	16.7	9.5	26.2					16.7		

(1) FY2018 = April 1, 2018 - March 31, 2019

(2) Net income = Profit Attributable to Owners of Parent

(3) EBITDA = Operating Profit + Depreciation

(4) Based on Trade Statistics of Japan Ministry of Finance

2H FY2018 Review

<vs. 2H FY2017>

(Sales) ◆Up ¥4.5 billion (+4%)

(+) Chemicals, Performance Materials, Agrochemicals, Trading

(-) Pharmaceuticals

(OP) ◆Flat

(+) Performance Materials, Agrochemicals

(±) Trading

(-) Chemicals, Pharmaceuticals

(Ordinary Income) ◆Up ¥0.1 billion (+0%)

(Net Income) ◆Up ¥0.1 billion (+0%)

(EPS) ◆Up ¥1.24 (+1%)

<vs. 2H FY2018 Outlook as of November 2018>

(Sales) ◆Down ¥0.6 billion

(+) Agrochemicals, Trading

(±) Pharmaceuticals

(-) Chemicals, Performance Materials

(OP) ◆Down ¥1.0 billion

(±) Agrochemicals

(-) Chemicals, Performance Materials, Pharmaceuticals, Trading

(Ordinary Income) ◆Down ¥1.0 billion

(Net Income) ◆Down ¥0.6 billion

(EPS) ◆Down ¥4.12

FY2018 Review

<vs. FY2017>

(Sales) ◆Up ¥11.5 billion (+6%)

(+) Chemicals, Performance Materials, Agrochemicals, Trading

(-) Pharmaceuticals

(OP) ◆Up ¥2.1 billion (+6%)

(+) Performance Materials, Agrochemicals, Trading

(-) Chemicals, Pharmaceuticals

(OP Margin) ◆18.1% More than 10% OP Margin in 16 consecutive years since FY2003

(Ordinary Income) ◆Up ¥2.9 billion (+8%)

(Net Income) ◆Up ¥2.3 billion (+8%)

(EPS) ◆Up ¥17.37 (+10%)

(ROE) ◆16.6% (FY2017: 16.1%)

★ OP and Ordinary Income renewed the highest results of a full year in 5 consecutive years.

★ Net Income renewed the highest results of a full year in 6 consecutive years.

★ Achieved OP, Ordinary Income and Net Income FY2018 goals of the Mid-Term Plan (see p59).

<Shareholder Return>

(Dividend) ◆1H ¥40, 2H ¥42, total ¥82/share, dividend payout ratio 41.5% (3.8% up vs. FY2017)
(¥14/share up vs. FY2017, in line with 2H FY2018 Outlook as of November 2018)

(Share Repurchases) ◆¥9.0 billion, 1.7 million shares completed in FY2018
(Cancelled 2 million shares in May 2018 and August 2018)

(Total Payout Ratio) ◆72.0% (Achieved Mid-Term Plan target 70%)

2H FY2018 PL

(¥billion)

	FY2017			FY2018			Change			FY2018 Outlook as of Nov. 2018		
	3Q	4Q	2H	3Q	4Q	2H	3Q	4Q	2H	3Q	4Q	2H
Sales	41.7	60.7	102.4	43.9	63.0	106.9	+2.2	+2.3	+4.5	42.9	64.6	107.5
Operating Profit	5.1	12.6	17.7	4.4	13.3	17.7	-0.7	+0.7	-0.0	3.2	15.5	18.7
Non-Operating Income/Expenses	1.0	-0.3	0.7	0.4	0.4	0.8	-0.6	+0.7	+0.1	0.5	0.3	0.8
Ordinary Income	6.1	12.3	18.4	4.8	13.7	18.5	-1.3	+1.4	+0.1	3.7	15.8	19.5
Extraordinary Income/Loss	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	0.0	0.0	0.0
Net Income (1)	4.5	9.4	13.9	3.4	10.6	14.0	-1.1	+1.2	+0.1	2.6	12.0	14.6
EBITDA (2)	7.8	15.7	23.5	7.3	16.3	23.6	-0.5	+0.6	+0.1	-	-	24.8
EPS (¥/share)	30.28	62.62	92.90	23.11	71.03	94.14	-7.17	+8.41	+1.24	-	-	98.26
Dividend (¥/share)	-	-	36	-	-	42	-	-	+6	-	-	42
Total amount of Dividend	-	-	5.4	-	-	6.2	-	-	+0.8	-	-	6.3
OP Margin	12.3%	20.7%	17.3%	10.1%	21.1%	16.6%	-2.2%	+0.4%	-0.7%	7.5%	24.0%	17.4%

(1) Net income = Profit Attributable to Owners of Parent

(2) EBITDA = Operating Profit + Depreciation

3Q FY2018 Review

<vs. 3Q FY2017>

(Sales) ◆Up ¥2.2 billion (+5%)

(OP) ◆Down ¥0.7 billion (-14%)

(Ordinary Income) ◆Down ¥1.3 billion (-22%)

(Net Income) ◆Down ¥1.1 billion (-25%)

(EPS) ◆Down ¥7.17 (-24%)

(+) Chemicals, Performance Materials, Trading

(-) Agrochemicals, Pharmaceuticals

(+) Performance Materials, Trading

(-) Chemicals, Agrochemicals, Pharmaceuticals

<vs. 3Q FY2018 Outlook as of November 2018>

(Sales) ◆Up ¥1.0 billion

(OP) ◆Up ¥1.2 billion

(Ordinary Income) ◆Up ¥1.1 billion

(Net Income) ◆Up ¥0.8 billion

(+) Performance Materials, Agrochemicals , Pharmaceuticals, Trading

(-) Chemicals

(+) Performance Materials, Agrochemicals, Pharmaceuticals, Trading

(-) Chemicals

4Q FY2018 Review

<vs. 4Q FY2017>

(Sales) ◆Up ¥2.3 billion (+4%)

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

(OP) ◆Up ¥0.7 billion (+5%)

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

(Ordinary Income) ◆Up ¥1.4 billion (+12%)

(Net Income) ◆Up ¥1.2 billion (+12%)

(EPS) ◆Up ¥8.41 (+13%)

<vs. 4Q FY2018 Outlook as of November 2018>

(Sales) ◆Down ¥1.6 billion

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

(OP) ◆Down ¥2.2 billion

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

(Ordinary Income) ◆Down ¥2.1 billion

(Net Income) ◆Down ¥1.4 billion

FY2018 Actual, FY2019 Outlook Non-Operating Income/Expenses, Extraordinary Income/Loss, Comprehensive Income

(¥billion)

	FY2017 Actual	FY2018 Outlook as of Nov. 2018	FY2018 Actual	FY2019 Outlook
Non-Operating Income	2.94	3.27	3.13	2.75
Interest income, dividend income	0.84	0.78	1.01	0.81
Equity in earnings of affiliates	1.32	1.05	0.97	0.93
Foreign exchange gains	0.00	0.31	0.00	0.00
Others	0.78	1.13	1.15	1.01
Non-Operating Expenses	1.69	1.28	1.12	1.30
Interest expense	0.13	0.10	0.11	0.17
Loss on disposal of non-current assets	0.59	0.75	0.63	0.68
Foreign exchange losses	0.46	0.00	0.02	0.00
Others	0.51	0.43	0.36	0.45
Extraordinary Income	-	-	-	-
Extraordinary Loss	-	-	-	-
Comprehensive Income	30.76	-	26.20	-
Net income	27.14	-	29.37	-
Net income attributable to non-controlling interests	0.16	-	0.14	-
Valuation difference on available-for-sale securities	3.57	-	-3.02	-
Foreign currency translation adjustment	-0.12	-	-0.16	-
Others	0.01	-	-0.13	-

FY2018 Actual, FY2019 Outlook

Cash Flows

(¥billion)

	FY2017 Actual	FY2018 Outlook as of Nov. 2018	2018 Actual	FY2019 Outlook
CF from operating activities	37.7	35.2	32.1	36.8
Income before income taxes & non-controlling interests	36.2	40.1	39.1	40.2
Depreciation & Amortization	10.5	11.1	10.9	10.7
Income taxes paid	-7.3	-9.7	-9.4	-9.0
Working capital, others	-1.7	-6.3	-8.5	-5.1
CF from investing activities	-15.2	-12.9	-10.9	-12.5
Purchase of PPE	-13.8	-12.3	-9.7	-12.2
Purchase and sales of investment securities	-0.7	-0.5	-0.5	0.0
Others	-0.7	-0.1	-0.7	-0.3
CF from financing activities	-20.3	-18.3	-22.6	-23.4
Total payout to shareholders (dividend & share repurchase)	-18.1	-16.3	-20.3	-21.4
Borrowings	-2.1	-2.0	-2.1	-2.0
Others	-0.1	0.0	-0.2	0.0
Effect of exchange rate change on cash & cash equivalents	-0.2	0.0	-0.1	0.0
Change in cash & cash equivalents	2.0	4.0	-1.5	0.9
Cash & cash equivalents at end of period	37.7	41.7	36.2	37.1

FY2018 Balance Sheets

(¥billion)

	2018/3	2019/3	Change
Current assets	145.6	152.5	+6.9
Cash	37.7	36.2	-1.5
Accounts receivable	65.4	69.2	+3.8
Inventories	37.8	42.0	+4.2
Others	4.7	5.1	+0.4
Fixed assets	100.4	94.5	-5.9
Total PPE	54.5	52.7	-1.8
Intangible assets	1.8	1.5	-0.3
Investment securities	38.5	35.2	-3.3
Others	5.6	5.1	-0.5
Total assets	246.0	247.0	+1.0

	2018/3	2019/3	Change
Liabilities	69.6	64.9	-4.7
Accounts payable	18.6	17.8	-0.8
Borrowings	28.6	26.6	-2.0
Others	22.4	20.5	-1.9
Net assets	176.4	182.1	+5.7
Shareholders' equity	160.4	169.5	+9.1
Valuation difference on available-for-sale securities	13.7	10.6	-3.1
Foreign currency translation adjustment	0.1	0.0	-0.1
Non-controlling interests	1.8	1.7	-0.1
Remeasurements of defined benefit plans	0.4	0.3	-0.1
Total liabilities & Net assets	246.0	247.0	+1.0

*Balance Sheet as of 2018/3 is restated to reflect changes in presentation from including an impact of "Partial Amendments to Accounting Standard for Tax Effect Accounting"

• Equity Ratio 71.0% 73.0%

• D/E Ratio (1) -5.7% -5.7%

• Change in shareholders' equity +9.1

= Net Income 29.4 - Dividend and others 20.3

(1)D/E Ratio = (Borrowings - Cash) / Shareholders' equity 11

FY2019 Outlook

(¥billion)

	FY2018 Actual					FY2019 Outlook					Change					Change (%)
	1Q	2Q	1H	2H	Total	1Q	2Q	1H	2H	Total	1Q	2Q	1H	2H	Total	Total
Sales	50.9	47.1	98.0	106.9	204.9	49.7	49.3	99.0	111.5	Record 210.5	-1.2	+2.2	+1.0	+4.6	+5.6	+3%
Operating Profit	10.7	8.7	19.4	17.7	37.1	8.7	9.1	17.8	20.9	Record 38.7	-2.0	+0.4	-1.6	+3.2	+1.6	+4%
Non-Operating Income/Expenses	1.2	0.0	1.2	0.8	2.0	1.1	-0.5	0.6	0.9	1.5	-0.1	-0.5	-0.6	+0.1	-0.5	-25%
Ordinary Income	11.9	8.7	20.6	18.5	39.1	9.8	8.6	18.4	21.8	Record 40.2	-2.1	-0.1	-2.2	+3.3	+1.1	+3%
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	8.8	6.6	15.4	14.0	29.4	7.2	6.5	13.7	16.5	Record 30.2	-1.6	-0.1	-1.7	+2.5	+0.8	+3%
EBITDA (1)	13.1	11.3	24.4	23.6	48.0	-	-	22.8	26.6	49.4	-	-	-1.6	+3.0	+1.4	+3%
EPS (¥/share)	59.25	44.28	103.53	94.14	197.67	-	-	93.25	112.58	205.83	-	-	-10.28	+18.44	+8.16	+4%
Dividend (¥/share)	-	-	40	42	82	-	-	42	46	88	-	-	+2	+4	+6	
Total amount of Dividend	-	-	5.9	6.2	12.1	-	-	6.2	6.7	12.9	-	-	+0.3	+0.5	+0.8	
OP Margin	21.0%	18.5%	19.8%	16.6%	18.1%	17.5%	18.5%	18.0%	18.7%	18.4%	-3.5%	-0.0%	-1.8%	+2.1%	+0.3%	
ROE	-	-	-	-	16.6%	-	-	-	-	16.3%						-0.3%
FX Rate (¥/\$)	109	111	110	112	111	-	-	110	110	110						
Naphtha (¥/kl)	48,700	53,500	51,200	48,400	49,700	-	-	43,000	43,000	43,000						
Comprehensive Income	7.5	9.2	16.7	9.5	26.2	(1) EBITDA = Operating Profit + Depreciation										

FY2019 OP Outlook vs. FY2018 OP Actual : 1H down ¥1.6 billion (1Q down ¥2.0 billion, 2Q up ¥0.4 billion), 2H up ¥3.2 billion, Full year up ¥1.6 billion (see p18)

FY2019 Outlook

<vs. FY2018>

(Sales) ◆Up ¥5.6 billion (+3%)

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

(OP) ◆Up ¥1.6 billion (+4%)

(+) Chemicals, Agrochemicals
(±) Performance Materials, Pharmaceuticals, Trading

(Ordinary Income) ◆Up ¥1.1 billion (+3%)

(Net Income) ◆Up ¥0.8 billion (+3%)

(EPS) ◆Up ¥8.16 (+4%)

(ROE) ◆16.3% (FY2018 16.6%)

★ OP and Ordinary Income expected to renew the highest results of a full year in 6 consecutive years.

★ Net Income expected to renew the highest results of a full year in 7 consecutive years.

<Shareholder Return>

(Dividend) ◆1H ¥42, 2H ¥46, total ¥88/share, dividend payout ratio 42.8% (1.3% up vs. FY2018)
(¥6/share up vs. FY2018)

(Share Repurchases) ◆¥6.0 billion, 1.7 million shares (announced in May 15, 2019)
(Cancelled 1 million shares in May 2019)

(Total Payout Ratio) ◆Target 72.5% (Mid-Term Plan target 72.5% in FY2019, 75% in FY2020 and 2021)

1Q and 1H FY2019 Outlook

<1Q FY2019 vs. 1Q FY2018>

(Sales) ◆Down ¥1.2billion (-2%)

(OP) ◆Down ¥2.0billion (-19%)

(+) Chemicals, Performance Materials, Trading

(-) Agrochemicals, Pharmaceuticals

(±) Trading

(-) Chemicals, Performance Materials, Agrochemicals,
Pharmaceuticals

(Ordinary Income) ◆Down ¥2.1billion (-18%)

(Net Income) ◆Down ¥1.6billion (-18%)

<1H FY2019 vs. 1H FY2018>

(Sales) ◆Up ¥1.0billion (+1%)

(OP) ◆Down ¥1.6billion (-8%)

(+) Chemicals, Trading

(-) Performance Materials, Agrochemicals,
Pharmaceuticals,

(+) Chemicals

(-) Performance Materials, Agrochemicals,
Pharmaceuticals, Trading

(Ordinary Income) ◆Down ¥2.2billion (-11%)

(Net Income) ◆Down ¥1.7billion (-11%)

FY2018 Sales by Segment (1)

(¥billion)

	FY2017					FY2018					Change					FY2018 Outlook as of Nov. 2018				
	1H	3Q	4Q	2H	Total	1H	3Q	4Q	2H	Total	1H	3Q	4Q	2H	Total	1H Actual	3Q	4Q	2H	Total
Chem	16.7	9.2	9.0	18.2	34.9	17.0	9.6	9.1	18.7	35.7	+0.3	+0.4	+0.1	+0.5	+0.8	17.0	10.2	10.6	20.8	37.8
Fine	5.3	2.8	2.5	5.3	10.6	5.1	2.6	2.7	5.3	10.4	-0.2	-0.2	+0.2	-0.0	-0.2	5.1	2.8	3.4	6.2	11.3
Basic	11.4	6.4	6.5	12.9	24.3	11.9	7.0	6.4	13.4	25.3	+0.5	+0.6	-0.1	+0.5	+1.0	11.9	7.4	7.2	14.6	26.5
P.M	29.1	15.1	14.6	29.7	58.8	32.0	16.6	14.4	31.0	63.0	+2.9	+1.5	-0.2	+1.3	+4.2	32.0	15.8	16.0	31.8	63.8
Agro	26.1	6.4	25.6	32.0	58.1	28.7	5.9	28.1	34.0	62.7	+2.6	-0.5	+2.5	+2.0	+4.6	28.7	5.7	28.2	33.9	62.6
Pharma	3.5	2.3	1.7	4.0	7.5	3.7	1.9	1.4	3.3	7.0	+0.2	-0.4	-0.3	-0.7	-0.5	3.7	1.3	2.0	3.3	7.0
Trading	29.1	15.9	14.5	30.4	59.5	33.4	18.1	16.4	34.5	67.9	+4.3	+2.2	+1.9	+4.1	+8.4	33.4	17.3	15.6	32.9	66.3
Others	9.7	4.6	7.2	11.8	21.5	10.5	7.2	6.9	14.1	24.6	+0.8	+2.6	-0.3	+2.3	+3.1	10.5	5.4	6.6	12.0	22.5
Adjust	-23.2	-11.8	-11.9	-23.7	-46.9	-27.3	-15.4	-13.3	-28.7	-56.0	-4.1	-3.6	-1.4	-5.0	-9.1	-27.3	-12.8	-14.4	-27.2	-54.5
Total	91.0	41.7	60.7	102.4	193.4	98.0	43.9	63.0	106.9	204.9	+7.0	+2.2	+2.3	+4.5	+11.5	98.0	42.9	64.6	107.5	205.5

(1) Including inter-segment sales/transfers

FY2018 OP by Segment

(¥billion)

	FY2017					FY2018					Change					FY2018 Outlook as of Nov. 2018				
	1H	3Q	4Q	2H	Total	1H	3Q	4Q	2H	Total	1H	3Q	4Q	2H	Total	1H Actual	3Q	4Q	2H	Total
Chem	1.3	1.2	0.9	2.1	3.4	1.2	1.0	0.8	1.8	3.0	-0.1	-0.2	-0.1	-0.3	-0.4	1.2	1.4	1.3	2.7	3.9
P.M	7.7	4.0	2.5	6.5	14.2	8.1	4.3	2.6	6.9	15.0	+0.4	+0.3	+0.1	+0.4	+0.8	8.1	3.5	3.7	7.2	15.3
Agro	8.1	-0.6	8.9	8.3	16.4	9.8	-1.3	9.9	8.6	18.4	+1.7	-0.7	+1.0	+0.3	+2.0	9.8	-1.4	10.0	8.6	18.4
Pharma	0.5	0.6	0.1	0.7	1.2	0.6	0.4	0.0	0.4	1.0	+0.1	-0.2	-0.1	-0.3	-0.2	0.6	0.1	0.5	0.6	1.2
Trading	0.9	0.5	0.4	0.9	1.8	1.1	0.6	0.3	0.9	2.0	+0.2	+0.1	-0.1	-0.0	+0.2	1.1	0.5	0.5	1.0	2.1
Others	0.2	0.1	0.3	0.4	0.6	0.2	0.2	0.5	0.7	0.9	+0.0	+0.1	+0.2	+0.3	+0.3	0.2	0.0	0.4	0.4	0.6
Adjust	-1.4	-0.7	-0.5	-1.2	-2.6	-1.6	-0.8	-0.8	-1.6	-3.2	-0.2	-0.1	-0.3	-0.4	-0.6	-1.6	-0.9	-0.9	-1.8	-3.4
Total	17.3	5.1	12.6	17.7	35.0	19.4	4.4	13.3	17.7	37.1	+2.1	-0.7	+0.7	-0.0	+2.1	19.4	3.2	15.5	18.7	38.1

FY2019 Sales Outlook by Segment (1)

(¥billion)

	FY2018 Actual					FY2019 Outlook					Change				
	1Q	2Q	1H	2H	Total	1Q	2Q	1H	2H	Total	1Q	2Q	1H	2H	Total
Chem	8.7	8.3	17.0	18.7	35.7	9.4	9.5	18.9	20.1	39.0	+0.7	+1.2	+1.9	+1.4	+3.3
Fine Chemicals	2.7	2.4	5.1	5.3	10.4	2.9	3.0	5.9	6.0	11.9	+0.2	+0.6	+0.8	+0.7	+1.5
Basic Chemicals	6.0	5.9	11.9	13.4	25.3	6.5	6.5	13.0	14.1	27.1	+0.5	+0.6	+1.1	+0.7	+1.8
Performance Materials	15.6	16.4	32.0	31.0	63.0	15.9	15.8	31.7	32.6	64.3	+0.3	-0.6	-0.3	+1.6	+1.3
Agro	16.4	12.3	28.7	34.0	62.7	14.1	14.2	28.3	35.9	64.2	-2.3	+1.9	-0.4	+1.9	+1.5
Pharma	1.8	1.9	3.7	3.3	7.0	1.6	1.8	3.4	3.6	7.0	-0.2	-0.1	-0.3	+0.3	+0.0
Trading	17.8	15.6	33.4	34.5	67.9	18.8	15.2	34.0	33.8	67.8	+1.0	-0.4	+0.6	-0.7	-0.1
Others	4.6	5.9	10.5	14.1	24.6	5.0	4.9	9.9	13.4	23.3	+0.4	-1.0	-0.6	-0.7	-1.3
Adjustment	-14.0	-13.3	-27.3	-28.7	-56.0	-15.1	-12.1	-27.2	-27.9	-55.1	-1.1	+1.2	+0.1	+0.8	+0.9
Total	50.9	47.1	98.0	106.9	204.9	49.7	49.3	99.0	111.5	210.5	-1.2	+2.2	+1.0	+4.6	+5.6

(1) Including inter-segment sales/transfers

FY2019 OP Outlook by Segment

(¥billion)

	FY2018 Actual					FY2019 Outlook					Change				
	1Q	2Q	1H	2H	Total	1Q	2Q	1H	2H	Total	1Q	2Q	1H	2H	Total
Chem	1.6	-0.4	1.2	1.8	3.0	1.4	-0.1	1.3	2.7	4.0	-0.2	+0.3	+0.1	+0.9	+1.0
Performance Materials	3.9	4.2	8.1	6.9	15.0	3.6	3.8	7.4	7.6	15.0	-0.3	-0.4	-0.7	+0.7	+0.0
Agro	5.1	4.7	9.8	8.6	18.4	3.6	5.6	9.2	9.8	19.0	-1.5	+0.9	-0.6	+1.2	+0.6
Pharma	0.3	0.3	0.6	0.4	1.0	0.1	0.4	0.5	0.5	1.0	-0.2	+0.1	-0.1	+0.1	+0.0
Trading	0.6	0.5	1.1	0.9	2.0	0.6	0.4	1.0	1.0	2.0	+0.0	-0.1	-0.1	+0.1	-0.0
Others	0.1	0.1	0.2	0.7	0.9	0.0	0.0	0.0	0.6	0.6	-0.1	-0.1	-0.2	-0.1	-0.3
Adjustment	-0.9	-0.7	-1.6	-1.6	-3.2	-0.6	-1.0	-1.6	-1.3	-2.9	+0.3	-0.3	+0.0	+0.3	+0.3
Total	10.7	8.7	19.4	17.7	37.1	8.7	9.1	17.8	20.9	38.7	-2.0	+0.4	-1.6	+3.2	+1.6

