

November 8, 2019

Presentation for Investors

1H FY2019 (April 1 – September 30, 2019)

Financial Results

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Translation of presentation materials for the investor meeting held in Tokyo on November 8, 2019



Nissan Chemical
CORPORATION

**Institutional
Investor**
**2019 ALL-JAPAN EXECUTIVE TEAM
MOST HONORED COMPANY**

Highlight

1H FY2019 Actual

- ◆ OP down ¥1.4 billion (1H FY2019 Actual ¥18.0 billion vs. 1H FY2018 Actual ¥19.4 billion)
However, ¥0.2 billion above target (¥17.8 billion) announced on May 15, 2019
- ◆ Net Income Attributable to Owners of Parent down ¥0.9 billion
(1H FY2019 Actual ¥14.5 billion vs. 1H FY2018 Actual ¥15.4 billion)
However, ¥0.8 billion above target (¥13.7 billion) announced on May 15, 2019 mainly due to Net Extraordinary Income ¥0.9 billion recognized in 1H FY2019

2H FY2019 Outlook

- ◆ OP up ¥2.9 billion (2H FY2019 Outlook ¥20.6 billion vs. 2H FY2018 Actual ¥17.7 billion)
However, ¥0.3 billion below target (¥20.9 billion) announced on May 15, 2019
- ◆ Net Income Attributable to Owners of Parent up ¥2.1 billion
(2H FY2019 Outlook ¥16.1 billion vs. 2H FY2018 Actual ¥14.0 billion)
However, ¥0.4 billion below target (¥16.5 billion) announced on May 15, 2019

Highlight

Full Year FY2019 Outlook

◆OP up ¥1.5 billion (FY2019 Outlook ¥38.6 billion vs. FY2018 Actual ¥37.1 billion)
However, ¥0.1 billion below target (¥38.7 billion) announced on May 15, 2019

◆Net Income Attributable to Owners of Parent up ¥1.2 billion
(FY2019 Outlook ¥30.6 billion vs. FY2018 Actual ¥29.4 billion) partly due to
Net Extraordinary Income ¥0.9 billion recognized in 1H FY2019
And, ¥0.4 billion above target (¥30.2 billion) announced on May 15, 2019

◆Shareholders Return

Annual dividend up ¥6/share

(FY2019 Outlook ¥88 = 1H ¥42 + 2H ¥46 vs. FY2018 Actual ¥82 = 1H ¥40 + 2H ¥42),
same amount as announced on May 15, 2019

Dividend payout ratio 42.1% vs. FY2018 Actual 41.5%

Share repurchase up ¥1.0 billion (FY2019 Outlook ¥10.0 billion vs. FY2018 Actual ¥9.0 billion)
¥6.0 billion completed in July 2019, ¥4.0 billion starting on November 11, 2019

Total payout ratio 74.6% vs. FY2018 72.0%

Exceeding FY2019 Outlook 72.5% announced on May 15, 2019,
close to Mid-Term Plan FY2020 and 2021 target 75.0%

1H FY2019 PL

(¥billion)