FY2018 Sales Outlook of Future Growth Engines

announced in November 2018

(1) Including R&D costs deduction due to the sample shipments

FY2018 Sales Outlook Level (1)	Below ¥0.3 billion	¥0.3 to ¥0.6 billion	Above ¥0.6 billion	Total
Chem	New TEPIC (Liquid type) (Fine Chemicals)			¥0.0 billion
Performance Materials	HYPERTECH (High refractive) (Display) Light control film materials (Display) Hole injection layer materials for OLED (Display) Alignment materials for LC retarder (Display) Repellant bank layer materials (Display) EUV under layer (Semis) CMOS image sensor materials (Semis) Organosol (Insulation CTE) (Inorganic) New high refractive materials (IM layer film) (Inorganic)	3D packaging process materials (Semis)	Oilfield materials (Inorganic)	¥2.2 billion
Agro	NEXTER (Licensed-in) TRANSFORM™/EXCEED™ (Licensed-in)	GRACIA (In-house)		¥1.0 billion
Pharma, Others	New GE API product (Custom Chemicals) Eldecalcitol (Custom Chemicals) 3D Cell culture medium	Maxacalcitol (Custom Chemicals)		¥0.7 billion

Total ¥3.9 billion

FY2018 Sales Actual of Future Growth Engines

(1) Including R&D costs deduction due to the sample shipments

FY2018 Sales Actual Level (1)	Below ¥0.3 billion	¥0.3 to ¥0.6 billion	Above ¥0.6 billion	Total	
Chem	<p>New TEPIC (Liquid type) (Fine Chemicals)</p> <p>Venus® Oilclean (Fine Chemicals)</p>			¥0.0 billion	
Performance Materials	<p>HYPERTECH (High refractive) (Display)</p> <p>Hole injection layer materials for OLED (Display)</p> <p>Alignment materials for LC retarder (Display)</p> <p>CMOS image sensor materials (Semis)</p> <p>Organosol (Insulation CTE) (Inorganic)</p> <p>New high refractive materials (IM layer film) (Inorganic)</p>	<p>Light control film materials (Display)</p> <p>Repellant bank layer materials (Display)</p> <p>EUV under layer (Semis)</p> <p>Monomersol (3D-printing) (Inorganic)</p>	<p>Oilfield materials (Inorganic)</p> <p>3D packaging process materials (Semis)</p>	¥1.9 billion	
Agro	<p>NEXTER (Licensed-in)</p> <p>CLARE (In-house)</p>	<p>TRANSFORM™/ EXCEED™/ VIRESCO™ (Licensed-in)</p>	<p>GRACIA (In-house)</p>	<p>ROUNDUP AL II/III (In-house)</p>	¥2.0 billion
Pharma, Others	<p>New GE API product (Custom Chemicals)</p> <p>3D Cell culture medium</p>	<p>Eldecalcitol (Custom Chemicals)</p>	<p>Maxacalcitol (Custom Chemicals)</p>	¥0.7 billion	

Total ¥4.6 billion

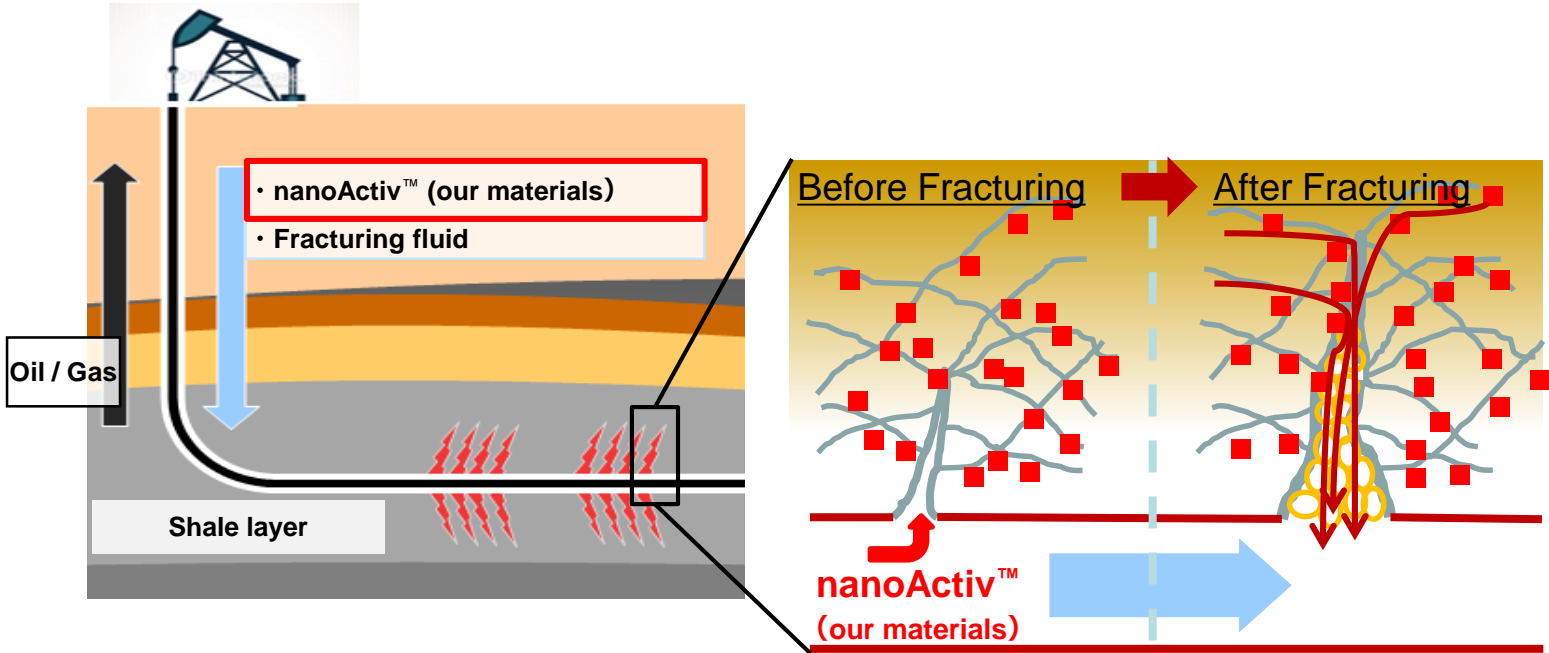
FY2019 Sales Outlook of Future Growth Engines

(1) Including R&D costs deduction due to the sample shipments

FY2019 Sales Outlook Level (1)	Below ¥0.3 billion	¥0.3 to ¥0.6 billion	Above ¥0.6 billion	Total
Chem	<p>New TEPIC (Liquid type) (Fine Chemicals)</p> <p>Venus® Oilclean (Fine Chemicals)</p>			¥0.1 billion
Performance Materials	<p>HYPERTECH (High refractive) (Display)</p> <p>Hole injection layer materials for OLED (Display)</p> <p>Alignment materials for LC retarder (Display)</p> <p>CMOS image sensor materials (Semis)</p> <p>Organosol (Insulation CTE) (Inorganic)</p> <p>New high refractive materials (IM layer film) (Inorganic)</p> <p>Light control film materials (Display)</p> <p>Repellant bank layer materials (Display)</p> <p>Monomersol (3D-printing) (Inorganic)</p>	<p>3D packaging process materials (Semis)</p> <p>EUV under layer (Semis)</p>	<p>Oilfield materials (Inorganic)</p>	¥3.1 billion
Agro	<p>NEXTER (Licensed-in)</p> <p>CLARE (In-house)</p> <p>ALEILE (In-house)</p>	<p>TRANSFORM™/ EXCEED™/ VIRESCO™ (Licensed-in)</p>	<p>GRACIA (In-house)</p> <p>ROUNDUP AL II / III (In-house)</p>	¥5.6 billion
Pharma, Others	<p>New GE API product (Custom Chemicals)</p> <p>3D Cell culture medium</p> <p>New GE API product (Custom Chemicals)</p>	<p>Eldecalcitol (Custom Chemicals)</p>		¥0.6 billion

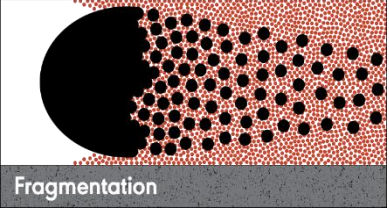
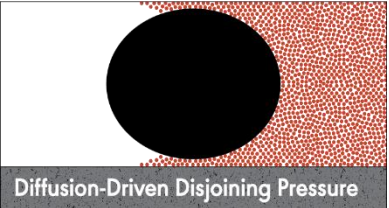
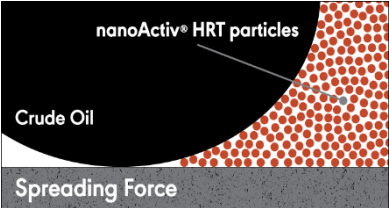
Total ¥9.4 billion

Oilfield Materials



Brownian Motion/Diffusion
⇒ Spreading Force

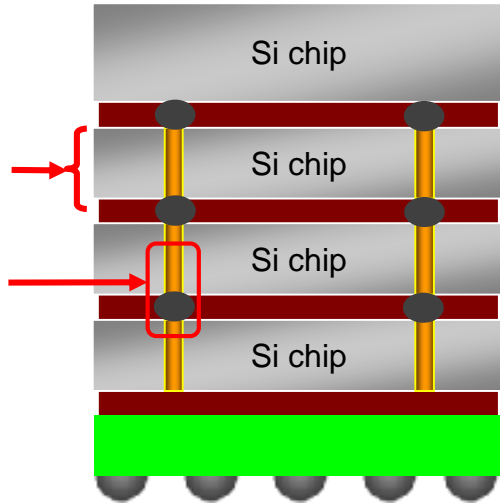
Wasan & Nikolov, *Nature*, Vol. 423, 2003.



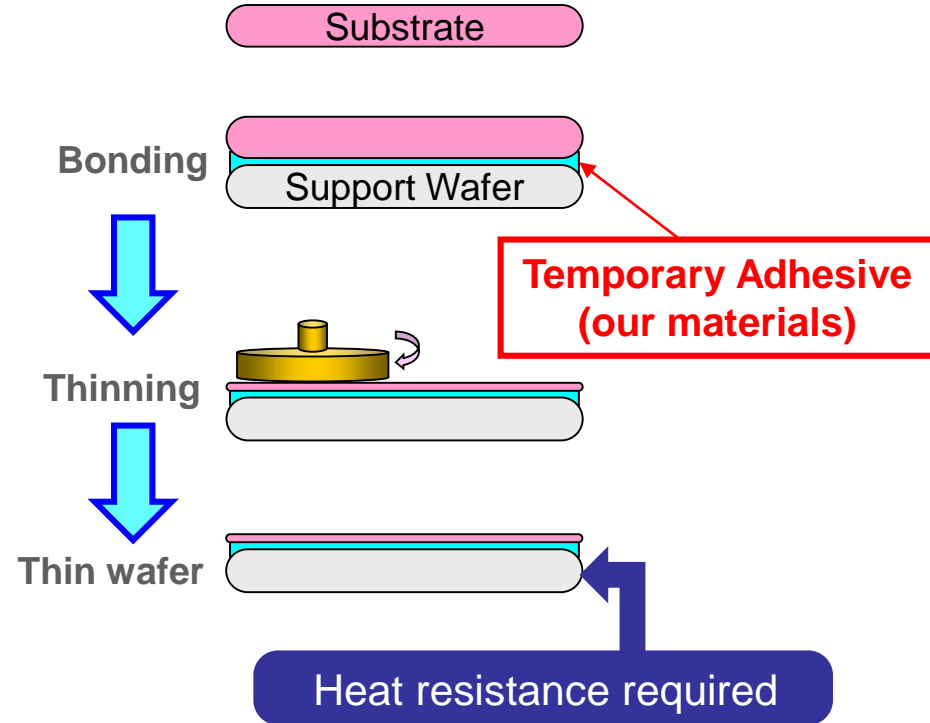
3D Packaging Process Materials

TSV (Through silicon via) technology

- Need for thinner substrate
- High temperature process required for TSV

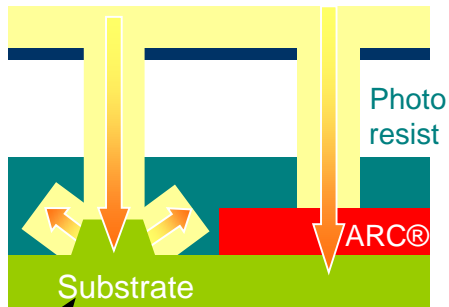


Using Temporary Adhesive system



EUV Under Layer

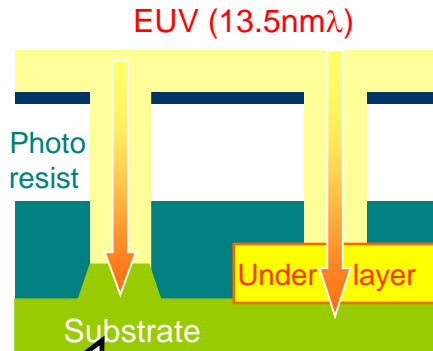
~ ArF lithography



Reflection

ARC® eliminates reflection effectively from substrate

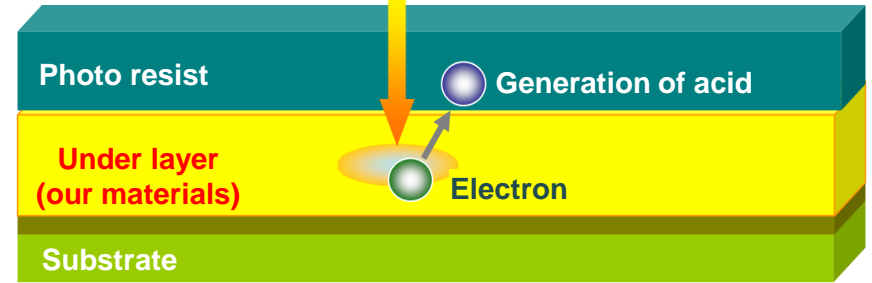
EUV lithography



Pass through

Reflection control is NOT necessary due to no reflection from substrate

EUV



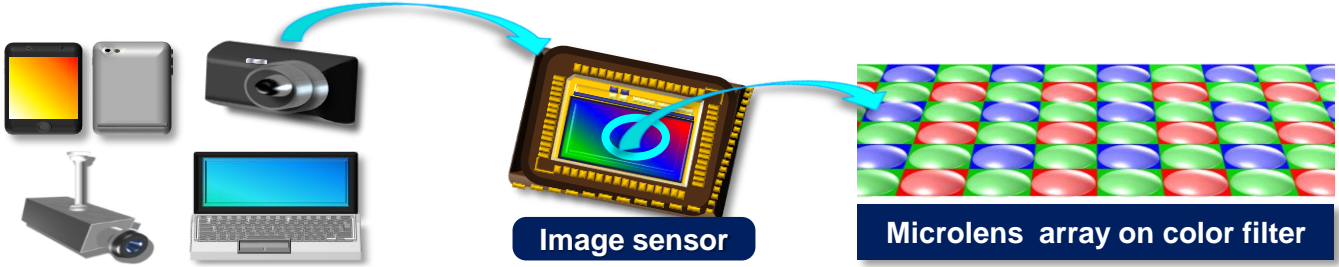
Without under layer

With under layer

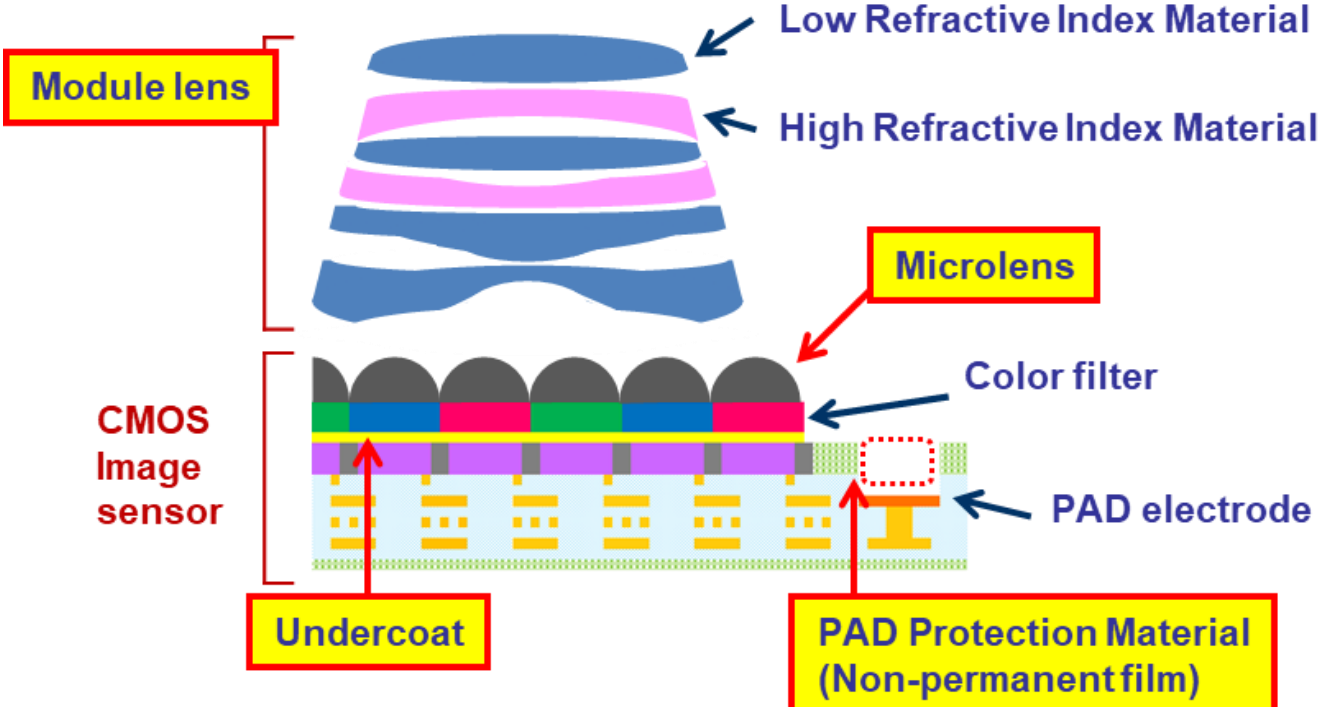


Under layer (our materials)

CMOS Image Sensor Materials

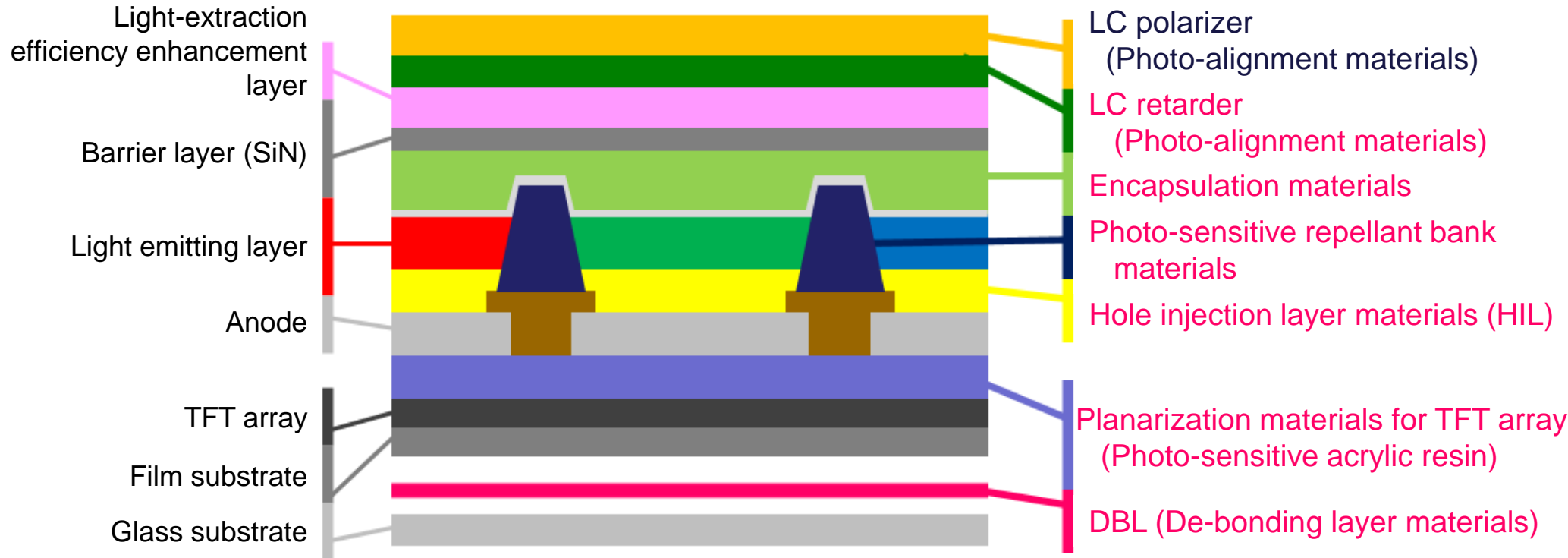


Our Materials



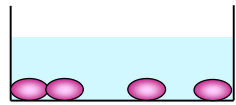
OLED-related Materials

Our Materials

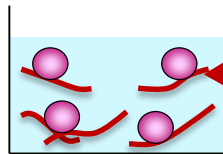
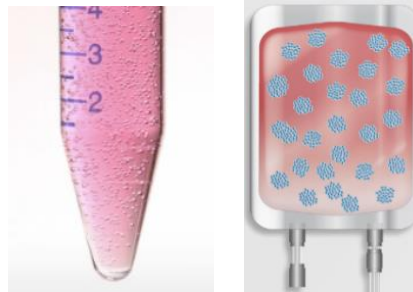


3D Cell Culture Medium

Conventional 2D method



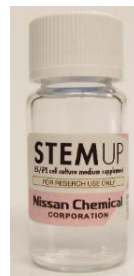
New 3D method for cultivating large amounts of cells



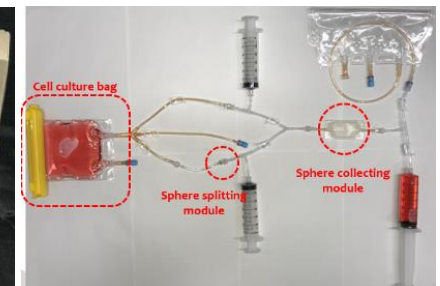
**Our
material**

- Our material is used for cultivating large amounts of iPS/ES cells, Mesenchymal stem cell (MSC) and so on.
- Cells are dispersed uniformly and floated by the used of our products.