	1H FY2018			1H FY2019			Change			Change (%)	1H FY2019 Outlook as of May 2019		
	1Q	2Q	1H	1Q	2Q	1H	1Q	2Q	1H	1H	1Q	2Q	1H
Sales	50.9	47.1	98.0	48.7	47.8	96.5	-2.2	+0.7	-1.5	-2%	49.7	49.3	99.0
Operating Profit	10.7	8.7	19.4	9.3	8.7	18.0	-1.4	-0.0	-1.4	-7%	8.7	9.1	17.8
Non-Operating Income/Expenses	1.2	0.0	1.2	0.7	-0.1	0.6	-0.5	-0.1	-0.6	-	1.1	-0.5	0.6
Ordinary Income	11.9	8.7	20.6	10.0	8.6	18.6	-1.9	-0.1	-2.0	-10%	9.8	8.6	18.4
Extraordinary Income/Loss	0.0	0.0	0.0	0.9	0.0	0.9	+0.9	+0.0	+0.9	-	0.0	0.0	0.0
Net Income (1)	8.8	6.6	15.4	7.8	6.7	14.5	-1.0	+0.1	-0.9	-6%	7.2	6.5	13.7
EBITDA (2)	13.1	11.3	24.4	11.6	11.1	22.7	-1.5	-0.2	-1.7	-7%	-	-	22.8
EPS (¥/share)	59.25	44.28	103.53	53.13	45.62	98.75	-6.12	+1.34	-4.78	-5%	-	-	93.25
Dividend (¥/share)	-	-	40	-	-	42	-	-	+2		-	-	42
Total amount of Dividend	-	-	5.9	-	-	6.2	-	-	+0.3		-	-	6.2
OP Margin	21.0%	18.5%	19.8%	19.2%	18.2%	18.7%	-1.8%	-0.3%	-1.1%		17.5%	18.5%	18.0%
ROE	-	-	-	-	-	-	-	-	-		-	-	-
FX Rate (¥/\$)	109	111	110	110	107	109					110	110	110
Naphtha (¥/kl) (3)	48,700	53,500	51,200	45,400	40,200	42,800					43,000	43,000	43,000

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

(2) EBITDA = Operating Profit + Depreciation

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

1H FY2019 Review

< vs. 1H FY2018 >

(Sales) ◆ Down ¥ 1.5 billion (-2%)

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

(OP) ◆ Down ¥ 1.4 billion (-7%)

(+) Performance Materials

(-) Chemicals, Agrochemicals, Pharmaceuticals, Trading

(Ordinary Income) ◆ Down ¥ 2.0 billion (-10%)

(Extraordinary Income/Loss) ◆ Up ¥ 0.9 billion

(Extraordinary Income) ¥1.7 billion (Gain on sales of investment securities ¥1.7 billion, sales amount ¥2.9 billion, sold 12 listed companies shares, sold 100% of our shareholdings of 3 listed companies)

(Extraordinary Loss) ¥0.8 billion (NCC's payment of a fee for a licensing arrangement relating to Fluralaner)

(Net Income) ◆ Down ¥ 0.9 billion (-6%)

(EPS) ◆ Down ¥ 4.78

< Shareholders Return >

(Dividend) ◆ 1H ¥42/share (up ¥2 vs. 1H FY2018) (In line with FY2019 Outlook as of May 2019)

(Share Repurchase) ◆ ¥6.0 billion, 1.27 million shares completed in July 2019

(Cancelled 2.0 million shares in May 2019 and August 2019)

< vs. 1H FY2019 Outlook as of May 2019 >

(Sales) ◆ Down ¥ 2.5 billion

(-) Chemicals, Performance Materials, Agrochemicals, Trading

(±) Pharmaceuticals

(OP) ◆ Up ¥ 0.2 billion

(+) Performance Materials, Agrochemicals

(±) Pharmaceuticals, Trading

(-) Chemicals

(Ordinary Income) ◆ Up ¥ 0.2 billion

(Extraordinary Income/Loss) ◆ Up ¥ 0.9 billion

(Extraordinary Income) ¥1.7 billion (Gain on sales of investment securities ¥1.7 billion, sales amount ¥2.9 billion, sold 12 listed companies shares, sold 100% of our shareholdings of 3 listed companies)

(Extraordinary Loss) ¥0.8 billion (NCC's payment of a fee for a licensing arrangement relating to Fluralaner)

(Net Income) ◆ Up ¥ 0.8 billion

(EPS) ◆ Up ¥ 5.50

FY2019 Outlook (Including 3Q and 4Q Outlook)

(¥billion)