"STEMUP" Culture supplement



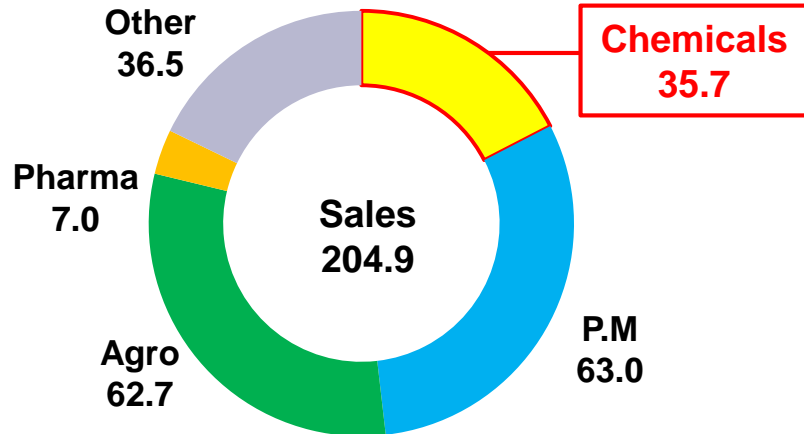
Culture system



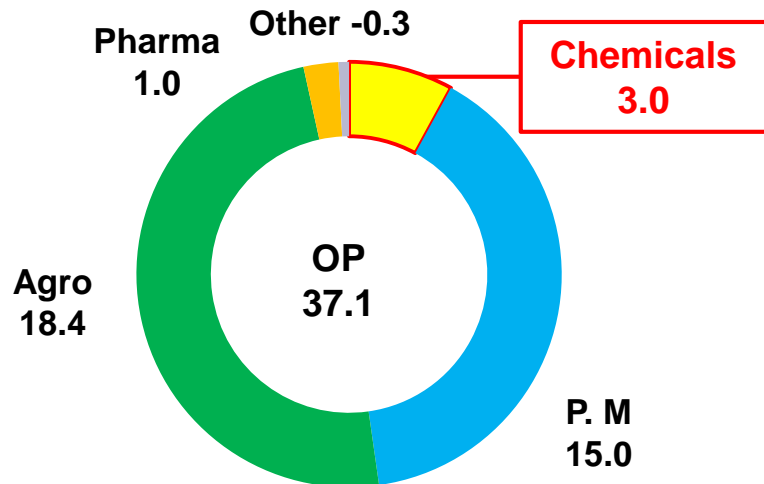
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Chemicals – (A) Recent Financial Performance

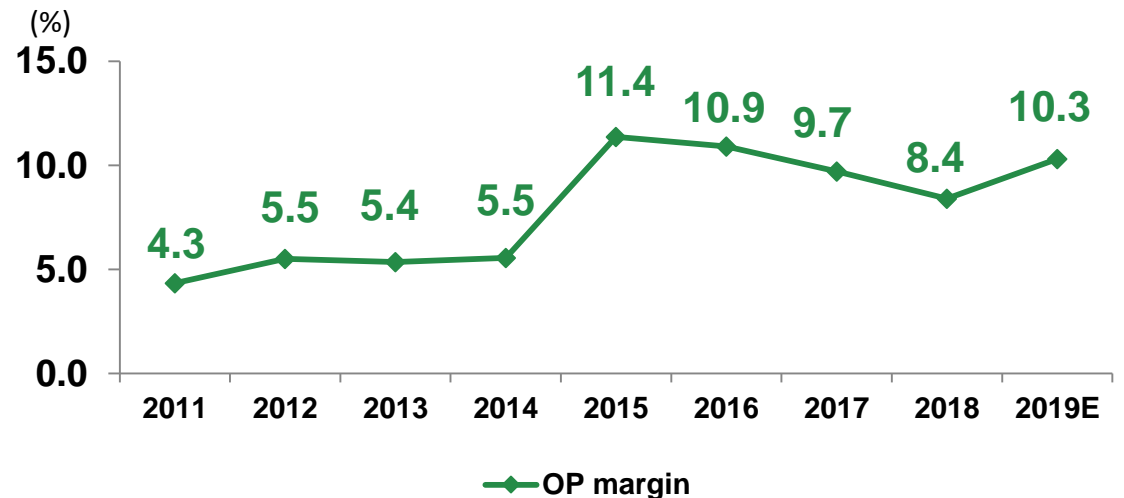
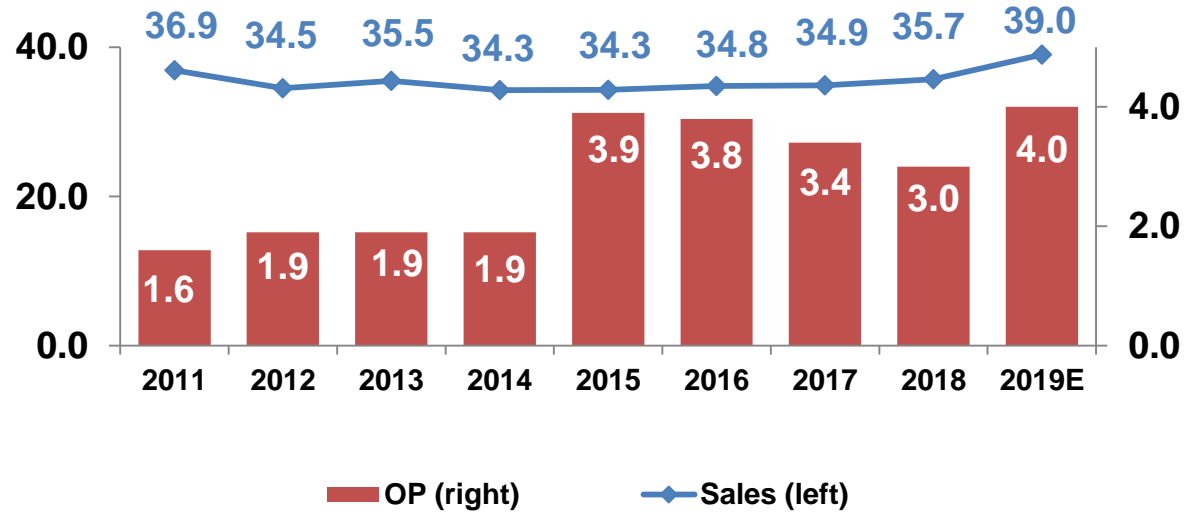
1. FY2018 Sales Distribution (¥billion)



2. FY2018 OP Distribution (¥billion)

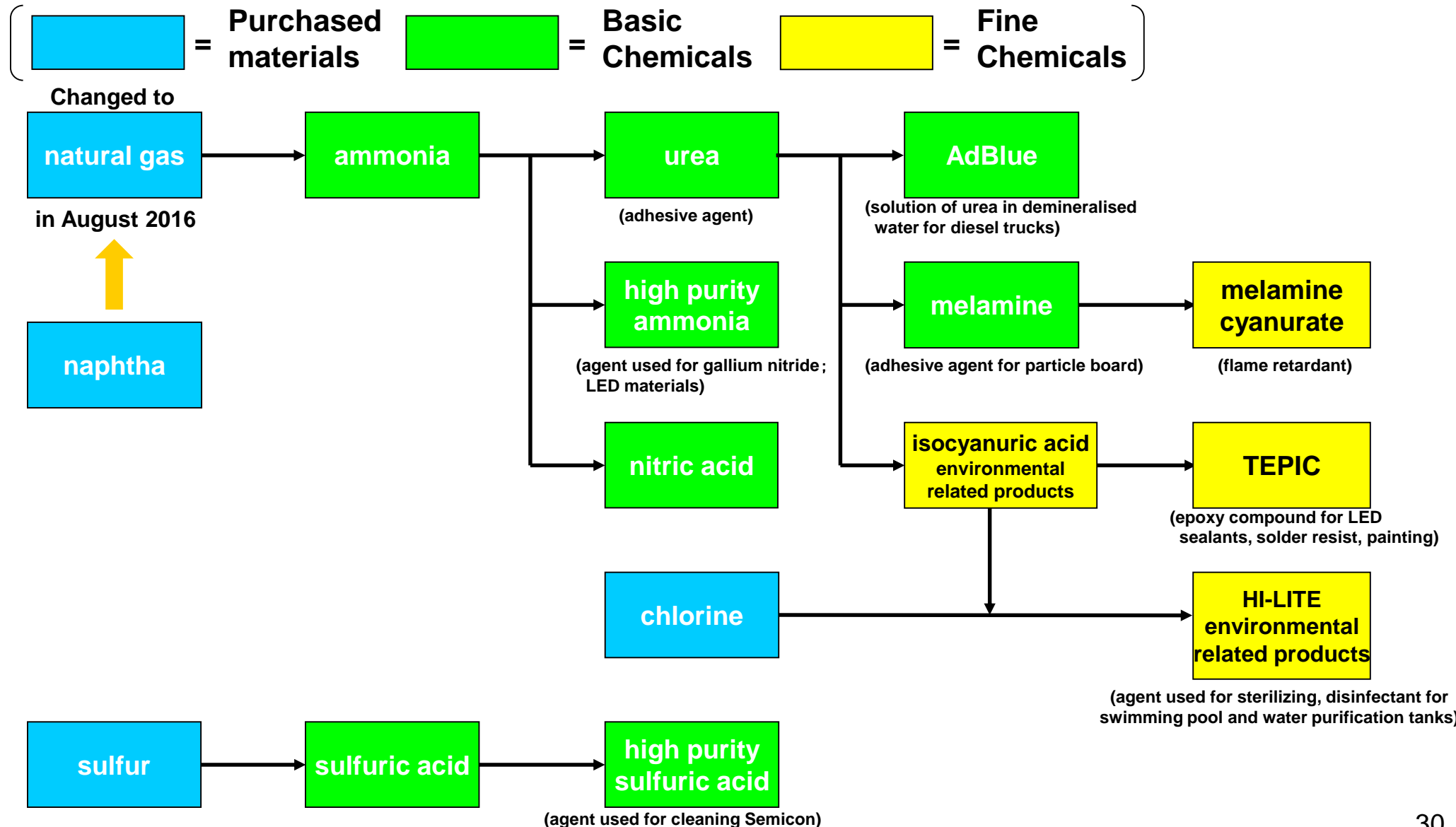


3. Recent Financial Performance (¥billion)



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

- ◆ Core products of Basic Chemicals : Ammonia related products and sulfuric acid related products
- ◆ FY2018 ammonia domestic production capacity share 11%, high percentage of self-consumption of ammonia



Chemicals – (C) Fine Chemicals Subsegment

FY2018 Sales Review

<1H FY2018 vs. 1H FY2017>

- ◆ TEPIC : Export sales for general applications down, sales for electronic materials down
- ◆ Environmental related products : Domestic sales flat, export sales up, price increases

<2H FY2018 vs. 2H FY2017>

- ◆ TEPIC : Export sales for general applications down (cheap Chinese export up), sales for electronic materials down
- ◆ Environmental related products : Domestic sales up, export sales up, price increases

<2H FY2018 vs. 2H FY2018 Outlook as of Nov. 2018>

- ◆ TEPIC : Export sales for general applications below target (cheap Chinese export up), sales for electronic materials below target
- ◆ Environmental related products : Both export and domestic sales below target

FY2019 Sales Outlook

<vs. FY2018>

- ◆ TEPIC : Export sales for general applications up, sales for electronic materials up (maintain/increase market share)
- ◆ Environmental related products : Domestic sales up (price increases), export sales up

Main Products		Sales YOY Change										
		FY2018 Outlook as of Nov. 2018			FY2018 Actual					FY2019 Outlook		
		1H Actual	2H	Total	1H	3Q	4Q	2H	Total	1H	2H	Total
Total Subsegment		-3%	+14%	+6%	-3%	-6%	+5%	-1%	-2%	+14%	+14%	+14%
TEPIC	◆ Epoxy compound for : (A) electronic materials (solder resist, LED materials), (B) general applications such as powder coating agent for paint ◆ World largest producer	-6%	+18%	+7%	-6%	-5%	-6%	-5%	-6%	+21%	+17%	+19%
Environmental related products	◆ HI-LITE : made from chlorinated isocyanuric acid, used for sterilizing, disinfectant for swimming pool as well as water purification tank	+8%	+10%	+9%	+8%	+6%	+7%	+6%	+7%	+6%	+7%	+6%

Two products account for 82% of total consolidated subsegment sales (FY2018)

- ◆ FY2018 Production capacity expansion of TEPIC for electronic materials (to be completed in August 2019, capex ¥0.5 billion)

Chemicals – (D) Basic Chemicals Subsegment

FY2018 Sales Review

<1H FY2018 vs. 1H FY2017>

- ◆ Melamine : Both domestic and export sales up, plant troubles in FY2017 and FY2018 (1)(2)
- ◆ Urea including AdBlue : Urea down, AdBlue up
- ◆ High purity sulfuric acid : Down due to a customer's temporary plant shutdown

<2H FY2018 vs. 2H FY2017>

- ◆ Melamine : Domestic sales up (absence of 2H FY2017 plant shutdown(1)), export down (cheap Chinese export up)
- ◆ Urea including AdBlue : Urea down, AdBlue up
- ◆ High purity sulfuric acid : Down due to weak domestic semis customers' orders

<2H FY2018 vs. 2H FY2018 Outlook as of Nov. 2018>

- ◆ Melamine : Domestic sales above target, export sales below target (cheap Chinese export up)
- ◆ Urea including AdBlue : Urea below target, AdBlue below target
- ◆ High purity sulfuric acid : Below target due to demand decrease by domestic semis customers

FY2019 Sales Outlook

<vs. FY2018>

- ◆ Melamine : Domestic sales up, export sales up, absence of 1H FY2018 plant shutdown(2)
- ◆ Urea including AdBlue : Urea down, AdBlue up
- ◆ High purity sulfuric acid : Up due to semis customers' new plants

Main Products		Sales YOY Change										
		FY2018 Outlook as of Nov. 2018			FY2018 Actual					FY2019 Outlook		
		1H Actual	2H	Total	1H	3Q	4Q	2H	Total	1H	2H	Total
Total Subsegment		+4%	+14%	+9%	+4%	+9%	-2%	+4%	+4%	+10%	+5%	+7%
Melamine	◆ Mainly used as adhesive agent for particle board, medium density fiberboard, plywood	+27%	+46%	+39%	+27%	+33%	-15%	+6%	+15%	+22%	+12%	+16%
Urea including AdBlue	◆ Urea: mainly used for urea formaldehyde resin, adhesive agent ◆ AdBlue: solution of urea in demineralised water for diesel trucks to reduce Nox	-3%	+7%	+2%	-3%	+4%	-2%	+1%	-1%	+7%	+1%	+4%
High purity sulfuric acid	◆ Used to clean semiconductors ◆ Largest in domestic market	-4%	+5%	+0%	-4%	-1%	-7%	-4%	-4%	+3%	+17%	+10%

Three products account for 39% of total consolidated subsegment sales (FY2018)

(1) From August 2017 to October 2017, melamine plant temporarily shutdown due to mechanical troubles, and normalized on October 12, 2017

(Estimated impact) (1H) OP down ¥0.37 billion (3Q) OP down ¥0.12 billion

In March 2018, ammonia plant temporarily shutdown due to mechanical troubles, and normalized on March 24, 2018

(Estimated impact) (4Q) OP down ¥0.27 billion

(2) In 1H FY2018, ammonia and melamine plants temporarily shutdown several times (and normalized) (Estimated impact) (1H) OP down ¥0.38 billion

Chemicals – (E-1) Profit Overview

(¥billion)

	FY2017 Actual					2H FY2018 Outlook as of Nov. 2018			FY2018 Actual (A)							FY2019 Outlook(B)					Change (B) - (A)				
	1H	3Q	4Q	2H	Total	3Q	4Q	2H	1Q	2Q	1H	3Q	4Q	2H	Total	1Q	2Q	1H	2H	Total	1Q	2Q	1H	2H	Total
Sales	16.7	9.2	9.0	18.2	34.9	10.2	10.6	20.8	8.7	8.3	17.0	9.6	9.1	18.7	35.7	9.4	9.5	18.9	20.1	39.0	+0.7	+1.2	+1.9	+1.4	+3.3
Fine	5.3	2.8	2.5	5.3	10.6	2.8	3.4	6.2	2.7	2.4	5.1	2.6	2.7	5.3	10.4	2.9	3.0	5.9	6.0	11.9	+0.2	+0.6	+0.8	+0.7	+1.5
Basic	11.4	6.4	6.5	12.9	24.3	7.4	7.2	14.6	6.0	5.9	11.9	7.0	6.4	13.4	25.3	6.5	6.5	13.0	14.1	27.1	+0.5	+0.6	+1.1	+0.7	+1.8
OP	1.3	1.2	0.9	2.1	3.4	1.4	1.3	2.7	1.6	-0.4	1.2	1.0	0.8	1.8	3.0	1.4	-0.1	1.3	2.7	4.0	-0.2	+0.3	+0.1	+0.9	+1.0

3Q FY2018 Review

<vs. 3Q FY2017>

(Fine Chemicals)

- ◆ Sales of TEPIC for both general applications and electronic materials down, Sales of environmental related products up
- ◆ Sales down, OP down

(Basic Chemicals)

- ◆ Sales of melamine and urea including AdBlue up
- ◆ Sales of high purity sulfuric acid down
- ◆ Price increases, feedstock and raw materials cost up
- ◆ Sales up, OP up

(Total Segment)

- ◆ Sales up ¥0.4 billion, OP down ¥0.2 billion

3Q FY2018 Review

<vs. 3Q FY2018 Outlook as of Nov. 2018>

(Fine Chemicals)

- ◆ Sales of TEPIC for general applications above target, for electronic materials below target
- ◆ Sales of environmental related products and other products below target
- ◆ Sales below target, OP below target

(Basic Chemicals)

- ◆ Sales of melamine and high purity sulfuric acid below target
- ◆ Sales of urea including AdBlue above target
- ◆ Sales below target, OP below target

(Total Segment)

- ◆ Sales down ¥0.6 billion, OP down ¥0.4 billion

4Q FY2018 Review

<vs. 4Q FY2017>

(Fine Chemicals)

- ◆ Sales of TEPIC for general applications(export) down (cheap Chinese export up), for electronic materials down
- ◆ Sales of environment related products up
- ◆ Sales up, OP up

(Basic Chemicals)

- ◆ Sales of melamine(export) down (cheap Chinese export up)
- ◆ Sales of urea including AdBlue down
- ◆ Sales of high purity sulfuric acid down
- ◆ Price increases, feedstock and raw materials cost up
- ◆ Sales down, OP down

(Total Segment)

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

4Q FY2018 Review

<vs. 4Q FY2018 Outlook as of Nov. 2018>

(Fine Chemicals)

- ◆ Sales of TEPIC for general applications(export) below target (cheap Chinese export up), for electronic materials below target
- ◆ Sales of environment related products below target
- ◆ Sales below target, OP below target

(Basic Chemicals)

- ◆ Sales of melamine (both domestic and export) below target (cheap Chinese export)
- ◆ Sales of urea including AdBlue below target
- ◆ Sales of high purity sulfuric acid below target
- ◆ Sales below target, OP below target

(Total Segment)

- ◆ Sales down ¥1.5billion, OP down ¥0.5billion

Chemicals – (E-2) Profit Overview

2H FY2018 Review

<vs. 2H FY2017>

(Fine Chemicals)

- ◆ Sales of TEPIC for general applications(export) down (cheap Chinese export up), for electronic materials down
- ◆ Sales of environment related products up
- ◆ Cost up (feedstock, raw materials)
- ◆ Sales down, OP down

(Basic Chemicals)

- ◆ Melamine domestic sales up (absence of 2H FY2017 plant shutdown), export down (cheap Chinese export up)
- ◆ Sales of urea including AdBlue up
- ◆ Sales of high purity sulfuric acid down
- ◆ Price increases, feedstock and raw materials cost up
- ◆ Sales up, OP down

(Total Segment)

- ◆ Sales up ¥0.5 billion, OP down ¥0.3 billion

2H FY2018 Review

<vs. 2H FY2018 Outlook as of Nov. 2018>

(Fine Chemicals)

- ◆ Sales of TEPIC for general applications(export) below target (cheap Chinese export up), for electronic materials below target
- ◆ Sales of environment related products below target
- ◆ Price increases below target
- ◆ Cost up (feedstock, raw materials) above expectations
- ◆ Sales below target, OP below target

(Basic Chemicals)

- ◆ Melamine domestic sales above target, export below target (cheap Chinese export)
- ◆ Sales of urea including AdBlue below target
- ◆ Sales of high purity sulfuric acid below target
- ◆ Price increases below target
- ◆ Cost up (feedstock, raw materials) above expectations
- ◆ Sales below target, OP below target

(Total Segment)

- ◆ Sales down ¥2.1 billion, OP down ¥0.9 billion

FY2018 Review

<vs. FY2017>

(Fine Chemicals)

- ◆ TEPIC export sales for general applications down (cheap Chinese export up), sales for electronic materials down
- ◆ Sales of environment related products up
- ◆ Price increases, feedstock and raw materials cost up
- ◆ Fixed cost up, inventory adjustment cost down
- ◆ Sales down, OP down

(Basic Chemicals)

- ◆ Melamine domestic sales up (absence of 2H FY2017 plant shutdown), export up (down in 2H due to cheap Chinese export)
- ◆ Sales of urea including AdBlue down
- ◆ Sales of high purity sulfuric acid down
- ◆ Price increases, feedstock and raw materials cost up, fixed cost up
- ◆ Inventory adjustment cost down
- ◆ Sales up, Op down

(Total Segment)

- ◆ Sales up ¥0.8 billion, OP down ¥0.4 billion

FY2019 Outlook

<vs. FY2018>

(Fine Chemicals)

- ◆ Sales of TEPIC for general applications(export) up, for electronic materials up (maintain/increase market share)
- ◆ Sales of environment related products up
- ◆ Feedstock and raw materials cost down, fixed cost up
- ◆ Sales up, OP up

(Basic Chemicals)

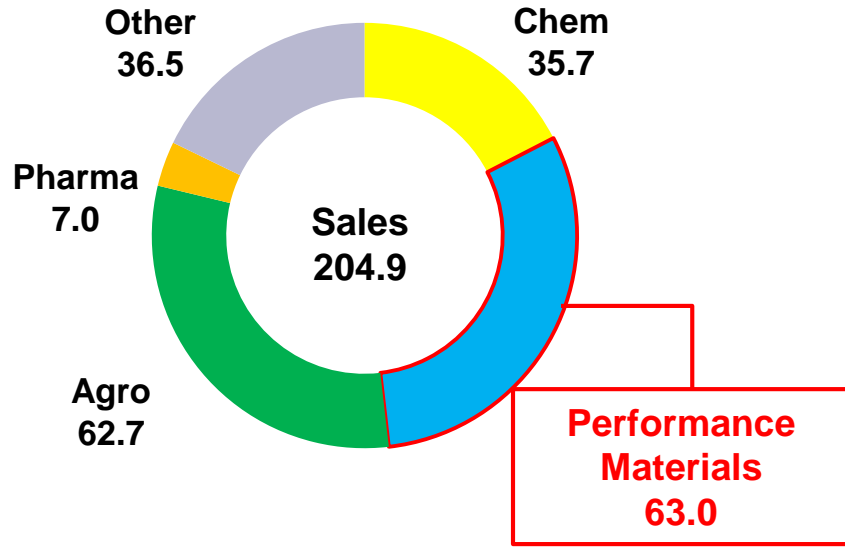
- ◆ Melamine domestic sales up (absence of 1H FY2018 plant shutdown), export up
- ◆ Sales of urea including AdBlue up
- ◆ Sales of high purity sulfuric acid up
- ◆ Feedstock and raw materials cost down, fixed cost up
- ◆ Inventory adjustment cost up
- ◆ Sales up, OP up

(Total Segment)

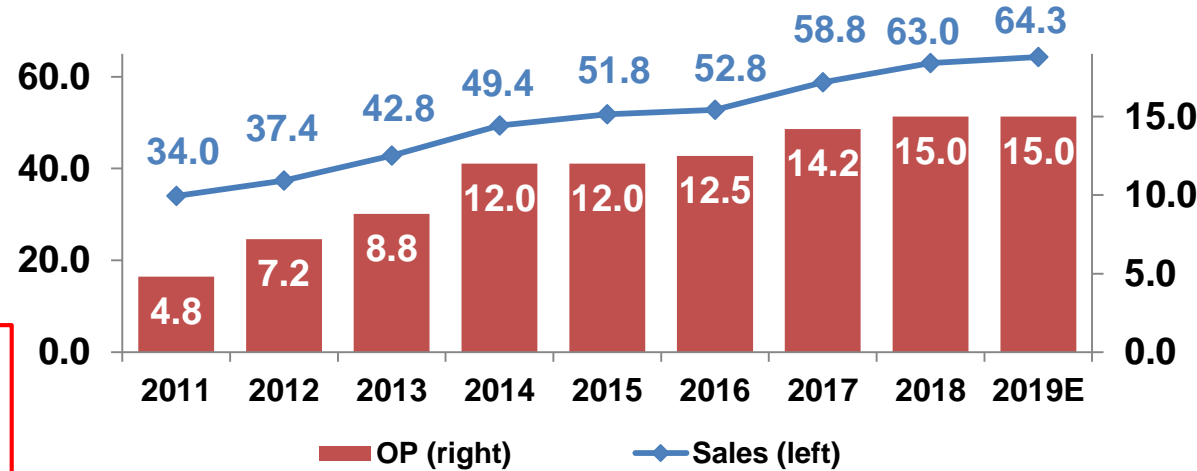
- ◆ Sales up ¥3.3 billion, OP up ¥1.0 billion

Performance Materials – (A) Recent Financial Performance

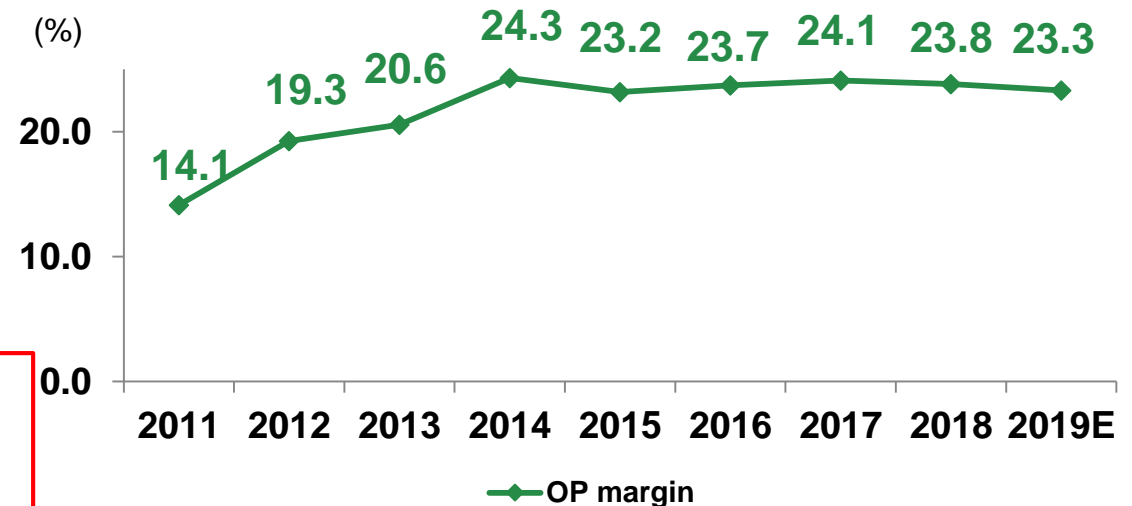
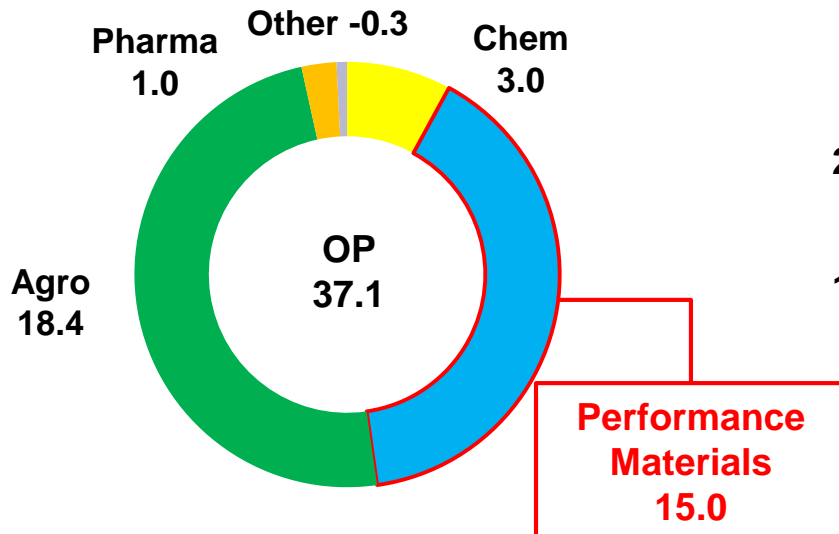
1. FY2018 Sales Distribution (¥billion)



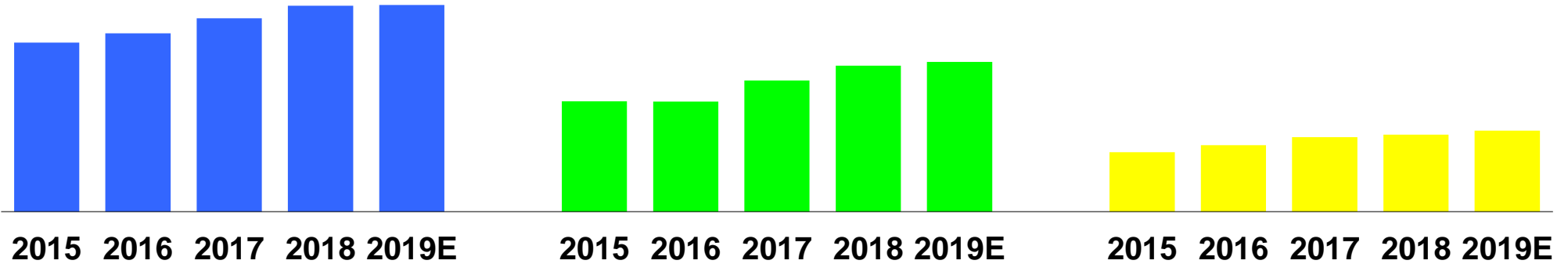
3. Recent Financial Performance (¥billion)



2. FY2018 OP Distribution (¥billion)



Performance Materials – (B) FY2015-2019E Sales Distribution



< Display Materials >

SUNEVER : LCD alignment coating

< Semis Materials >

ARC® : Bottom anti-reflective coating for semis
Multi layer process materials (OptiStack®)

< Inorganic * >

SNOWTEX : Silica sol for:
polishing materials (silicon wafer, compound semiconductors, semiconductors CMP and etc.) and non-polishing materials (NOx reduction catalyst materials, special steel sheet and etc.)

Organo/Monomer sol : Hard coating materials, electronic information materials, resin additive

Oilfield materials : For enhancing oil recovery

*2015 : Non-consolidated basis

Performance Materials – (C-1) Display Materials

FY2018 Sales Review

<1H FY2018 vs. 1H FY2017>

◆ Total SUNEVER up +8%

TN and IPS (photo up, rubbing down) up, VA flat

<2H FY2018 vs. 2H FY2017>

◆ Total SUNEVER up +5%

VA and IPS (photo up, rubbing down) up, TN down
CPT (Taiwan) restructuring caused negative impact on rubbing IPS

<2H FY2018 vs. 2H FY2018 Outlook as of Nov. 2018 >

◆ Total SUNEVER below target

VA above target, TN and IPS(photo above target, rubbing below target) below target
4Q sales substantially below target mainly due to sluggish smartphone markets and
CPT (Taiwan) restructuring

FY2019 Sales Outlook

<vs. FY2018>

◆ Total SUNEVER flat

VA up, IPS down (photo up, rubbing down), TN down

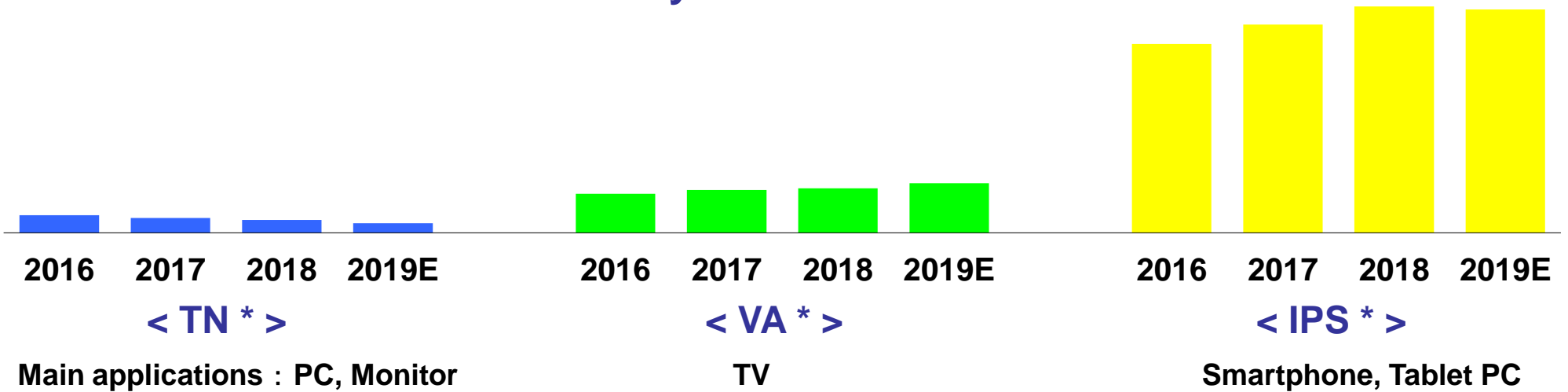
Main Products	Sales YOY Change										
	FY2018 Outlook as of Nov. 2018			FY2018 Actual					FY2019 Outlook		
	1H Actual	2H	Total	1H	3Q	4Q	2H	Total	1H	2H	Total
Total SUNEVER	+8%	+6%	+7%	+8%	+9%	+1%	+5%	+7%	-3%	+2%	-0%
Other Display Materials (1)	-4%	+28%	+12%	-4%	-12%	+5%	-3%	-3%	-4%	+85%	+40%
Total Display Materials	+8%	+6%	+7%	+8%	+9%	+2%	+5%	+7%	-3%	+4%	+0%

(1) Including OLED materials (Hole injection layer materials, repellent bank layer materials, etc.)

◆ Established a subsidiary in Suzhou, China for product development, technical support, and customer service (July 2017)

Performance Materials – (C-2) SUNEVER

<SUNEVER Sales Distribution by Mode>



<Sales YOY Change by Mode>

	FY2018 Outlook as of Nov. 2018	FY2018 Actual	FY2019 Outlook
TN	↘	↘ ↘	↘ ↘ ↘
VA	↗	↗	↗ ↗
IPS	↗	↗	↘
Total	+7%	+7%	-0%

YOY Change

+20~+29%	↗↗↗
+10~+19%	↗↗
+0~+9%	↗
-0~-9%	↘
-10~-19%	↘↘
-20~-29%	↘↘↘

*TN : Twisted Nematic, VA : Vertical Alignment, IPS : In-Plane Switching

Performance Materials – (D) Semiconductors Materials

FY2018 Sales Review

<1H FY2018 vs. 1H FY2017>

◆ Total Semis Materials up +17%

KrF down, ArF and other semis materials up (multi layer process materials and other new materials(1) up)

<2H FY2018 vs. 2H FY2017>

◆ Total Semis Materials up +6%

KrF down, ArF and other semis materials up (multi layer process materials and other new materials up)

<2H FY2018 vs. 2H FY2018 Outlook as of Nov. 2018 >

◆ Total Semis Materials below target

KrF below target, ArF above target, other semis materials below target (multi layer process materials and other new materials below target), 4Q sales substantially below target due to sluggish semis markets

FY2019 Sales Outlook

<vs. FY2018>

◆ Total Semis Materials up +3%

KrF down, ArF and other semis materials up (multi layer process materials and other new materials up)

Main Products	Sales YOY Change										
	FY2018 Outlook as of Nov. 2018			FY2018 Actual					FY2019 Outlook		
	1H Actual	2H	Total	1H	3Q	4Q	2H	Total	1H	2H	Total
KrF (ARC®)	-1%	-6%	-4%	-1%	-4%	-15%	-9%	-5%	-9%	-2%	-5%
ArF (ARC®)	+14%	+4%	+9%	+14%	+18%	-6%	+6%	+10%	-1%	+5%	+2%
Total	+9%	+2%	+6%	+9%	+12%	-8%	+2%	+6%	-3%	+3%	-0%
Other Semis Materials (1)	+43%	+32%	+37%	+43%	+45%	-0%	+20%	+31%	+8%	+13%	+11%
Total Semis Materials	+17%	+9%	+13%	+17%	+19%	-6%	+6%	+11%	-0%	+5%	+3%

(1) Multi layer process materials (OptiStack®), other new materials (EUV under layer, CMOS image sensor materials, 3D packaging process materials total) etc.

*NCK: Consolidated subsidiary in South Korea. R&D, production and sales of display and semis materials.

◆ Semiconductor capex plan to capture long-term future business:

Main capex :	FY2014	Analyzing and evaluation R&D equipment (¥1.1 billion)
(approval basis)	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 (¥2.6 billion), Analyzing and evaluation R&D equipment (¥1.0 billion), Material Research Lab. (¥0.4 billion)
	FY2017	Material Research Lab. (¥0.4 billion)
	FY2018	ARC® Production capacity expansion (¥0.2 billion), Production test facilities (¥0.2 billion)
	FY2019	Material Research Lab. new annex (¥2.0 billion), Analyzing and evaluation R&D equipment (¥1.0 billion), Production test facilities (¥0.2 billion)

Performance Materials –

(E) SNOWTEX, Organo/Monomer sol, Oilfield Materials

FY2018 Sales Review

<1H FY2018 vs. 1H FY2017>

- ◆ SNOWTEX : Up (polishing materials down, non-polishing materials up)
- ◆ Organo/Monomer sol : Down
- ◆ Oilfield materials : Up

<2H FY2018 vs. 2H FY2017>

- ◆ SNOWTEX : Down (polishing materials down, non-polishing materials up)
- ◆ Organo/Monomer sol : Up
- ◆ Oilfield materials : Down (weak oil price trend, tight operator capex budget)

< 2H FY2018 vs. 2H FY2018 Outlook as of Nov. 2018>

- ◆ SNOWTEX : In line with target (both polishing materials and non-polishing materials in line with target)
- ◆ Organo/Monomer sol : Below target
- ◆ Oilfield materials: Below target (weak oil price trend, tight operator capex budget)

FY2019 Sales Outlook

<vs. FY2018>

- ◆ SNOWTEX: Up (polishing materials flat, non-polishing materials up)
- ◆ Organo/Monomer sol : Up
- ◆ Oilfield materials : Up

Main Products	Sales YOY Change										
	FY2018 Outlook as of Nov. 2018			FY2018 Actual					FY2019 Outlook		
	1H Actual	2H	Total	1H	3Q	4Q	2H	Total	1H	2H	Total
SNOWTEX	+2%	-1%	+1%	+2%	+1%	-3%	-1%	+1%	+3%	+0%	+2%
Organo/ Monomer sol	-8%	+9%	-0%	-8%	+12%	+4%	+8%	-1%	+3%	+7%	+5%
Oilfield materials	+40%	+62%	+52%	+40%	-44%	-30%	-39%	-3%	+40%	+196%	+95%

Three products account for 80% of total consolidated subsegment sales (FY2018)

Total Inorganic Materials	+8%	+6%	+7%	+8%	-1%	-2%	-1%	+3%	+3%	+8%	+5%
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Performance Materials – (F-1) Profit Overview

(¥billion)

	FY2017 Actual					2H FY2018 Outlook as of Nov. 2018			FY2018 Actual (A)								FY2019 Outlook(B)					Change (B) - (A)				
	1H	3Q	4Q	2H	Total	3Q	4Q	2H	1Q	2Q	1H	3Q	4Q	2H	Total	1Q	2Q	1H	2H	Total	1Q	2Q	1H	2H	Total	
Sales	29.1	15.1	14.6	29.7	58.8	15.8	16.0	31.8	15.6	16.4	32.0	16.6	14.4	31.0	63.0	15.9	15.8	31.7	32.6	64.3	+0.3	-0.6	-0.3	+1.6	+1.3	
OP	7.7	4.0	2.5	6.5	14.2	3.5	3.7	7.2	3.9	4.2	8.1	4.3	2.6	6.9	15.0	3.6	3.8	7.4	7.6	15.0	-0.3	-0.4	-0.7	+0.7	+0.0	

other new materials: EUV under layer, CMOS image sensor materials, 3D packaging process materials total

3Q FY2018 Review

<vs. 3Q FY2017>

- ◆ SUNEVER sales up (IPS (photo and rubbing up) and VA up, TN down)
- ◆ Total Semis Materials sales up (KrF down, ArF and other semis materials up (multi layer and other new materials up))
- ◆ Inorganic Materials sales down (SNOWTEX and Organo/Monomer sol up, Oilfield materials down)
- ◆ Fixed cost up ¥0.8 billion (including R&D)
- ◆ Sales up ¥1.5 billion, OP up ¥0.3 billion (OP: DP up, Semis up, Inorganic down)

3Q FY2018 Review

<vs. 3Q FY2018 Outlook as of Nov. 2018>

- ◆ SUNEVER sales above target (IPS and VA above target, TN below target)
- ◆ Total Semis Materials sales above target (KrF and ArF above target, other semis materials in line with target (multi layer below target, other new materials above target))
- ◆ Inorganic Materials sales below target (SNOWTEX above target, Organo/Monomer sol and Oilfield materials below target)
- ◆ Fixed cost above expectations ¥0.2 billion (including R&D)
- ◆ Inventory adjustment cost below expectations (¥0.2 billion)
- ◆ Sales up ¥0.8 billion, OP up ¥0.8 billion (OP: DP up, Semis down, Inorganic down)

4Q FY2018 Review

<vs. 4Q FY2017>

- ◆ SUNEVER sales up (IPS up (photo up, rubbing down), VA up, TN down)
- ◆ Total Semis Materials sales down (KrF and ArF down, other semis materials flat (multi layer up, other new materials down))
- ◆ Inorganic Materials sales down (SNOWTEX down, Organo/Monomer sol up, Oilfield materials down)
- ◆ Fixed cost down ¥0.2 billion (including R&D)
- ◆ Sales down ¥0.2 billion, OP up ¥0.1 billion (OP: DP flat, Semis up, Inorganic down)

4Q FY2018 Review

<vs. 4Q FY2018 Outlook as of Nov. 2018>

- ◆ SUNEVER sales below target (IPS below target (photo and rubbing below target, CPT restructuring), VA in line with target, TN below target)
- ◆ Total Semis Materials sales below target substantially due to sluggish semis markets (KrF, ArF and other semis materials below target (multi layer and other new materials below target))
- ◆ Inorganic Materials sales below target (SNOWTEX below target, Organo/Monomer sol above target, Oilfield materials below target)
- ◆ Fixed cost below expectations (¥0.4 billion) (including R&D)
- ◆ Sales down ¥1.6 billion, OP down ¥1.1 billion (OP: DP down, Semis down, Inorganic down)

Performance Materials – (F-2) Profit Overview

other new materials: EUV under layer, CMOS image sensor materials, 3D packaging process materials total

2H FY2018 Review

<vs. 2H FY2017>

- ◆ SUNEVER sales up (VA and IPS up (photo up, rubbing down, CPT restructuring), TN down)
- ◆ Total Semis Materials sales up (KrF down, ArF and other semis materials up (multi layer and other new materials up))
- ◆ Inorganic Materials sales down (SNOWTEX down, Organo/Monomer sol up, Oilfield materials down (weak oil price trend, tight operator capex budget))
- ◆ Fixed cost up ¥0.6 billion (including R&D)
- ◆ Sales up ¥1.3 billion, OP up ¥0.4 billion (OP: DP up, Semis up, Inorganic down)

2H FY2018 Review

<vs. 2H FY2018 Outlook as of Nov. 2018>

- ◆ SUNEVER sales below target (VA above target, TN and IPS below target (photo above target, rubbing below target, CPT restructuring))
- ◆ Total Semis Materials sales below target (ArF above target, KrF and other semis materials below target (multi layer and other new materials below target))
- ◆ Inorganic Materials sales below target (SNOWTEX in line with target, Organo/Monomer sol and Oilfield materials below target (weak oil price trend, tight operator capex budget))
- ◆ Fixed cost below expectations (¥0.2 billion) (including R&D)
- ◆ Inventory adjustment cost below expectations (¥0.2 billion)
- ◆ Sales down ¥0.8 billion, OP down ¥0.3 billion (OP: DP down, Semis down, Inorganic down)