	FY2018 Actual							FY2019 Outlook as of Nov. 2019							FY2019 Outlook as of May 2019				
	1Q	2Q	1H	3Q	4Q	2H	Total	1Q Actual	2Q Actual	1H Actual	3Q	4Q	2H	Total	1Q	2Q	1H	2H	Total
Sales	50.9	47.1	98.0	43.9	63.0	106.9	204.9	48.7	47.8	96.5	42.5	70.0	112.5	Record 209.0	49.7	49.3	99.0	111.5	210.5
Operating Profit	10.7	8.7	19.4	4.4	13.3	17.7	37.1	9.3	8.7	18.0	2.6	18.0	20.6	Record 38.6	8.7	9.1	17.8	20.9	38.7
Non-Operating Income/Expenses	1.2	0.0	1.2	0.4	0.4	0.8	2.0	0.7	-0.1	0.6	0.3	0.2	0.5	1.1	1.1	-0.5	0.6	0.9	1.5
Ordinary Income	11.9	8.7	20.6	4.8	13.7	18.5	39.1	10.0	8.6	18.6	2.9	18.2	21.1	Record 39.7	9.8	8.6	18.4	21.8	40.2
Extraordinary Income/Loss	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.9	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0
Net Income (1)	8.8	6.6	15.4	3.4	10.6	14.0	29.4	7.8	6.7	14.5	2.3	13.8	16.1	Record 30.6	7.2	6.5	13.7	16.5	30.2
EBITDA (2)	13.1	11.3	24.4	7.3	16.3	23.6	48.0	11.6	11.1	22.7	-	-	26.2	48.9	-	-	22.8	26.6	49.4
EPS (¥/share) (3)	59.25	44.28	103.53	23.11	71.03	94.14	197.67	53.13	45.62	98.75	-	-	110.17	208.92	-	-	93.25	112.58	205.83
Dividend (¥/share)	-	-	40	-	-	42	82	-	-	42	-	-	46	88	-	-	42	46	88
Dividend payout ratio (%)	-	-	-	-	-	-	41.5	-	-	-	-	-	-	42.1	-	-	-	-	42.8
Total amount of Dividend (3)	-	-	5.9	-	-	6.2	12.1	-	-	6.2	-	-	6.7	12.9	-	-	6.2	6.7	12.9
OP Margin	21.0%	18.5%	19.8%	10.1%	21.1%	16.6%	18.1%	19.2%	18.2%	18.7%	6.1%	25.7%	18.3%	18.5%	17.5%	18.5%	18.0%	18.7%	18.4%
ROE (3)	-	-	-	-	-	-	16.6%	-	-	-	-	-	-	16.8%	-	-	-	-	16.3%
FX Rate (¥/\$)	109	111	110	-	-	112	111	110	107	109	108	108	108		110	110	110	110	110
Naphtha (¥/kl)	48,700	53,500	51,200	-	-	48,400	49,700	45,400	40,200	42,800	-	-	42,100		43,000	43,000	43,000	43,000	43,000

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

(2) EBITDA = Operating Profit + Depreciation

(3) FY2019 Outlook including effects of FY2019 share repurchase program ¥10.0 billion (¥6.0 billion completed in July, 2019 and ¥4.0 billion announced in November 2019)

2H FY2019 Outlook

<vs. 2H FY2018>

(Sales) ◆ Up ¥ 5.6 billion (+5%) (+) Chemicals, Performance Materials, Agrochemicals, Pharmaceuticals

(OP) ◆ Up ¥ 2.9 billion (+16%) (−) Trading
(+) Chemicals, Performance Materials, Agrochemicals, Pharmaceuticals, Trading

(Ordinary Income) ◆ Up ¥ 2.6 billion (+14%)

(Net Income) ◆ Up ¥ 2.1 billion (+15%)

(EPS) ◆ Up ¥ 16.03

3Q (OP) ◆ Down ¥ 1.8 billion (−41%)

4Q (OP) ◆ Up ¥ 4.7 billion (+35%)

<vs. 2H FY2019 Outlook as of May 2019>

(Sales) ◆ Up ¥ 1.0 billion

(+) Chemicals, Agrochemicals

(±) Pharmaceuticals, Trading

(−) Performance Materials

(OP) ◆ Down ¥ 0.3 billion

(+) Chemicals, Agrochemicals, Pharmaceuticals, Trading

(−) Performance Materials

(Ordinary Income) ◆ Down ¥ 0.7 billion

(Net Income) ◆ Down ¥ 0.4 billion

(EPS) ◆ Down ¥ 2.41

Full Year FY2019 Outlook

< vs. FY2018 >

(Sales) ◆ Up ¥ 4.1 billion (+2%)

(+) Chemicals, Performance Materials, Agrochemicals

(±) Pharmaceuticals

(-) Trading

(OP) ◆ Up ¥ 1.5 billion (+4%)

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

(Ordinary Income) ◆ Up ¥ 0.6 billion (+2%)

(Extraordinary Income/Loss) ◆ Up ¥ 0.9 billion

(Extraordinary Income) ¥1.7 billion (Gain on sales of investment securities ¥1.7 billion, sales amount ¥2.9 billion, sold 12 listed companies shares, sold 100% of our shareholdings of 3 listed companies)

(Extraordinary Loss) ¥0.8 billion (NCC's payment of a fee for a licensing arrangement relating to Fluralaner)

(Net Income) ◆ Up ¥ 1.2 billion (+4%)

(EPS) ◆ Up ¥ 11.25

< vs. FY2019 Outlook as of May 2019 >

(Sales) ◆ Down ¥ 1.5 billion

(+) Agrochemicals

(±) Pharmaceuticals

(-) Chemicals, Performance Materials, Trading

(OP) ◆ Down ¥ 0.1 billion

(+) Performance Materials, Agrochemicals, Pharmaceuticals, Trading

(-) Chemicals

(Ordinary Income) ◆ Down ¥ 0.5 billion

(Extraordinary Income/Loss) ◆ Up ¥ 0.9 billion

(Extraordinary Income) ¥1.7 billion (Gain on sales of investment securities ¥1.7 billion, sales amount ¥2.9 billion, sold 12 listed companies shares, sold 100% of our shareholdings of 3 listed companies)

(Extraordinary Loss) ¥0.8 billion (NCC's payment of a fee for a licensing arrangement relating to Fluralaner)

(Net Income) ◆ Up ¥ 0.4 billion

(EPS) ◆ Up ¥ 3.09

< Shareholders Return >

(Dividend) ◆ 1H ¥42/share, 2H ¥46/share (Dividend Payout Ratio : 42.1%)

(1H up ¥2, 2H up ¥4 vs. FY2018) (In line with FY2019 Outlook as of May 2019)

(Share Repurchase) ◆ ¥10.0 billion (¥6.0 billion completed in July 2019, ¥4.0 billion announced in November 2019)

(¥1.0 billion up vs. FY2018, ¥1.0 billion up vs. FY2019E as of May 2019)

(Cancelled 2 million shares in May 2019 and August 2019)

(Total Payout Ratio) ◆ 74.6% (vs. 72.5% FY2019 Outlook as of May 2019, 72.0% FY2018 Actual)

Non-Operating Income/Expenses, Extraordinary Income/Loss

(¥billion)