FY2018 Review

<vs. FY2017>

- ◆ SUNEVER sales up (VA and IPS up (photo up, rubbing down, CPT restructuring), TN down)
- ◆ Total Semis Materials sales up (KrF down, ArF and other semis materials up (multi layer up, other new materials up))
- ◆ Inorganic Materials sales up (SNOWTEX up, Organo/Monomer sol and Oilfield Materials down (weak oil price trend, tight operator capex budget))
- ◆ Fixed cost up ¥1.6 billion (including R&D)
- ◆ Inventory adjustment cost up ¥0.4 billion
- ◆ Sales up ¥4.2 billion, OP up ¥0.8 billion (OP: DP up, Semis up, Inorganic down)

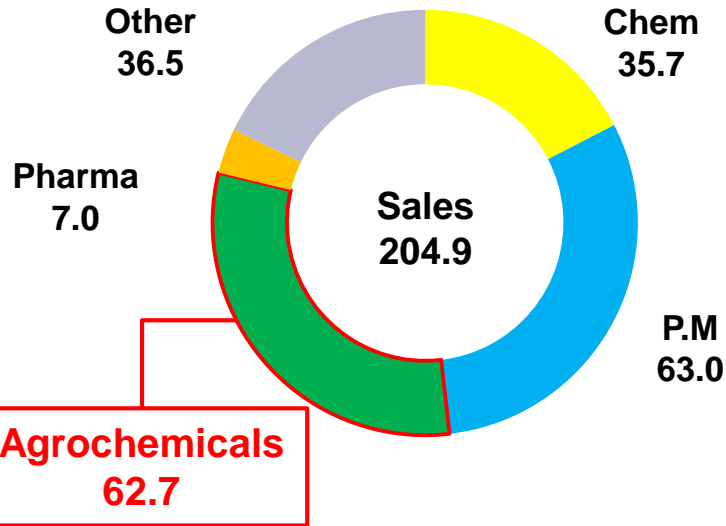
FY2019 Outlook

<vs. FY2018>

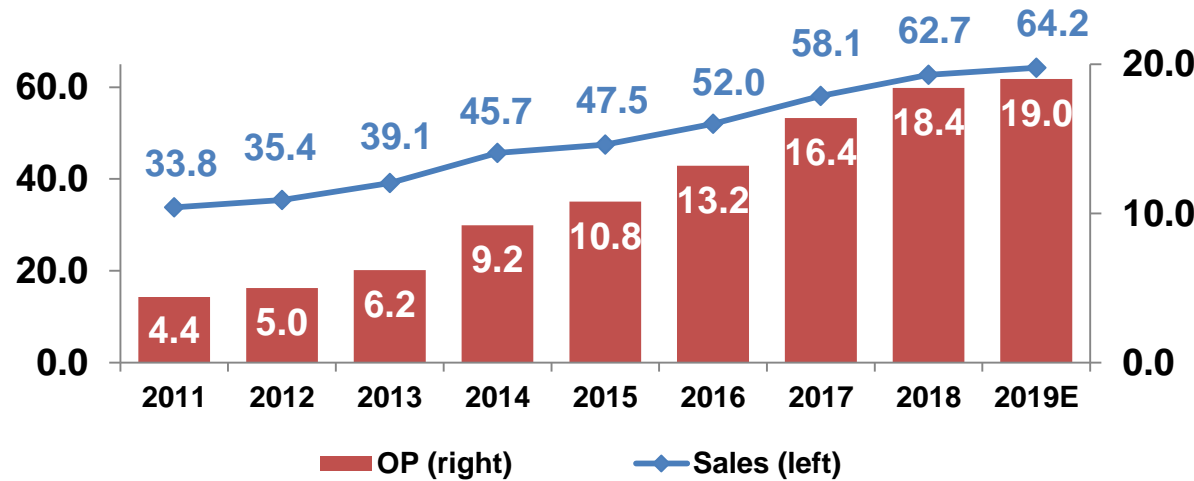
- ◆ SUNEVER sales flat (TN and IPS down (photo up, rubbing down, CPT restructuring), VA up)
- ◆ Total Semis Materials sales up (KrF down, ArF and other semis materials up (multi layer up, other new materials up))
- ◆ Inorganic Materials sales up (SNOWTEX up, Organo/Monomer sol up, Oilfield Materials up)
- ◆ Fixed cost up ¥1.1 billion (including R&D)
- ◆ Sales up ¥1.3 billion, OP flat (OP: DP flat, Semis up, Inorganic down)

Agrochemicals – (A) Recent Financial Performance

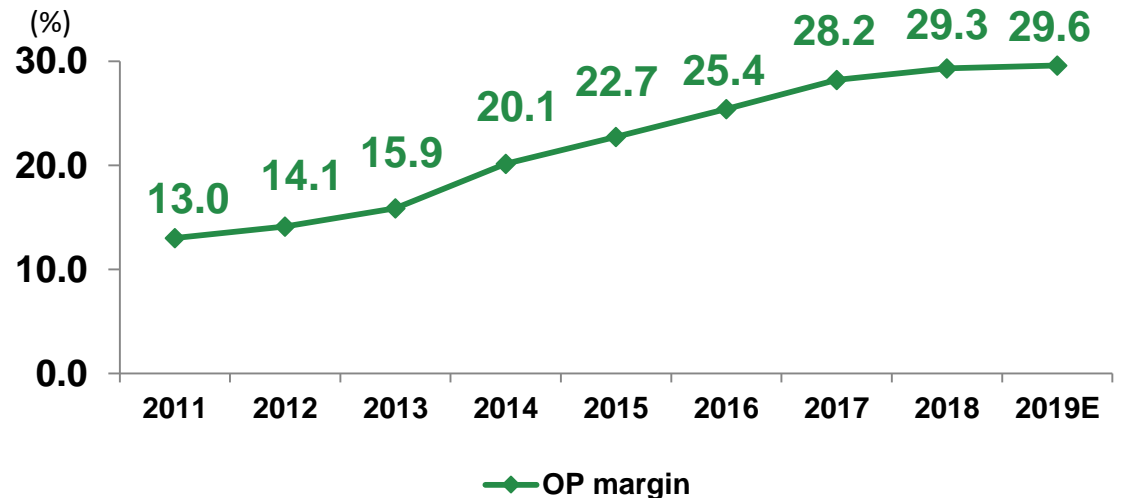
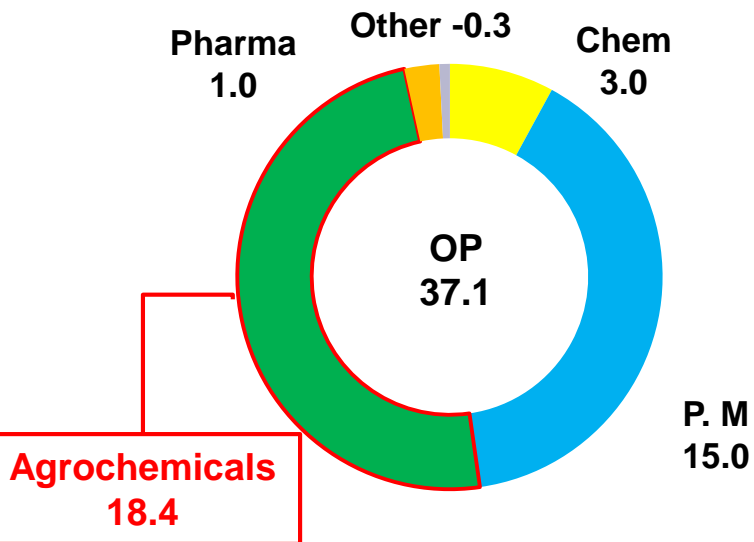
1. FY2018 Sales Distribution (¥billion)



3. Recent Financial Performance (¥billion)



2. FY2018 OP Distribution (¥billion)

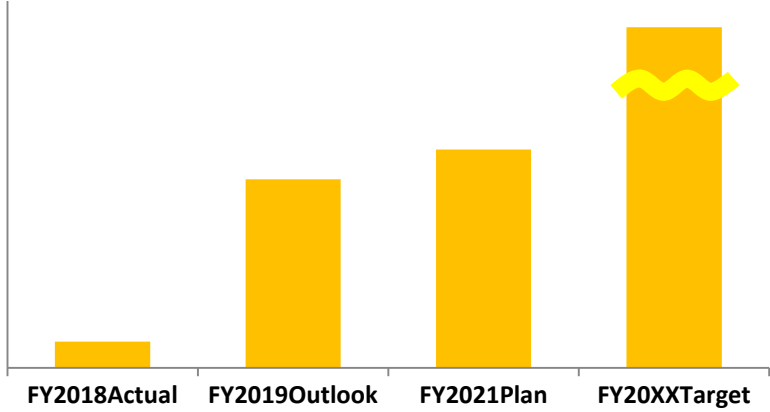


Agrochemicals – (B) Sales YOY Change (Before Discount)

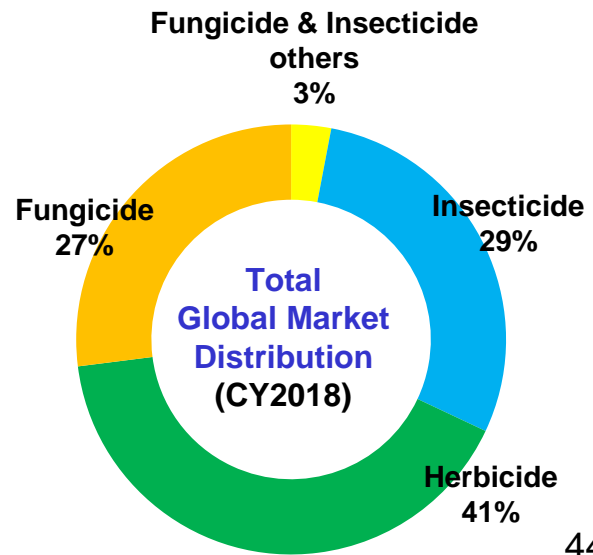
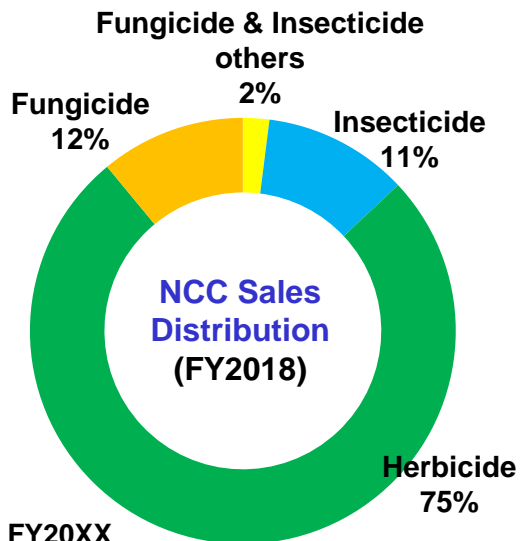
		Consolidated Sales YOY Change				
Main Products (in order of FY2018 sales amount)		FY2017 /FY2016	FY2018E as of Nov.2018 /FY2017	FY2018 /FY2017	FY2019E /FY2018	YOY Change
Fluralaner	Animal health products	↗↗↗↗↗	↗↗↗	↗↗↗	↘	+40~+59% ↑↑↑↑↑
ROUNDUP (1)	Herbicide	+8%	-6%	-6%	+8%	+30~+39% ↑↑↑↑
ALTAIR	Herbicide	↗	↗	↗↗	↘	+20~+29% ↑↑↑
TARGA	Herbicide	↗	↗	↗↗	↘	+10~+19% ↑↑
PERMIT	Herbicide	↗	↗	↗	↗↗	+0~+9% ↑
GRACIA	Insecticide	-	-	-	over +600%	-0~-9% ↓
						-10~-19% ↓↓
						-20~-29% ↓↓↓
						-30~-39% ↓↓↓↓
Total segment	-	+10%	+7%	+7%	+3%	

(1) ROUNDUP AL for general household accounting for 19% of FY2018 ROUNDUP sales

GRACIA Sales Growth forecast



Aiming at ¥10.0 billion sales in FY20XX



Agrochemicals – (C) Main Products

Launch	Products	Application	Product development type	Notes
2002	ROUNDUP	Herbicide	Acquired	Acquired domestic business from Monsanto, continuing to grow
2008	LEIMAY	Fungicide	In-house	
2008	STARMITE	Insecticide	In-house	
2009	PULSOR (THIFLUZAMIDE)	Fungicide	Acquired	Acquired world business from Dow
2009	PREVATHON	Insecticide	Licensed-in	Licensed from DuPont
2010	ROUNDUP AL	Herbicide	In-house	For general household shower-type herbicide market, launched ROUNDUP ALII in FY2016 and ALIII in FY2017, growing sharply
2011	ALTAIR	Herbicide	In-house	Launched in Korea in FY2011 and in Japan in FY2012
2013	Fluralaner	Animal health products	In-house	Started to be supplied to MSD* in July as scheduled
2014	BRAVECTO**	Veterinary medical product for companion animals	-	Launched in several countries in EU in April, and in the USA in June by MSD
2014	EXIREL / PRYROSSO	Insecticide	Licensed-in	Licensed from DuPont
2015	BRAVECTO**	Veterinary medical product for companion animals	-	Launched in Japan in July by Intervet K.K Intervet K.K :a Japanese subsidiary of MSD
2015	TREFANOCIDE	Herbicide	Licensed-in	Acquired by Gowan from Dow, exclusive sales right in Japan transferred to NCC
2017	NEXTER	Fungicide	Licensed-in	Licensed from Syngenta
2017	TRANSFORM™ / EXCEED™ / VIRESCO™	Insecticide	Licensed-in	Licensed from Dow
2017	EXZOLT**	Veterinary medical product for poultry	-	Launched in EU in September for poultry red mites by MSD
2018	GRACIA	Insecticide	In-house	Effective against a wide range of serious pests, having less negative impact on honeybees. Launched in Korea in FY2018
2022	NC-241(PYRAPROPOYNE)	Fungicide	In-house	General fungicide
2024	NC-653	Herbicide	In-house	Effective against resistant weeds, having excellent safety to rice

*MSD: MSD Animal Health, the global animal health business unit of Merck

**BRAVECTO, EXZOLT: the product names developed by MSD, containing the active substance Fluralaner

- ◆ Export sales account for 43% of FY2018 consolidated segment sales (Asia:21%, Europe/Africa:70%, North/Central/South America:9%)
 - *Including Fluralaner
- ◆ Acquired 3% share of IHARABRÁS (leading agro company in Brazil) in September 2011
- ◆ Established subsidiaries in China (January 2014), Brazil (August 2016) and India (July 2017) for sales support and product development
- ◆ Full reconstruction of Biological Research Laboratories for Agro and Pharma completed (April 2017) (FY2010-2017 total capex ¥6.4 billion)
- ◆ Construction of GRACIA plant completed (September 2018, capex ¥1.4billion) and Fluralaner plant completed (September 2018)
- ◆ Construction of R&D facilities specializing in formulation started in 2018 (to be completed in September 2019, capex ¥0.6billion)

Agrochemicals – (D) Fluralaner

◆ Fluralaner

- *Invented by NCC and supplied to MSD as the active pharmaceutical ingredient of BRAVECTO and EXZOLT
- *Currently, BRAVECTO series and EXZOLT are available in 100 countries
- *Compound patent
 - Fluralaner's compound patent expires in March 2025, but many countries have a patent term extension system
 - Some EU countries including France, Germany – already extended to February 2029
 - USA, UK, etc. – applications under examination



◆ BRAVECTO

- *Developed and launched by MSD
- *Veterinary medical products providing 12 weeks of continuous protection for dogs and cats against fleas and ticks with immediate effect, nearly 3 times longer than any monthly products in the market.
- *Chewable tablet for dogs
 - April 2014 Europe, June 2014 USA, July 2015 Japan
- *Spot-on solution for dogs and cats
 - July 2016 EU(cats), December 2016 USA(cats)
 - January 2017 USA, Germany, Austria(dogs)
 - June 2018 Japan(cats)

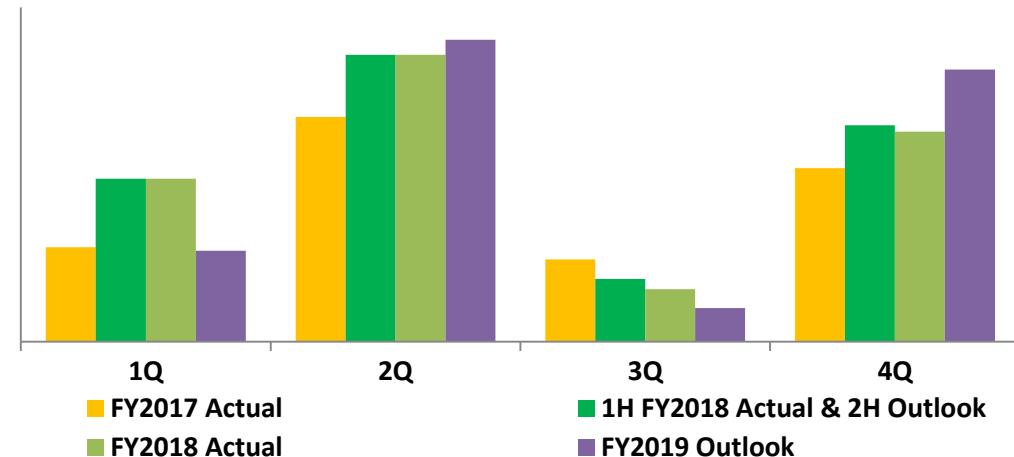
◆ EXZOLT

- *A poultry medicine against red mite launched by MSD (administered via drinking water)
- September 2017 Europe

◆ BRAVECTO Plus

- *A broad-spectrum combination spot-on solution for cats to treat internal and external parasite infestations approved in the EU in May 2018

■ Fluralaner Quarterly Sales (including royalty)



For sales plan of FY2018-2021 Fluralaner, see p30 of Mid-term Business Plan Vista2021 Stage II presentation materials (announced in 15 May 2019)

Agrochemicals – (E-1) Profit Overview

(¥billion)

	FY2017 Actual					2H FY2018 Outlook as of Nov.2018			FY2018 Actual (A)							FY2019 Outlook(B)					Change (B) - (A)				
	1H	3Q	4Q	2H	Total	3Q	4Q	2H	1Q	2Q	1H	3Q	4Q	2H	Total	1Q	2Q	1H	2H	Total	1Q	2Q	1H	2H	Total
Sales	26.1	6.4	25.6	32.0	58.1	5.7	28.2	33.9	16.4	12.3	28.7	5.9	28.1	34.0	62.7	14.1	14.2	28.3	35.9	64.2	-2.3	+1.9	-0.4	+1.9	+1.5
OP	8.1	-0.6	8.9	8.3	16.4	-1.4	10.0	8.6	5.1	4.7	9.8	-1.3	9.9	8.6	18.4	3.6	5.6	9.2	9.8	19.0	-1.5	+0.9	-0.6	+1.2	+0.6

3Q FY2018 Review

<vs. 3Q FY2017>

- ◆ Sales up : GRACIA(export), LEIMAY(export), ROUNDUP, ALTAIR(domestic), PULSOR(export)
- ◆ Sales down : Fluralaner, TARGA(export), STARMITE(export), SIRIUS(domestic and export), PERMIT
- ◆ Fixed cost up ¥0.4 billion
- ◆ Sales down ¥0.5 billion, OP down ¥0.7 billion

3Q FY2018 Review

<vs. 3Q FY2018 Outlook as of Nov. 2018>

- ◆ Sales above target : GRACIA(export), LEIMAY(export), PERMIT(export), ROUNDUP, TARGA(export)
- ◆ Sales below target : Fluralaner, ALTAIR(domestic), PULSOR(export), SIRIUS(domestic), SANMITE(export), STARMITE(export)
- ◆ Sales above target mainly due to shipment shift from 4Q FY2018 to 3Q (excluding ROUNDUP)
- ◆ Sales up ¥0.2 billion, OP up ¥0.1 billion

4Q FY2018 Review

<vs. 4Q FY2017>

- ◆ Sales up : ALTAIR(domestic and export), Fluralaner, TARGA(export), PULSOR(export), STARMITE(export)
- ◆ Sales down : PERMIT(export), SANMITE(export)
- ◆ Fixed cost up ¥0.1 billion
- ◆ Inventory adjustment cost up ¥0.1 billion
- ◆ Sales up ¥2.5 billion, OP up ¥1.0 billion

4Q FY2018 Review

<vs. 4Q FY2018 Outlook as of Nov. 2018>

- ◆ Sales above target : ALTAIR(domestic), TARGA(export), LEIMEY(export), SANMITE, STARMITE
- ◆ Sales below target : GRACIA(export), PERMIT(export), Fluralaner, ROUNDUP
- ◆ Fixed cost up ¥0.1 billion
- ◆ Inventory adjustment cost down ¥0.1 billion
- ◆ Sales down ¥0.1 billion, OP down ¥0.1 billion

Agrochemicals – (E-2) Profit Overview

2H FY2018 Review

<vs. 2H FY2017>

- ◆ Sales up : ALTAIR(domestic and export), GRACIA(export), TARGA(export), PULSOR(export), LEIMEY(export), Fluralaner
- ◆ Sales down : PERMIT and SIRIUS (domestic and export), SANMITE(export)
- ◆ Fixed cost up ¥0.5 billion
- ◆ Inventory adjustment cost down ¥0.3 billion
- ◆ Sales up ¥2.0 billion, OP up ¥0.3 billion

2H FY2018 Review

<vs. 2H FY2018 Outlook as of Nov. 2018>

- ◆ Sales above target : LEIMEY(export), ALTAIR(domestic), TARGA(export)
- ◆ Sales below target : Fluralaner, PERMIT(export), SIRIUS(export)
- ◆ Inventory adjustment cost below expectations (¥0.5 billion)
- ◆ Sales up ¥0.1 billion, OP in line with target

FY2018 Review

<vs. FY2017>

- ◆ Sales up : Fluralaner, ALTAIR(domestic), PULSOR(export), TARGA(export), GRACIA(export)
- ◆ Sales down : ROUNDUP (1H FY2018 abnormal weather in Japan), SANMITE(export), SIRIUS(domestic)
- ◆ Fixed cost up ¥1.1 billion
- ◆ Inventory adjustment cost down ¥0.8 billion
- ◆ Sales up ¥4.6 billion, OP up ¥2.0 billion