	FY2018 Actual			FY2019 Outlook as of Nov. 2019			Change			FY2019 Outlook as of May 2019		
	1H	2H	Total	1H Actual	2H	Total	1H Actual	2H	Total	1H	2H	Total
Non-Operating Income	1.78	1.66	3.44	1.36	1.25	2.61	-0.42	-0.41	-0.83	1.49	1.26	2.75
Interest income, dividend income	0.34	0.67	1.01	0.37	0.44	0.81	+0.03	-0.23	-0.20	0.35	0.46	0.81
Equity in earnings of affiliates	0.41	0.56	0.97	0.40	0.60	1.00	-0.01	+0.04	+0.03	0.39	0.54	0.93
Foreign exchange gains	0.31	0.00	0.31	0.00	0.00	0.00	-0.31	+0.00	-0.31	0.00	0.00	0.00
Others	0.72	0.43	1.15	0.59	0.21	0.80	-0.13	-0.22	-0.35	0.75	0.26	1.01
Non-Operating Expenses	0.57	0.86	1.43	0.74	0.71	1.45	+0.17	-0.15	+0.02	0.87	0.43	1.30
Interest expense	0.06	0.05	0.11	0.07	0.06	0.13	+0.01	+0.01	+0.02	0.10	0.07	0.17
Loss on disposal of non-current assets	0.32	0.31	0.63	0.20	0.41	0.61	-0.12	+0.10	-0.02	0.42	0.26	0.68
Foreign exchange losses	0.00	0.33	0.33	0.22	0.00	0.22	+0.22	-0.33	-0.11	0.00	0.00	0.00
Others	0.19	0.17	0.36	0.25	0.24	0.49	+0.06	+0.07	+0.13	0.35	0.10	0.45
Extraordinary Income	0.00	0.00	0.00	1.69	0.00	1.69	+1.69	0.00	+1.69	0.00	0.00	0.00
Extraordinary Loss	0.00	0.00	0.00	0.83	0.00	0.83	+0.83	0.00	+0.83	0.00	0.00	0.00

Cash Flows

(¥billion)

	1H FY2018 Actual	1H FY2019 Actual	FY2018 Actual	FY2019 Outlook as of Nov. 2019	FY2019 Outlook as of May 2019
CF from operating activities	29.2	31.9	32.1	36.1	36.8
Income before income taxes & non-controlling interests	20.6	19.5	39.1	40.6	40.2
Loss (gain) on sales of securities	-0.3	-1.7	-0.3	-1.7	0.0
Depreciation & amortization	5.0	4.7	10.9	10.3	10.7
Income taxes paid	-5.2	-4.3	-9.4	-8.4	-9.0
Working capital, others	9.1	13.7	-8.2	-4.7	-5.1
CF from investing activities	-6.0	-2.4	-10.9	-8.9	-12.5
Purchase of PPE	-5.2	-4.2	-9.7	-10.5	-12.2
Purchase and sales of investment securities	-0.5	2.9	-0.5	2.9	0.0
Others	-0.3	-1.1	-0.7	-1.3	-0.3
CF from financing activities	-31.5	-33.4	-22.6	-25.3	-23.4
Total payout to shareholders (dividend & share repurchase)	-10.4	-12.2	-20.3	-22.4	-21.4
Borrowings	-20.9	-20.3	-2.1	-2.0	-2.0
Others (1)	-0.2	-0.9	-0.2	-0.9	0.0
Effect of exchange rate change on cash & cash equivalents	0.1	-0.4	-0.1	0.0	0.0
Change in cash & cash equivalents	-8.2	-4.3	-1.5	1.9	0.9
Cash & cash equivalents at the end of period	29.5	31.9	36.2	38.1	37.1

(1) 1H FY2019 Actual, FY2019 Outlook as of Nov. 2019: Share repurchase related to Introduction of a performance-linked stock compensation plan -0.8, Others -0.1

Balance Sheets

(¥billion)

	2018/9	2019/3 (A)	2019/9 (B)	Change (B) - (A)		2018/9	2019/3 (A)	2019/9 (B)	Change (B) - (A)
Current assets	128.2	152.5	133.6	-18.9	Liabilities	48.1	64.9	43.5	-21.4
Cash	29.5	36.2	31.9	-4.3	Accounts payable	16.6	17.8	15.8	-2.0
Accounts receivable	53.5	69.2	51.8	-17.4	Borrowings	7.7	26.6	6.2	-20.4
Inventories	41.6	42.0	44.5	+2.5	Others	23.8	20.5	21.5	+1.0
Others	3.6	5.1	5.4	+0.3	Net assets	182.5	182.1	180.0	-2.1
Fixed assets	102.4	94.5	89.9	-4.6	Shareholders' equity	165.4	169.5	171.0	+1.5
Total PPE	54.7	52.7	52.2	-0.5	Valuation difference on available-for-sale securities	14.5	10.6	8.1	-2.5
Intangible assets	1.7	1.5	1.4	-0.1	Foreign currency translation adjustment	0.5	0.0	-0.9	-0.9
Investment securities*	40.6	35.2	30.4	-4.8	Non-controlling interests	1.7	1.7	1.6	-0.1
Others	5.4	5.1	5.9	+0.8	Remeasurements of defined benefit plans	0.4	0.3	0.2	-0.1
Total assets	230.6	247.0	223.5	-23.5	Total liabilities & Net assets	230.6	247.0	223.5	-23.5