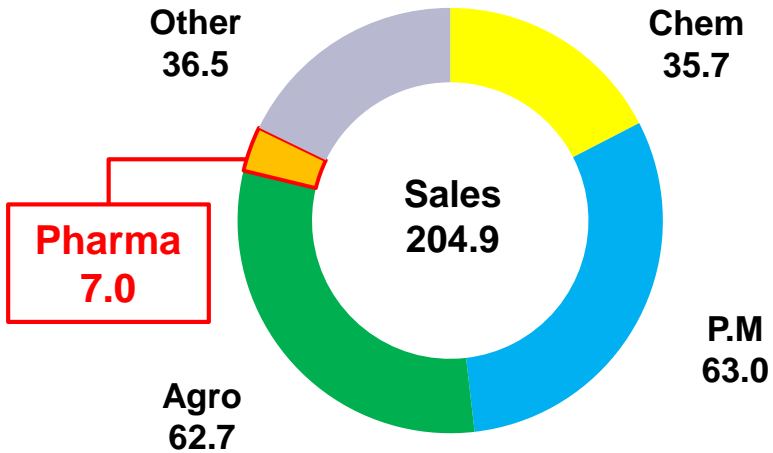
FY2019 Outlook

<vs. FY2018>

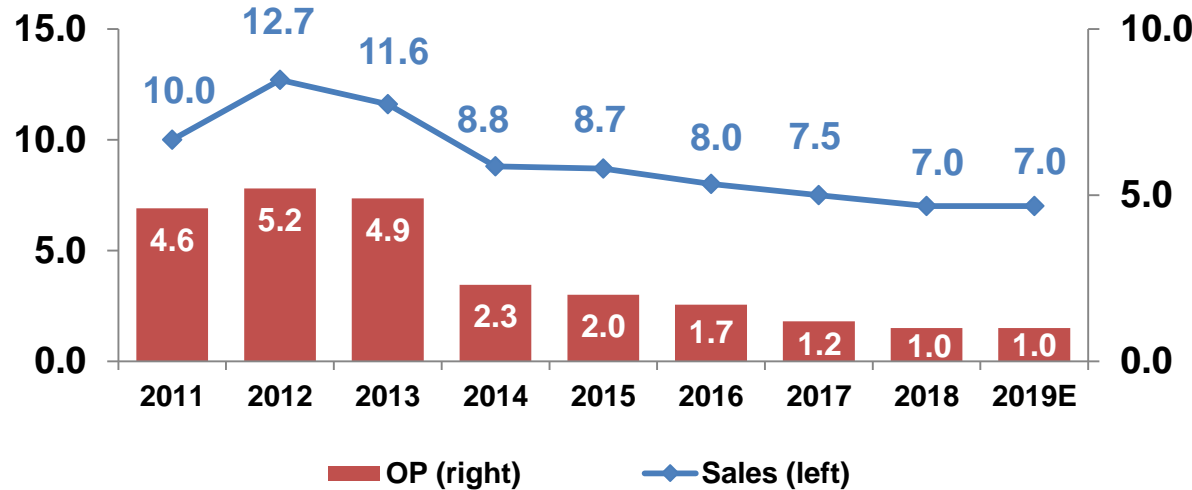
- ◆ Sales up : GRACIA(domestic and export), ROUNDUP(absence of 1H FY2018 abnormal weather in Japan), PERMIT(export)
- ◆ Sales down : Fluralaner (BRAVECTO inventory adjustment), SANMITE(export), STARMITE(domestic), TARGA(export), LEIMEY(export)
- ◆ Fixed cost up ¥0.6 billion
- ◆ Inventory adjustment cost up ¥0.6 billion
- ◆ Sales up ¥1.5 billion, OP up ¥0.6 billion

Pharmaceuticals – (A) Recent Financial Performance

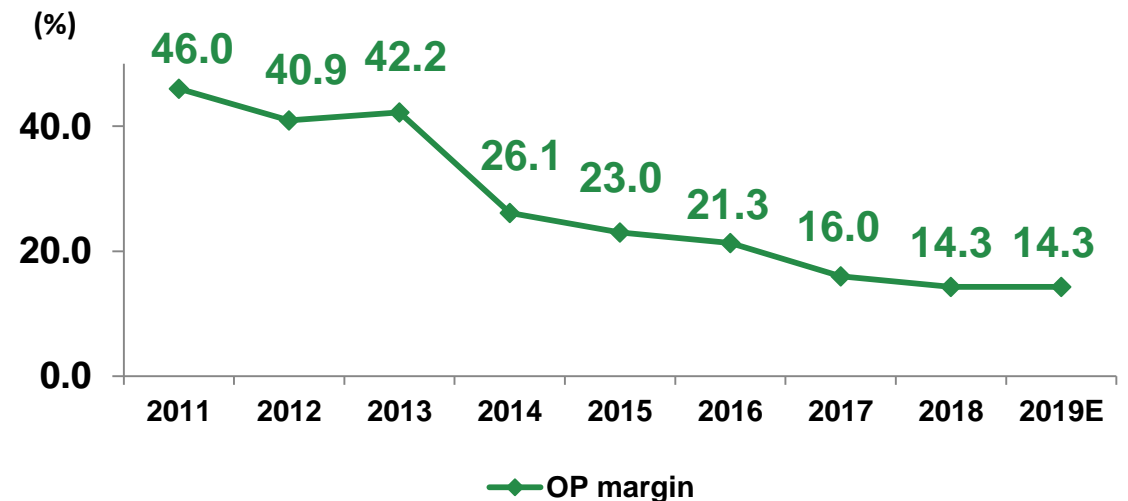
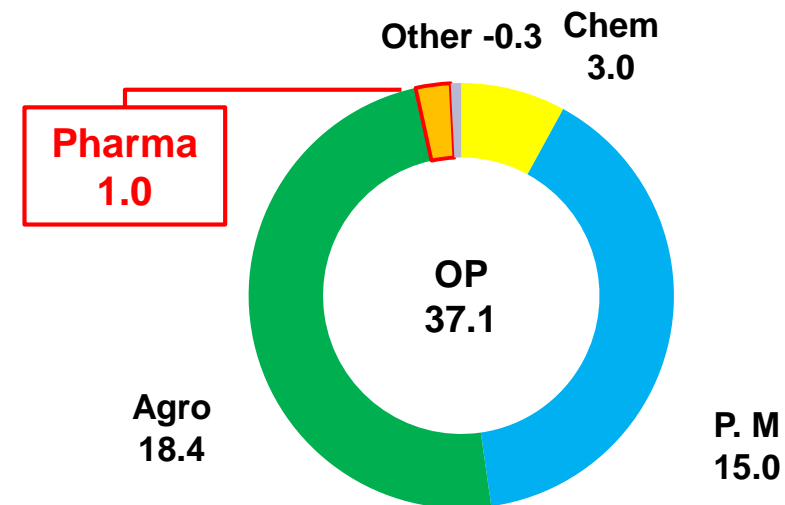
1. FY2018 Sales Distribution (¥billion)



3. Recent Financial Performance (¥billion)

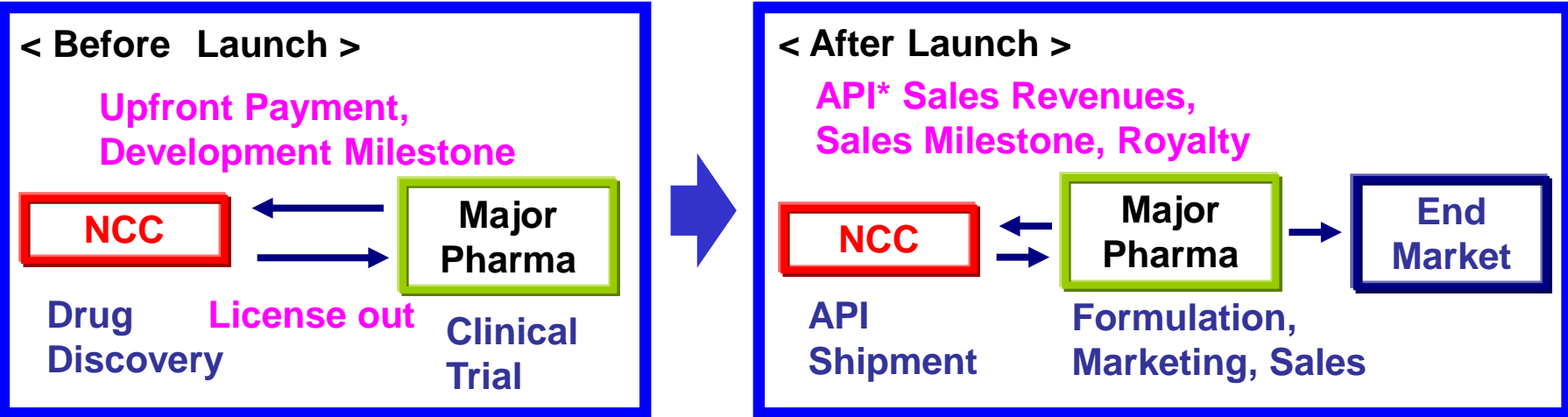


2. FY2018 OP Distribution (¥billion)



Pharmaceuticals – (B) Business Model (New Drug) and LIVALO

◆ Unique ethical pharma business model without sales force



API*: Active Pharmaceutical Ingredient

◆ LIVALO (Anti-Cholesterol Drug)

	FY2013 Actual	FY2014 Actual	FY2015 Actual	FY2016 Actual	FY2017 Actual	FY2018 Outlook as of Nov. 2018	FY2018 Actual	FY2019 Outlook
Domestic End Market Sales (NHI drug price basis, ¥billion)	52.6	34.5	29.7	23.9	21.0	-	16.7	-
Our Domestic and Export API Sales (¥billion)	10.2	6.9	5.8	5.2	4.8	4.5	4.3	4.1
Our Domestic and Export API Sales YOY Change	-2%	-32%	-15%	-11%	-7%	-7%	-11%	-5%
(Domestic API Sales YOY Change)	(-2%)	(-46%)	(-27%)	(-42%)	(-73%)	(-42%)	(-53%)	(+59%)
(Export API Sales YOY Change)	(-1%)	(+21%)	(+5%)	(+26%)	(+29%)	(-2%)	(-6%)	(-9%)

- August 2013, domestic compound patent expired
- December 2018, won a law suit against certain companies in USA which had submitted Abbreviated New Drug Application(ANDA) with FDA
- Currently, available in 25 countries

Pharmaceuticals – (C) Pipeline

Product	Mechanism of action	Expected indications	Development partners
NIP-022	<ul style="list-style-type: none"> Thrombopoietin (TPO) receptor activation 	<ul style="list-style-type: none"> Thrombocytopenia 	<ul style="list-style-type: none"> 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
NTC-801	<ul style="list-style-type: none"> Acetylcholine-activated K⁺ channel current (IKACH) inhibition 	<ul style="list-style-type: none"> Arrhythmia (Atrial fibrillation) 	<ul style="list-style-type: none"> Terminated the license agreement with Teijin and BMS in September 2015 Under consideration regarding seeking new partners Adopted as AMED* program in September 2018 Preparing for an investigator initiated clinical trial conducted by Osaka University

*Japan Agency for Medical Research and Development

<Policy for drug discovery research>

To create innovative medicines by using the strategic chemical library, the precise organic synthesis technology, proprietary oligonucleotides therapeutics discovery platform

◆ In-house research

- Focusing on cardiovascular disease and neurological disease as core therapeutic areas
- Using state-of-the art-ion channel evaluation platform as key technology

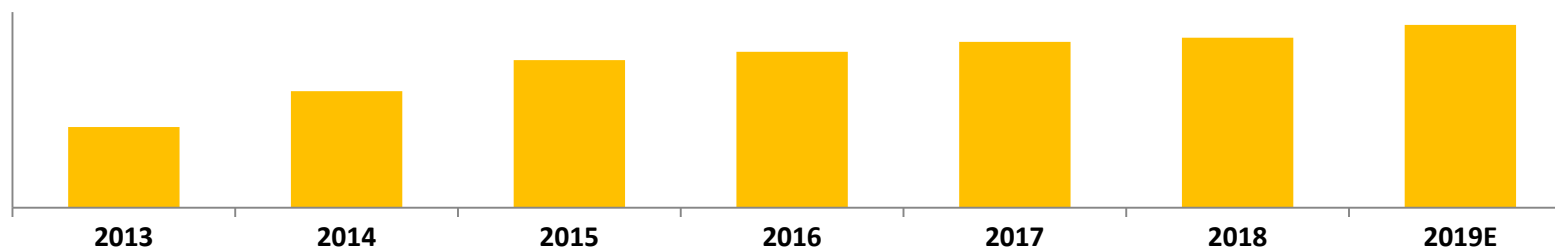
◆ Collaborative research

- Conducting small molecule drug discovery programs (e.g. Shionogi & Co., Ltd.)
- Started oligonucleotides drug discovery programs (e.g. Luxna Biotech Co., Ltd.)

Pharmaceuticals – (D) Custom Chemicals

- ◆ Custom manufacturing and process researching services for new drug pharmaceutical ingredients and intermediates from pre-clinical to commercial production stages
- ◆ In addition, focusing on obtaining new contracts mainly for high activity and high-valued added GE API products
 - 2016- Maxacalcitol (Secondary hyperparathyroidism and Psoriasis)
 - 2017- Eldecalcitol (Osteoporosis)

◆ Custom Chemicals Sales Growth



FY2018 Sales Review

<1H FY2018 vs. 1H FY2017>

◆ Up due to volume increase

<2H FY2018 vs. 2H FY2017>

◆ Down due to absence of 2H 2017 one-time large order

<2H FY2018 vs. 2H FY2018 Outlook as of Nov. 2018>

◆ Above target (volume above target)

FY2019 Sales Outlook

<vs. FY2018>

◆ Up due to volume increase

Sales YOY Change										
FY2018 Outlook as of Nov. 2018			FY2018 Actual					FY2019 Outlook		
1H Actual	2H	Total	1H	3Q	4Q	2H	Total	1H	2H	Total
+18%	-20%	-3%	+18%	-38%	+73%	-10%	+3%	-1%	+16%	+8%

Pharmaceuticals – (E) Equity participation in PeptiStar Inc. (PS)

- ◆ **Our Investment Amount:** **¥0.9 billion, (8.2% of the number of shares outstanding after the third-party allotment)**

- ◆ **Outline of PS:** **The world's first Contract Manufacturing Organization (CMO) for the research and commercial manufacture of constrained peptide therapeutics.
Established by PeptiDream, Shionogi and Sekisui Chemical in September 2017**

- ◆ **Funding of PS :** **¥11.0 billion Equity provided by about 20 companies by way of (approximate amount) third-party allotment
¥9.0 billion Grant program of Cyclic Innovation for Clinical Empowerment (CiCLE) by the Japan Agency for Medical Research and Development (AMED)
Total ¥20.0 billion**

- ◆ **Business Plan of PS :** **Expected to start commercial production constrained peptide therapeutics in fall 2019**

- ◆ **Our Role and Objective:** **Develop solution-phase synthesis suitable for mass production of constrained peptides**

- ◆ **Impact on our Business:** **Improve our novel synthetic method (solution-phase synthesis) of constrained peptides, reduce manufacturing cost substantially and expand our CMO business.**

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Pharmaceuticals – (F-1) Profit Overview

(¥billion)

	FY2017 Actual					2H FY2018 Outlook as of Nov.2018			FY2018 Actual (A)							FY2019 Outlook(B)					Change (B) - (A)				
	1H	3Q	4Q	2H	Total	3Q	4Q	2H	1Q	2Q	1H	3Q	4Q	2H	Total	1Q	2Q	1H	2H	Total	1Q	2Q	1H	2H	Total
Sales	3.5	2.3	1.7	4.0	7.5	1.3	2.0	3.3	1.8	1.9	3.7	1.9	1.4	3.3	7.0	1.6	1.8	3.4	3.6	7.0	-0.2	-0.1	-0.3	+0.3	+0.0
OP	0.5	0.6	0.1	0.7	1.2	0.1	0.5	0.6	0.3	0.3	0.6	0.4	0.0	0.4	1.0	0.1	0.4	0.5	0.5	1.0	-0.2	+0.1	-0.1	+0.1	+0.0

3Q FY2018 Review

<vs. 3Q FY2017>

- ◆ LIVALO sales down
(domestic sales down, export up)
- ◆ Custom Chemicals sales down due to absence of
a large development project completed in FY2017
- ◆ Inventory adjustment cost down ¥0.2 billion
- ◆ Sales down ¥0.4 billion, OP down ¥0.2 billion

3Q FY2018 Review

<vs. 3Q FY2018 Outlook as of Nov. 2018>

- ◆ LIVALO sales above target
(domestic sales below target, export above target)
- ◆ Custom Chemicals sales above target
- ◆ LIVALO(export) and Custom Chemicals sales above target
due to shipment shift from 4Q FY2018 to 3Q
- ◆ Sales up ¥0.6 billion, OP up ¥0.3 billion

4Q FY2018 Review

<vs. 4Q FY2017>

- ◆ LIVALO sales down
(Domestic sales down,
export down due to shipment shift from 4Q FY2018 to 3Q)
- ◆ Custom Chemicals sales up due to volume increase
- ◆ Inventory adjustment cost up ¥0.1 billion
- ◆ Sales down ¥0.3 billion, OP down ¥0.1 billion

4Q FY2018 Review

<vs. 4Q FY2018 Outlook as of Nov. 2018>

- ◆ LIVALO sales below target
(Domestic sales above target,
export below target due to shipment shift from 4Q FY2018 to 3Q)
- ◆ Custom Chemicals below target
due to shipment shift from 4Q FY2018 to 3Q
- ◆ Sales down ¥0.6 billion, OP down ¥0.5 billion

Pharmaceuticals – (F-2) Profit Overview

2H FY2018 Review

<vs. 2H FY2017>

- ◆ LIVALO sales down
(Domestic sales down due to inventory adjustment, export down due to shipment shift from 2H FY2018 to 1H)
- ◆ Custom Chemicals sales down due to absence of a large development project completed in FY2017)
- ◆ Inventory adjustment cost down ¥0.1 billion
- ◆ Sales down ¥0.7billion, OP down ¥0.3 billion

2H FY2018 Review

<vs. 2H FY2018 Outlook as of Nov. 2018>

- ◆ LIVALO sales below target
(Domestic sales below target due to inventory adjustment, export below target)
- ◆ Custom Chemicals sales above target
- ◆ Inventory adjustment cost up ¥0.1billion
- ◆ Sales in line with target, OP down ¥0.2 billion

FY2018 Review

<vs. FY2017>

- ◆ LIVALO sales down
(Domestic sales down due to inventory adjustment, export down due to 1H FY2017 large shipments)
- ◆ Custom Chemicals sales up due to volume increase
- ◆ Fixed cost up ¥0.1 billion
- ◆ Inventory adjustment cost down ¥0.1 billion
- ◆ Sales down ¥0.5 billion, OP down ¥0.2 billion

FY2019 Outlook

<vs. FY2018>

- ◆ LIVALO sales down
(Domestic sales up due to normalized end market inventory, export down)
- ◆ Custom Chemicals sales up due to volume increase
- ◆ Inventory adjustment cost down ¥0.1 billion
- ◆ Sales flat, OP flat

Capex/Depreciation/R&D by Segment

(¥billion)

	Capex (1)					Depreciation (2)					R&D expenses					% of Sales				
	2015	2016	2017	2018	2019E	2015	2016	2017	2018	2019E	2015	2016	2017	2018	2019E					
Chem	2.3	2.0	2.6	2.0	3.2	1.4	1.6	1.7	1.8	2.0	0.5	0.5	0.6	0.6	0.5	1.3%				
Performance M.	5.4	8.4	7.2	3.3	4.3	5.2	4.8	5.9	6.0	5.5	7.4	7.9	8.1	8.2	8.6	13.4%				
Agro	1.3	2.4	2.6	3.3	0.7	1.4	1.3	1.4	1.7	1.8	3.9	3.8	4.3	4.5	4.7	7.3%				
Pharma	0.4	0.9	0.7	0.5	0.5	0.8	0.7	0.7	0.6	0.6	2.4	2.2	2.5	2.5	2.5	35.7%				
Trading	0.0	0.0	0.0	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	-				
Others	0.8	0.6	0.6	0.7	0.6	0.8	0.4	0.7	0.7	0.7	1.6	1.7	1.7	2.0	2.0	-				
Total	10.2	14.3	13.7	9.9	9.7	9.7	8.9	10.5	10.9	10.7	15.8	16.1	17.2	17.8	18.3					
											R&D expenses/Sales					8.9%	8.9%	8.9%	8.7%	8.7%

(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. 2018) –A	470
Total Professionals (Sept. 2018) –B	1,155
A/B	41%

※Parent company only

※Round number

Main Capex Items (Approval Basis)

(¥billion)

FY2016 Actual		FY2017 Actual		FY2018 Outlook		FY2019 Outlook	
NCK Semis (Production capacity expansion)	2.6	Agro (Production facilities)	1.4	Material Research Lab. (Instruments)	0.7	Semis (Material Research Lab. new annex)	2.0
Material Research Lab. (Instruments)	1.1	NSU R&D Center	1.0	Chemical Research Lab. (Instruments)	0.7	Isocyanuric acid (1) (Production capacity expansion)	2.0
Semis (Analyzing and evaluation R&D equipment)	1.0	Material Research Lab. (Instruments)	0.9	Agro (Product development facilities)	0.6	Display (Production facilities)	1.3
Chemical Research Lab. (Instruments)	0.6	Chemical Research Lab. (Instruments)	0.6	TEPIC (Production capacity expansion)	0.5	Semis (Analyzing and evaluation R&D equipment)	1.0
SNOWTEX (Production capacity expansion)	0.5	Display (Test facilities)	0.3	NSU R&D Center	0.5	SNOWTEX (Production capacity expansion)	0.9
NCK SUNEVER (Production capacity expansion)	0.3	Biological Research Lab. (Instruments)	0.3	Biological Research Lab. (Instruments)	0.4	Chemical Research Lab. (Instruments)	0.8
SNOWTEX (Production capacity expansion)	0.3	Display (production facilities)	0.3	Semis (Production test facilities)	0.2	Biological Research Lab. (Instruments)	0.4
Biological Research Lab. (Instruments)	0.2			SNOWTEX (Production capacity expansion)	0.2	NSU R&D Center	0.2
NCK R&D Center (Instruments)	0.2					Semis (Production test facilities)	0.2

(1) Fine Chemicals materials (see p30)

FY2018 Actual vs. FY2018 Mid-Term Plan announced in May 2016 (A)

1. PL	FY2015 Actual	FY2018 Actual	FY2018 Mid-Term Plan	Variance	(¥billion)
		(A)	(B)	(A)-(B)	
Sales	176.9	204.9	217.0	-12.1	
Operating Profit	28.6	37.1	35.0	+2.1	
Ordinary Income	29.5	39.1	35.6	+3.5	
Net Income	22.4	29.4	27.1	+2.3	
EPS (¥/share)	143.37	197.67	-	-	
Dividend (¥/share)	44	82	-	-	
FX Rate (¥/\$)	120	111	115	-4	
Naphtha (¥/kl)	42,800	49,700	51,100	-1,400	

(Financial Targets)

OP Margin	16.2%	18.1%	Above 15%	Achieved	
ROE	14.6%	16.6%	Above 14%	Achieved	
Dividend Payout Ratio	30.7%	41.5%	40%	Achieved	
Total Payout Ratio	70.8%	72.0%	70%	Achieved	
R&D Expenses/Sales	8.9%	8.7%	Above 8%	Achieved	(¥billion)

2. Segment (1)

	Sales				Operating Profit				(person)
	FY2015 Actual	FY2018 Actual	FY2018 Mid-Term Plan	Variance	FY2015 Actual	FY2018 Actual	FY2018 Mid-Term Plan	Variance	
		(A)	(B)	(A)-(B)		(A)	(B)	(A)-(B)	
Chem	34.3	35.7	38.0	-2.3	3.9	3.0	4.0	-1.0	
Performance Materials	51.8	63.0	68.0	-5.0	12.0	15.0	15.4	-0.4	
Agro	47.5	62.7	58.6	+4.1	10.8	18.4	12.9	+5.5	
Pharma	8.7	7.0	8.1	-1.1	2.0	1.0	2.0	-1.0	
Trading, Others, Adjustment	34.6	36.5	44.3	-7.8	-0.1	-0.3	0.7	-1.0	
Total	176.9	204.9	217.0	-12.1	28.6	37.1	35.0	+2.1	

(¥billion)

	Capex <FY2016-2018>			R&D expenses <FY2016-2018>			Researchers <FY2018>		
	Actual	Mid-Term Plan	Variance	Actual	Mid-Term Plan	Variance	Actual	Mid-Term Plan	Variance
	(A)	(B)	(A)-(B)	(A)	(B)	(A)-(B)	(A)	(B)	(A)-(B)
Chem	6.6	9.1	-2.5	1.6	1.7	-0.1	10	10	0
Performance Materials	18.9	20.8	-1.9	24.3	24.3	+0.0	200	194	+6
Agro	8.3	9.8	-1.5	12.6	15.2	-2.6	95	95	0
Pharma	2.1	2.0	+0.1	7.2	7.1	+0.1	85	80	+5
Trading, Others, Adjustment	2.0	1.0	+1.0	5.4	5.5	-0.1	80	69	+11
Total	37.9	42.7	-4.8	51.1	53.8	-2.7	470	448	+22

(1) Including inter-segment sales/transfers

FY2018 Actual vs. FY2018 Mid-Term Plan announced in May 2016 (B)

(¥billion)

		FY2015 Actual	FY2018 Actual (A)	FY2018 Mid-term Plan (B)	(A) - (B)	
Chemicals	Sales	34.3	35.7	38.0	-2.3	<ul style="list-style-type: none"> ◆ Above target: melamine(export), high purity sulfuric acid ◆ Below target: melamine(domestic), urea including AdBlue, high purity ammonia, environmental related products, TEPIC(general applications and electronic materials), new TEPIC
	OP	3.9	3.0	4.0	-1.0	<ul style="list-style-type: none"> ◆ Sales below target(price increases, slow down of the Chinese market), feedstock and raw materials cost above expectations, fixed cost in line with expectations, inventory adjustment cost below expectations ¥0.6 billion ◆ (OP) (Fine Chemicals) below target, (Basic Chemicals) in line with target
Performance Materials	Sales	51.8	63.0	68.0	-5.0	<ul style="list-style-type: none"> ◆ DP: (Above target) Photo-alignment IPS, (Below target) TN, rubbing IPS, VA, OLED materials, HYPERTECH, light control film materials, Total below target
						<ul style="list-style-type: none"> ◆ Semis: (Above target) EUV under layer, 3D packaging process materials, (Below target) KrF, ArF, multi layer process materials, CMOS image sensor materials, Total below target
	OP	12.0	15.0	15.4	-0.4	<ul style="list-style-type: none"> ◆ Inorganic: (Above target) SNOWTEX(polishing), Organo/Monomer sol, other materials, (Below target) Oilfield materials, Total below target ◆ Sales below target, fixed cost above expectations ¥1.3billion (Semis, Inorganic) ◆ (OP) (DP) above target, (Semis) below target, (Inorganic) below target
Agro	Sales	47.5	62.7	58.6	+4.1	<ul style="list-style-type: none"> ◆ (Above target) Fluralaner, ALTAIR, TARGA, ROUNUP AL, GRACIA ◆ (Below target) PERMIT(export), SIRIUS, PULSOR(export), ROUNUP ML, LEIMAY(export)
	OP	10.8	18.4	12.9	+5.5	<ul style="list-style-type: none"> ◆ Sales above target, fixed cost below expectations ¥1.7billion, inventory adjustment cost below expectations ¥0.8billion
Pharma	Sales	8.7	7.0	8.1	-1.1	<ul style="list-style-type: none"> ◆ (Above target) LIVALO(export) ◆ (Below target) LIVALO(domestic), up-front and milestone payments ◆ (In line with target) Custom Chemicals
	OP	2.0	1.0	2.0	-1.0	<ul style="list-style-type: none"> ◆ Sales below target, fixed cost in line with expectations ◆ (OP) (Pharma) below target, (Custom Chemicals) in line with target
Trading, Others, Adjustment	Sales	34.6	36.5	44.3	-7.8	<ul style="list-style-type: none"> ◆ Trading down ¥1.1billion, other domestic subs up ¥0.9billion, Adjustment calculation down ¥7.6billion
	OP	-0.1	-0.3	0.7	-1.0	<ul style="list-style-type: none"> ◆ Trading down ¥0.3billion, other domestic subs up ¥0.2billion, Adjustment calculation down ¥0.9billion
Total	Sales	176.9	204.9	217.0	-12.1	
	OP	28.6	37.1	35.0	+2.1	

New Mid-Term Plan Vista 2021 Stage II (FY2019-2021) (A)

1. PL	Actual	Outlook	New Mid-Term Plan	Mid-Term Plan announced in May 2016	(¥billion)
	FY2018	FY2019	FY2021	FY2021	
Sales	204.9	210.5	235.0	250.0	
Operating Profit	37.1	38.7	43.0	40.0	
Ordinary Income	39.1	40.2	44.0	40.8	
Net Income	29.4	30.2	33.0	31.0	
EPS (¥/share)	197.67	205.83	230.00	-	
Dividend (¥/share)	82	88	-	-	
FX Rate (¥/\$)	111	110	110	115	
Naphtha (¥/kl)	49,700	43,000	43,000	51,100	

(Financial Targets)	Actual	Outlook	New Mid-Term Plan	Mid-Term Plan announced in May 2016	(¥billion)
	FY2018	FY2019	FY2020, FY2021	FY2021	
OP Margin	18.1%	18.4%	Above 18%	Above 15%	
ROE	16.6%	16.3%	Above 16%	Above 14%	
Dividend Payout Ratio	41.5%	42.8%	45%	40%	
Total Payout Ratio	72.0%	72.5%	75%	70%	

2. Segment ⁽¹⁾	Sales				Operating Profit			
	Actual	Outlook	New Mid-Term Plan	Mid-Term Plan announced in May 2016	Actual	Outlook	New Mid-Term Plan	Mid-Term Plan announced in May 2016
	FY2018	FY2019	FY2021	FY2021	FY2018	FY2019	FY2021	FY2021
Chem	35.7	39.0	43.1	40.5	3.0	4.0	5.1	4.5
Performance M.	63.0	64.3	75.1	82.9	15.0	15.0	17.3	18.4
Agro	62.7	64.2	70.1	67.0	18.4	19.0	21.1	16.7
Pharma	7.0	7.0	7.5	8.3	1.0	1.0	0.7	2.4
Trading, Others, Adj	36.5	36.0	39.2	51.3	-0.3	-0.3	-1.2	-2.0
Total	204.9	210.5	235.0	250.0	37.1	38.7	43.0	40.0

(1) Including inter-segment sales/transfers

New Mid-Term Plan Vista 2021 Stage II (FY2019-2021) (B)

1. Cash Flows

	Actual	New Mid-Term
	Total FY2016-2018	Total FY2019-2021*
CF from operating activities	102.1	115.0
CF from investing activities	-39.2	-45.0
CF from financing activities	-62.0	-75.0
(Total payout to shareholders (dividend & share repurchase))	-55.6	-70.0
(Repayment of borrowings)	-6.4	-5.0
	FY2018	FY2021
Cash at end of fiscal year	36.2	30.0

(¥billion)

*Round number

2. Capex, Depreciation, R&D expenses, Researchers

(¥billion)

(person)

	Capex		Depreciation		R&D expenses		Researchers	
	Actual	New Mid-Term Plan	Actual	New Mid-Term Plan	Actual	New Mid-Term Plan	Actual	New Mid-Term Plan
	Total FY2016-2018	Total FY2019-2021	Total FY2016-2018	Total FY2019-2021	Total FY2016-2018	Total FY2019-2021	FY2018	FY2021
Chemicals	6.6	14.7	5.2	9.4	1.6	1.4	10	10
Performance Materials	18.9	17.8	16.7	17.0	24.3	26.7	200	210
Agrochemicals	8.3	8.2	4.4	5.5	12.6	14.8	95	95
Pharmaceuticals	2.1	1.7	2.1	1.8	7.2	7.1	85	90
Trading, Others, Adjustment	2.0	2.3	1.9	3.1	5.4	8.0	80	75
Total	37.9	44.7	30.3	36.8	51.1	58.0	470	480

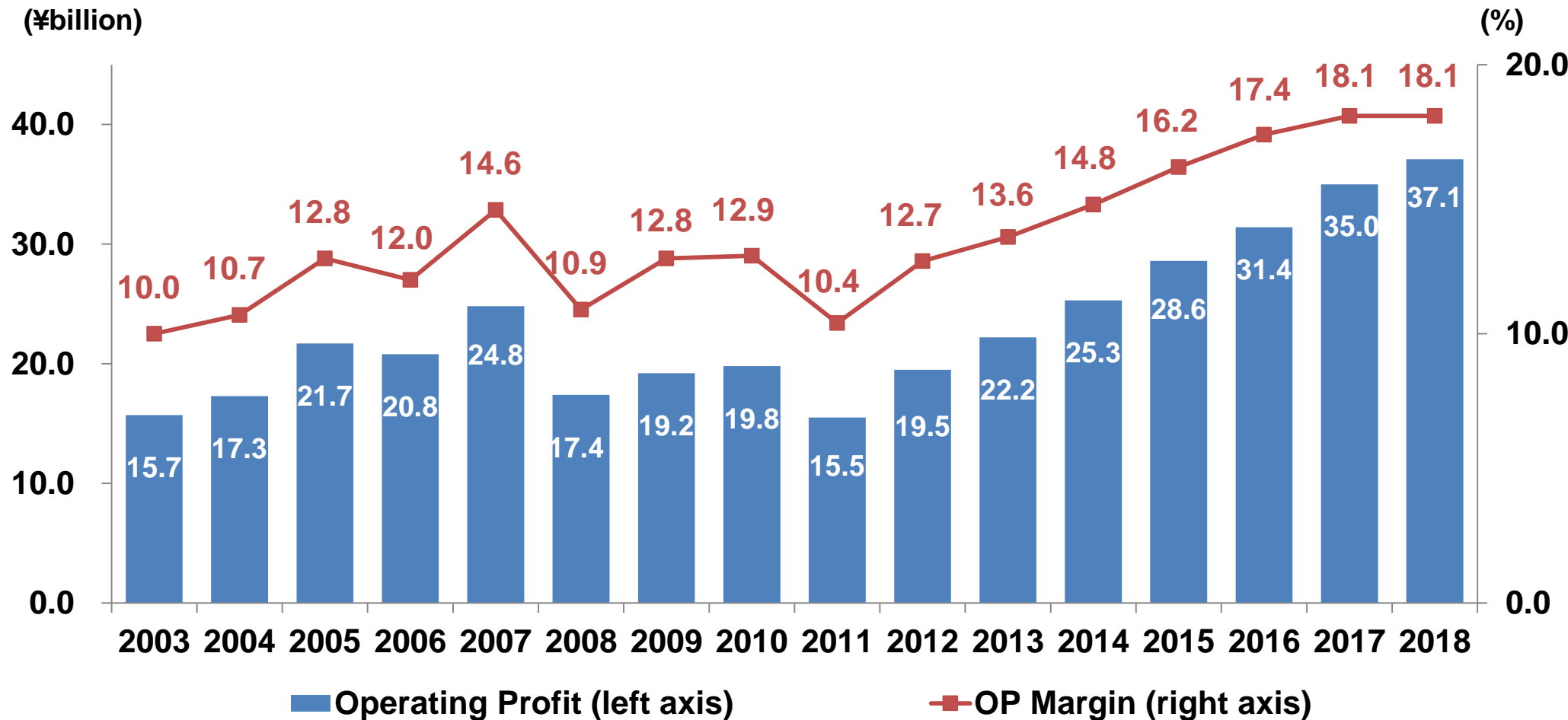
ESG

- ◆ **September 2018**
NCC was selected for the first time as an inclusion in the Dow Jones Sustainability Asia Pacific Index
 - ◆ **September 28, 2018**
NCC published its integrated reports “Integrated Reports 2018” for the first time
https://www.nissanchem.co.jp/eng/ir_info/archive/ar/ar2018.pdf
 - ◆ **April 1, 2019**
Establishment of Nomination and Remuneration Advisory Committee as an optional advisory body of the Board of Directors
 - ◆ ***Introduction of a performance-linked stock compensation plan called a Board Benefit Trust for members of the Board of Directors, etc.**
 - ◆ ***One Outside Director added**
As a result, the Board of Directors consisting of 9 Directors include 3 Outside Directors
- *subject to approval at the 149th Ordinary General Meeting of Shareholders to be held in late June 2019**

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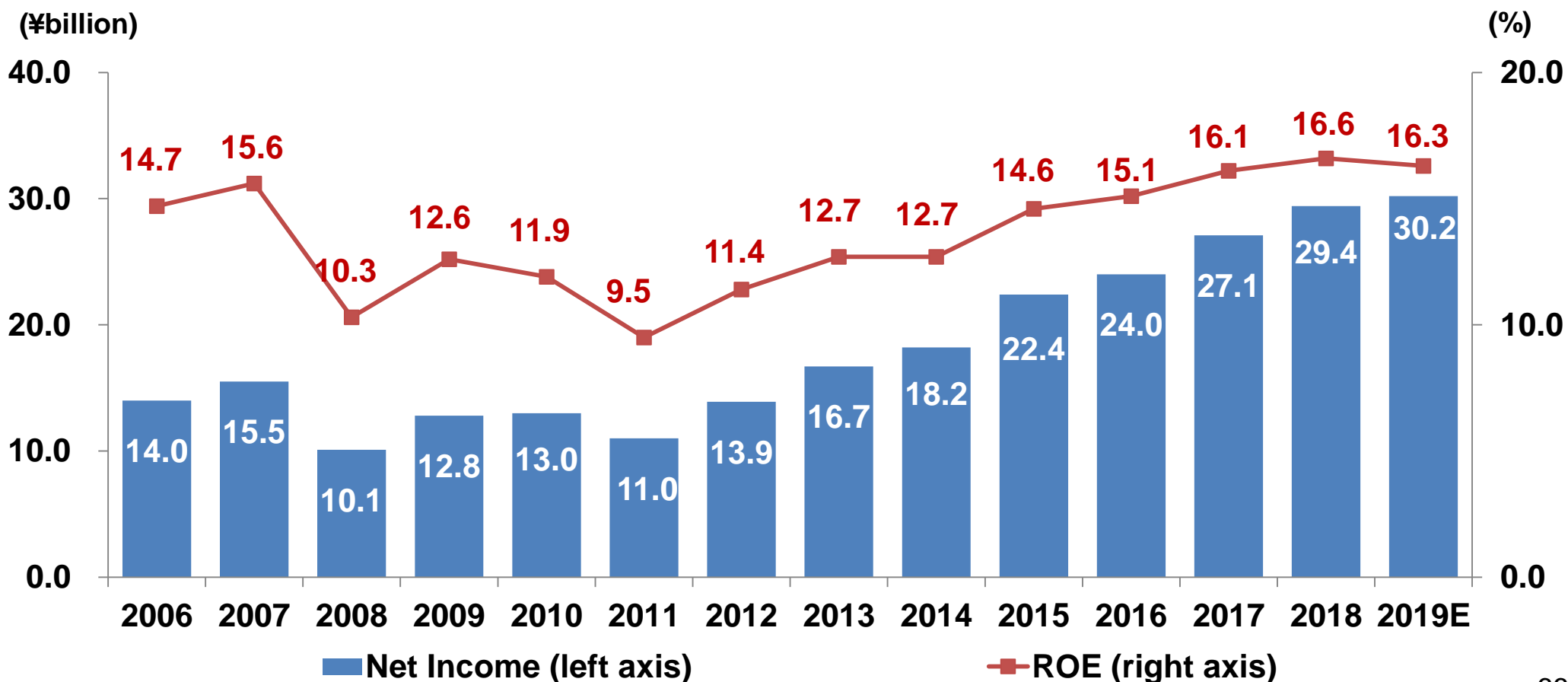
Our Characteristics - (A) Recording Stable OP Margin

◆ NCC has recorded more than 10% OP margin in 16 consecutive years (FY2003-2018)



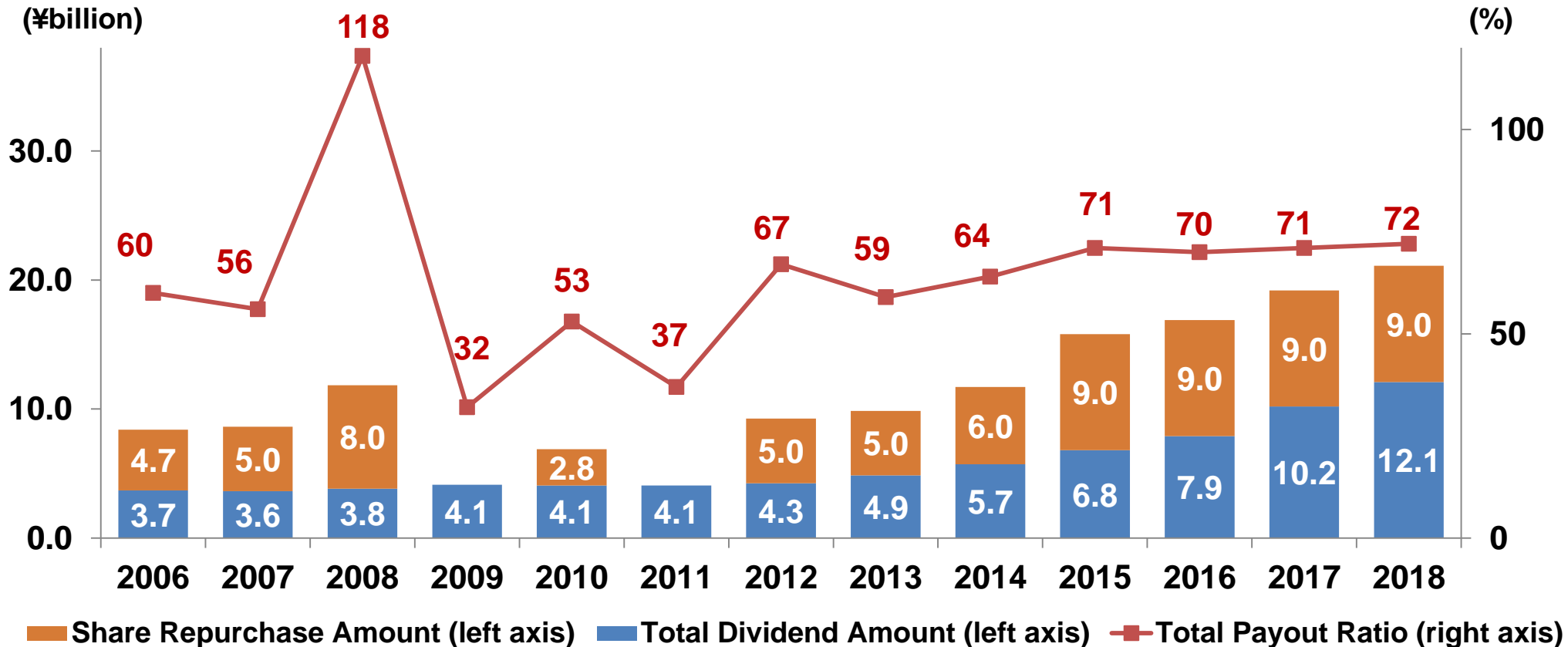
Our Characteristics - (B) High ROE

- ◆ The most important financial indicator for a long time
- ◆ Target : Maintain above 14% (Mid-Term Plan FY2016-2018)
⇒ Achieved in FY2016, 2017 and 2018
- ◆ New Target : Maintain above 16% (New Mid-Term Plan FY2019-2021)



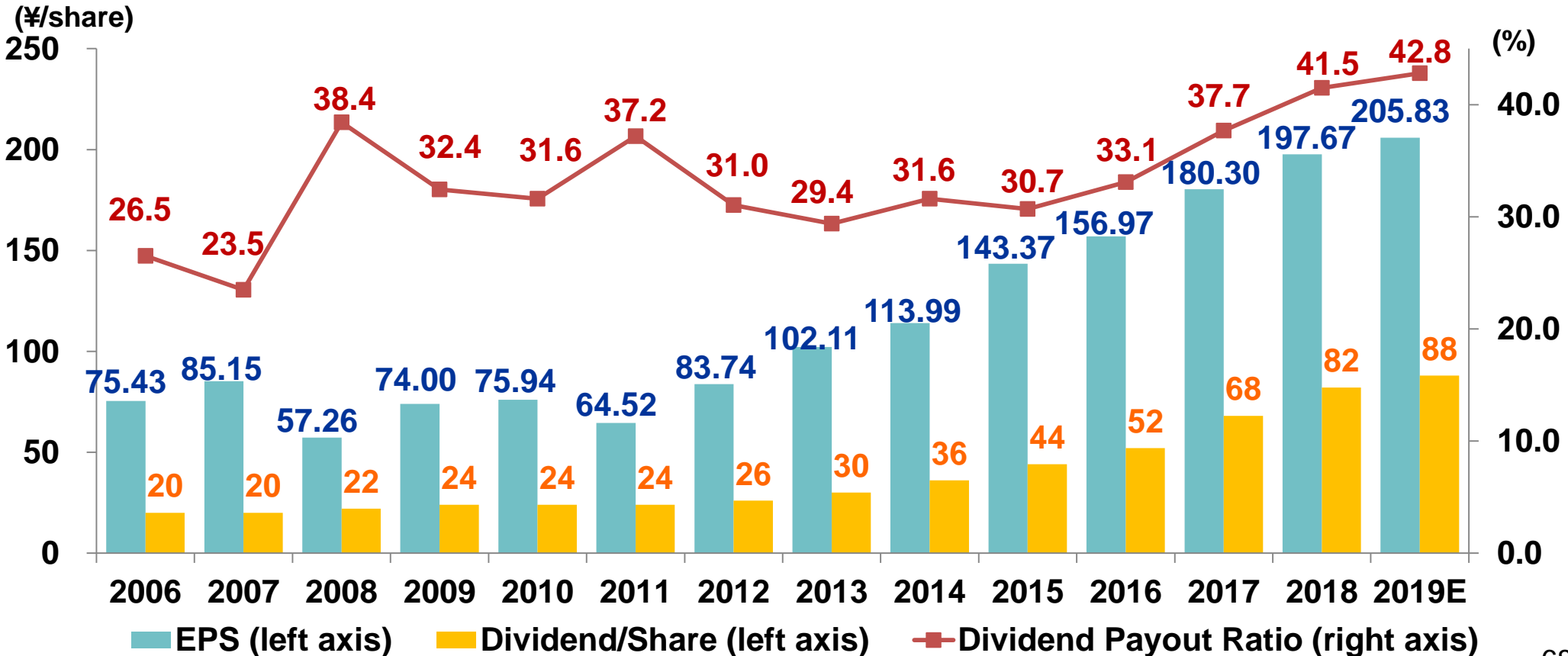
Our Characteristics - (C) Shareholders Return Policy

- ◆ Maintaining an aggressive shareholders return policy
- ◆ Target : Maintain 70% total payout ratio (Mid-Term Plan FY2016-2018)
⇒ Achieved in FY2016, 2017 and 2018
- ◆ New Target : 72.5% in FY2019, 75% in FY2020 and 2021
(New Mid-Term Plan FY2019-2021)



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 Plan FY2016-18)
⇒ Achieved in FY2018 (41.5%)
- ◆ New Target : 42.5% in FY2019, 45% in FY2020 and 2021
(New Mid-Term Plan FY2019-2021)



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

- ◆ Started share repurchase in 2006 only to enhance ROE
- ◆ Repurchased ¥72.5 billion, 38.8 million shares (20.7% of shares issued) in total from FY2006 to FY2018
- ◆ **Cancelled all repurchased shares**

Shareholders Return FY2006 - 2018

Fiscal year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	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	2,292	1,682	38,748
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	9.0	9.0	72.5
Shares cancelled (thousand shares)	3,000	3,635	7,000	0	3,000	0	6,000	4,000	3,000	2,000	2,000	3,000	2,000	38,635
Shares issued at FY end (million shares)	185	181	174	174	171	171	165	161	158	156	154	151	149	
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	1,535	1,218	

◆ Share repurchase program

Fiscal year	2018		2019
Total amount (¥billion)	5.0	4.0	up to 6.0
Total number of shares repurchased (thousand shares)	976	706	up to 1,700
Period of repurchase	May 14, 2018 - June 8, 2018	February 12, 2019 - March 4, 2019	May 16, 2019 - August 30, 2019

- ◆ FY2019 cancellation of treasury shares:
 - May 10, 2019 : 1.0 million shares

◆ Cash Management Policy

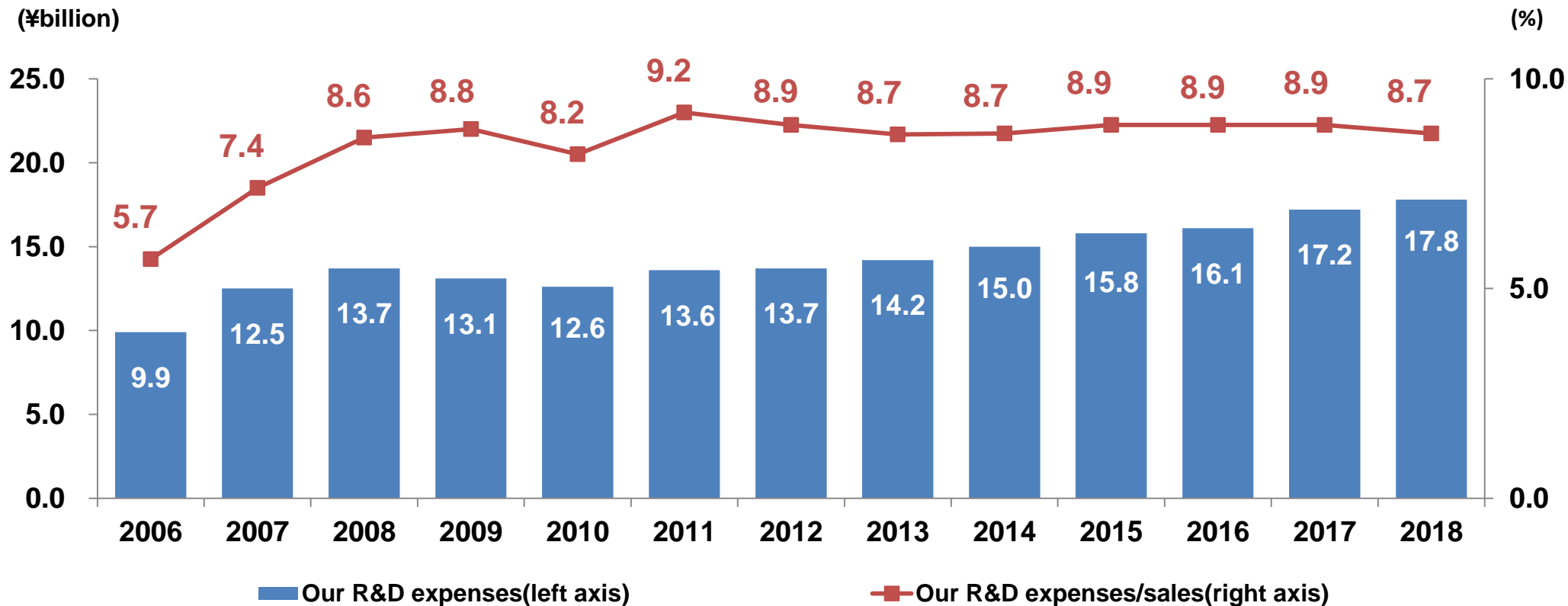
Aiming to control cash balance around the level of

- = Minimum required level
- + 1/3 of annual scheduled long-term borrowings repayment
- + 1/3 of short-term borrowings outstanding + Contingent risk reserves

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Our Characteristics- (F-1) R&D Oriented Chemical Company

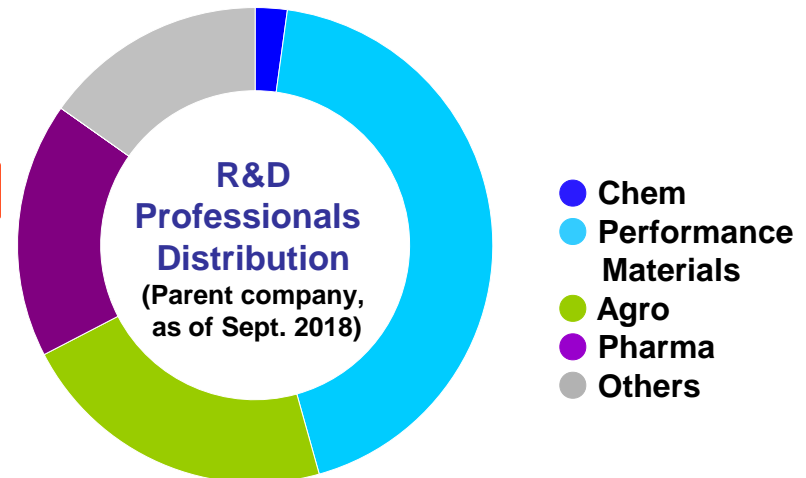
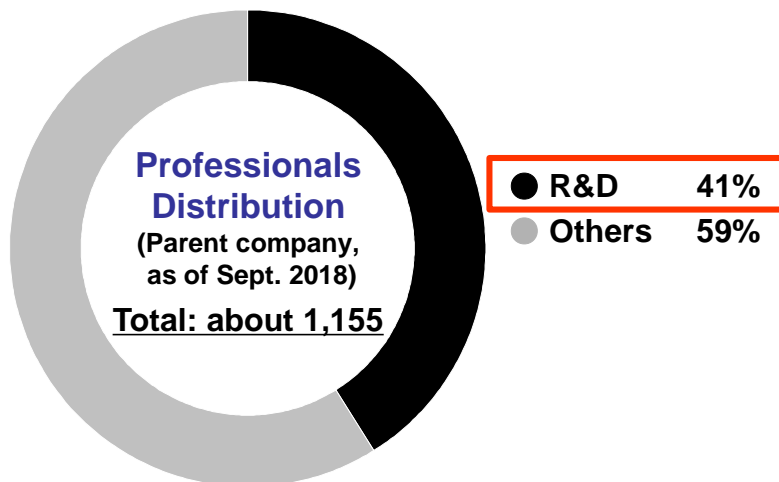
- ◆ FY2018 R&D expenses/sales: 8.7%
- ◆ Maintaining above 8% R&D expenses/sales in recent years
- ◆ About 40% of profession staff assigned to R&D centers



Our Characteristics- (F-2) R&D Oriented Chemical Company

◆ R&D by segment

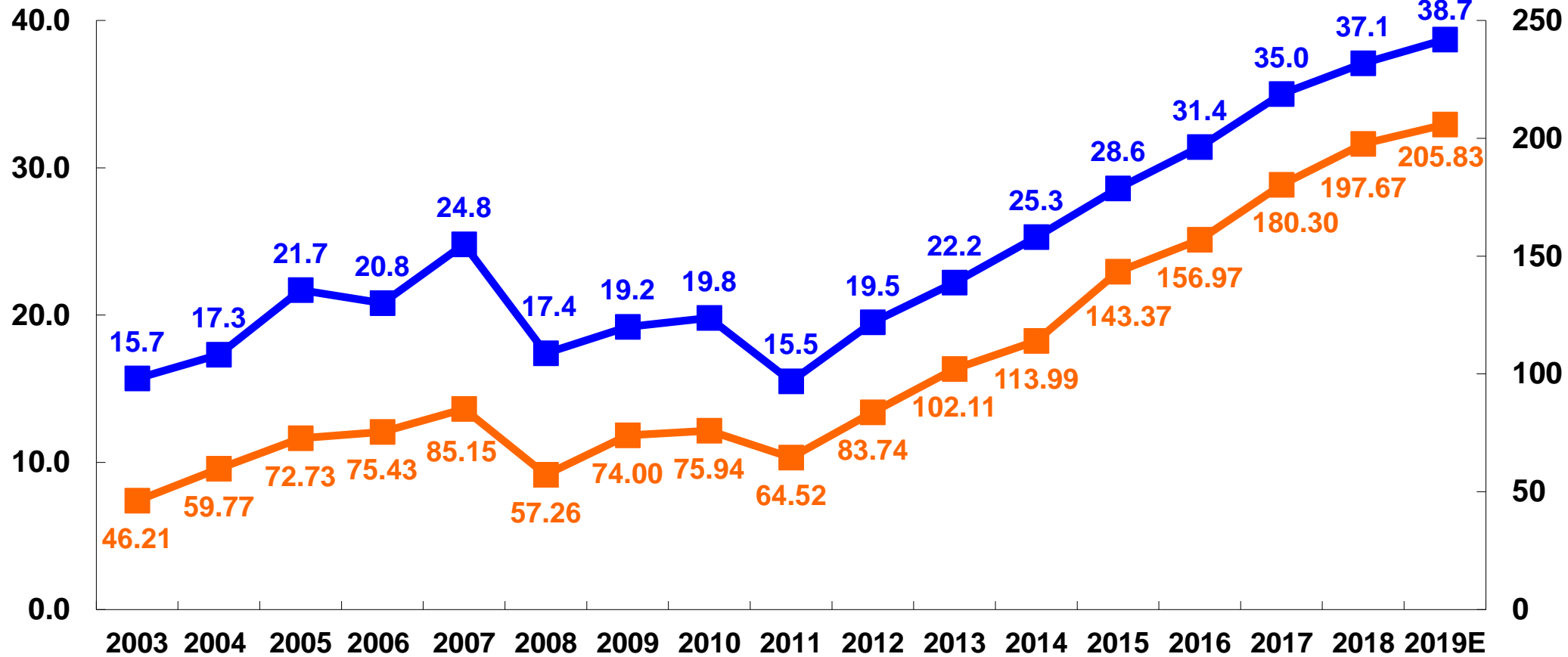
Segment	FY2018 Actual				
	Sales (¥billion)	OP (¥billion)	OP margin	R&D expenses (¥billion)	% of Sales
Chemicals	35.7	3.0	8.4%	0.6	1.7%
Performance Materials	63.0	15.0	23.8%	8.2	13.0%
Agrochemicals	62.7	18.4	29.3%	4.5	7.2%
Pharmaceuticals	7.0	1.0	14.3%	2.5	35.7%
Others	-	-	-	2.0	-
Total (including others and adjustment)	204.9	37.1	18.1%	17.8	8.7%



Long-term Financial Performance Trend

OP
(¥billion)

EPS
(¥/share)



Long Term Financial Performance Trend

(¥billion)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019E
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	193.4	204.9	210.5
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	35.0	37.1	38.7
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	36.2	39.1	40.2
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	27.1	29.4	30.2
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	45.5	48.0	49.4
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%	18.1%	18.1%	18.4%
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%	16.1%	16.6%	16.3%
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	180.30	197.67	205.83
Dividend(¥/share)	11	11	15	20	20	22	24	24	24	26	30	36	44	52	68	82	88
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%	37.7%	41.5%	42.8%
Share Repurchase	-	-	-	4.7	5.0	8.0	-	2.8	-	5.0	5.0	6.0	9.0	9.0	9.0	9.0	-
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	246.0	247.0	-
Net Assets	70.4	80.0	93.6	99.3	101.2	96.8	107.7	112.4	119.6	126.7	137.8	151.3	156.9	163.7	176.4	182.1	-
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	37.7	36.2	-
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	28.6	26.6	-
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%	71.0%	73.0%	-
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	13.7	9.9	9.7
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	10.5	10.9	10.7
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	17.2	17.8	18.3
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%	8.9%	8.7%	8.7%

*Total Assets as of FY2017 are restated to reflect changes in presentation from including an impact of “Partial Amendments to Accounting Standard for Tax Effect Accounting”

FY2015 - FY2018 Quarterly Sales by Segment (1)

(¥billion)

	FY2015 Actual					FY2016 Actual					FY2017 Actual					FY2018 Actual				
	1Q	2Q	3Q	4Q	Total	1Q	2Q	3Q	4Q	Total	1Q	2Q	3Q	4Q	Total	1Q	2Q	3Q	4Q	Total
Chem	8.7	8.0	9.0	8.6	34.3	8.5	8.0	9.1	9.2	34.8	8.8	7.9	9.2	9.0	34.9	8.7	8.3	9.6	9.1	35.7
Fine	3.0	2.5	2.5	2.6	10.6	2.8	2.5	2.7	2.7	10.7	2.8	2.5	2.8	2.5	10.6	2.7	2.4	2.6	2.7	10.4
Basic	5.7	5.5	6.5	6.0	23.7	5.7	5.5	6.4	6.5	24.1	6.0	5.4	6.4	6.5	24.3	6.0	5.9	7.0	6.4	25.3
P.M	13.0	13.0	13.6	12.2	51.8	12.6	12.9	13.8	13.5	52.8	14.1	15.0	15.1	14.6	58.8	15.6	16.4	16.6	14.4	63.0
Agro	13.6	7.5	5.0	21.4	47.5	14.5	9.5	4.2	23.8	52.0	14.6	11.5	6.4	25.6	58.1	16.4	12.3	5.9	28.1	62.7
Pharma	2.1	1.6	3.5	1.5	8.7	2.2	1.5	2.4	1.9	8.0	2.1	1.4	2.3	1.7	7.5	1.8	1.9	1.9	1.4	7.0
Trading	14.7	12.8	14.9	13.2	55.6	14.4	13.2	13.7	13.9	55.2	14.6	14.5	15.9	14.5	59.5	17.8	15.6	18.1	16.4	67.9
Others	4.1	4.8	4.7	7.3	20.9	4.0	4.6	5.8	9.6	24.0	5.4	4.3	4.6	7.2	21.5	4.6	5.9	7.2	6.9	24.6
Adjust	-11.0	-9.2	-11.0	-10.7	-41.9	-11.1	-10.3	-11.4	-13.7	-46.5	-12.2	-11.0	-11.8	-11.9	-46.9	-14.0	-13.3	-15.4	-13.3	-56.0
Total	45.2	38.5	39.7	53.5	176.9	45.1	39.4	37.6	58.2	180.3	47.4	43.6	41.7	60.7	193.4	50.9	47.1	43.9	63.0	204.9

(1) Including inter-segment sales/transfers

FY2015 - FY2018 Quarterly OP by Segment

(¥billion)

	FY2015 Actual					FY2016 Actual					FY2017 Actual					FY2018 Actual				
	1Q	2Q	3Q	4Q	Total	1Q	2Q	3Q	4Q	Total	1Q	2Q	3Q	4Q	Total	1Q	2Q	3Q	4Q	Total
Chem	1.5	-0.1	1.2	1.3	3.9	1.5	-0.2	1.3	1.2	3.8	1.5	-0.2	1.2	0.9	3.4	1.6	-0.4	1.0	0.8	3.0
P.M	3.4	2.9	3.6	2.1	12.0	3.0	3.2	3.8	2.5	12.5	3.6	4.1	4.0	2.5	14.2	3.9	4.2	4.3	2.6	15.0
Agro	4.4	1.8	-1.3	5.9	10.8	4.5	2.4	-2.0	8.3	13.2	4.5	3.6	-0.6	8.9	16.4	5.1	4.7	-1.3	9.9	18.4
Pharma	0.4	0.2	1.6	-0.2	2.0	0.6	0.0	0.8	0.3	1.7	0.5	0.0	0.6	0.1	1.2	0.3	0.3	0.4	0.0	1.0
Trading	0.5	0.4	0.5	0.4	1.8	0.4	0.4	0.5	0.4	1.7	0.4	0.5	0.5	0.4	1.8	0.6	0.5	0.6	0.3	2.0
Others	0.0	0.0	0.0	0.5	0.5	0.0	0.0	0.2	0.8	1.0	0.1	0.1	0.1	0.3	0.6	0.1	0.1	0.2	0.5	0.9
Adjust	-0.8	-0.3	-0.7	-0.6	-2.4	-0.5	-0.6	-0.6	-0.8	-2.5	-0.6	-0.8	-0.7	-0.5	-2.6	-0.9	-0.7	-0.8	-0.8	-3.2
Total	9.4	4.9	4.9	9.4	28.6	9.5	5.2	4.0	12.7	31.4	10.0	7.3	5.1	12.6	35.0	10.7	8.7	4.4	13.3	37.1

Sales and Operating Profit by Segment (1) (2)

<Sales (A)>

(¥billion)

	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019E
Chem	38.1	36.9	34.5	35.5	34.3	34.3	34.8	34.9	35.7	39.0
P.M	38.0	34.0	37.4	42.8	49.4	51.8	52.8	58.8	63.0	64.3
Agro	34.4	33.8	35.4	39.1	45.7	47.5	52.0	58.1	62.7	64.2
Pharma	9.6	10.0	12.7	11.6	8.8	8.7	8.0	7.5	7.0	7.0
Trading	44.1	44.8	46.6	50.7	54.4	55.6	55.2	59.5	67.9	67.8
Others	27.0	20.0	21.2	21.4	20.9	20.9	24.0	21.5	24.6	23.3
Adjust	-37.0	-30.9	-34.0	-37.4	-42.3	-41.9	-46.5	-46.9	-56.0	-55.1
Total	154.2	148.6	153.8	163.7	171.2	176.9	180.3	193.4	204.9	210.5

<Segment Assets (D)>

<OP (B)>

Chem	2.4	1.6	1.9	1.9	1.9	3.9	3.8	3.4	3.0	4.0
P.M	7.9	4.8	7.2	8.8	12.0	12.0	12.5	14.2	15.0	15.0
Agro	4.8	4.4	5.0	6.2	9.2	10.8	13.2	16.4	18.4	19.0
Pharma	4.4	4.6	5.2	4.9	2.3	2.0	1.7	1.2	1.0	1.0
Trading	1.4	1.3	1.4	1.5	1.7	1.8	1.7	1.8	2.0	2.0
Others	1.0	0.3	0.7	0.8	0.6	0.5	1.0	0.6	0.9	0.6
Adjust	-2.1	-1.5	-1.9	-1.9	-2.4	-2.4	-2.5	-2.6	-3.2	-2.9
Total	19.8	15.5	19.5	22.2	25.3	28.6	31.4	35.0	37.1	38.7

FY2018
28.7
51.3
61.8
9.1
25.5
11.5
59.1
247.0

<OP Margin (C)=(B)/(A)>

Chem	6.3%	4.3%	5.5%	5.4%	5.5%	11.4%	10.9%	9.7%	8.4%	10.3%
P.M	20.8%	14.1%	19.3%	20.6%	24.3%	23.2%	23.7%	24.1%	23.8%	23.3%
Agro	14.0%	13.0%	14.1%	15.9%	20.1%	22.7%	25.4%	28.2%	29.3%	29.6%
Pharma	45.8%	46.0%	40.9%	42.2%	26.1%	23.0%	21.3%	16.0%	14.3%	14.3%
Trading	3.2%	2.9%	3.0%	3.0%	3.1%	3.2%	3.1%	3.0%	2.9%	2.9%
Others	3.7%	1.5%	3.3%	3.7%	2.9%	2.4%	4.2%	2.8%	3.7%	2.6%
Total	12.9%	10.4%	12.7%	13.6%	14.8%	16.2%	17.4%	18.1%	18.1%	18.4%

<ROA (E)=(B)/(D)>

10.5%
29.2%
29.8%
11.0%
7.8%
7.8%
15.0%

(1) FY2010-2011 : Former Segmentation, FY2012- : New Segmentation

(2) Including inter-segment sales/transfers

Main Products by Segment

Segment	Products	Main Applications
Chem	◆ Fine Chemicals TEPIC Melamine cyanurate Environmental product	epoxy compound for LED sealants, solder resist, painting flame retardant HI-LITE (chlorinated isocyanuric acid for sterilizing)
	◆ Basic Chemicals Melamine AdBlue 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 SUNEVER ARC® OptiStack® NHC OPTIFOCUS ELSOURCE	LCD alignment coating bottom anti-reflective coating for semiconductors multi layer process material for semiconductors (Si-HM/SOC) *ARC® and OptiStack® 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 Organo silica sol Monomer sol Alumina sol SUNCOLLOID CELNAX Oilfield materials	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 for enhancing oil recovery
Agro	◆ Herbicide TARGA PERMIT SIRIUS, ALTAIR ROUNDUP ◆ Insecticide STARMITE, SANMITE, MITOKOHNE GRACIA ◆ Fungicide LEIMAY/ORACLE PULSOR, IKARUGA, GREATAM (THIFLUZAMIDE) ◆ Animal health products Fluralaner	soybean, rapeseed, sugarbeet corn, sugarcane, rice paddy rice non-selective herbicide for orchard, noncrop land fruits, tea, vegetables vegetables, tea vegetables, potato, fruits potato, grape, turf 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 researching services for pharmaceutical companies
Trading	Nissei Corporation	
Others	Transportation, Landscaping, Engineering, Fertilizer	

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.



Nissan Chemical
CORPORATION