*Investment securities				
Listed shares	31.2	25.6	20.8	-4.8
Unlisted shares	2.5	2.5	2.4	-0.1
Subsidiaries/Associates shares	6.9	7.1	7.2	+0.1
Total	40.6	35.2	30.4	-4.8

• Equity Ratio	78.4%	73.0%	79.8%
• D/E Ratio (1)	-13.1%	-5.7%	-15.0%
• Change in shareholders' equity	+1.5		
= Net Income 14.5 - Dividend and others 13.0			
(1)D/E Ratio = (Borrowings - Cash) / Shareholders' equity			

FY2019 Sales Outlook by Segment⁽¹⁾

(¥billion)

	FY2018 Actual							FY2019 Outlook as of Nov. 2019							Change			FY2019 Outlook as of May 2019				
	1Q	2Q	1H	3Q	4Q	2H	Total	1Q Actual	2Q Actual	1H Actual	3Q	4Q	2H	Total	1H Actual	2H	Total	1Q	2Q	1H	2H	Total
Chem	8.7	8.3	17.0	9.6	9.1	18.7	35.7	8.4	8.4	16.8	10.0	10.5	20.5	37.3	-0.2	+1.8	+1.6	9.4	9.5	18.9	20.1	39.0
Fine	2.7	2.4	5.1	2.6	2.7	5.3	10.4	2.6	2.6	5.2	2.9	3.2	6.1	11.3	+0.1	+0.8	+0.9	2.9	3.0	5.9	6.0	11.9
Basic	6.0	5.9	11.9	7.0	6.4	13.4	25.3	5.8	5.8	11.6	7.1	7.3	14.4	26.0	-0.3	+1.0	+0.7	6.5	6.5	13.0	14.1	27.1
P.M	15.6	16.4	32.0	16.6	14.4	31.0	63.0	15.1	16.3	31.4	16.2	15.9	32.1	63.5	-0.6	+1.1	+0.5	15.9	15.8	31.7	32.6	64.3
Agro	16.4	12.3	28.7	5.9	28.1	34.0	62.7	14.7	13.2	27.9	5.2	31.2	36.4	64.3	-0.8	+2.4	+1.6	14.1	14.2	28.3	35.9	64.2
Pharma	1.8	1.9	3.7	1.9	1.4	3.3	7.0	1.9	1.5	3.4	1.6	2.0	3.6	7.0	-0.3	+0.3	-0.0	1.6	1.8	3.4	3.6	7.0
Trading	17.8	15.6	33.4	18.1	16.4	34.5	67.9	17.5	15.8	33.3	17.5	16.3	33.8	67.1	-0.1	-0.7	-0.8	18.8	15.2	34.0	33.8	67.8
Others	4.6	5.9	10.5	7.2	6.9	14.1	24.6	4.9	4.9	9.8	5.5	7.1	12.6	22.4	-0.7	-1.5	-2.2	5.0	4.9	9.9	13.4	23.3
Adjust	-14.0	-13.3	-27.3	-15.4	-13.3	-28.7	-56.0	-13.8	-12.3	-26.1	-13.5	-13.0	-26.5	-52.6	+1.2	+2.2	+3.4	-15.1	-12.1	-27.2	-27.9	-55.1
Total	50.9	47.1	98.0	43.9	63.0	106.9	204.9	48.7	47.8	96.5	42.5	70.0	112.5	209.0	-1.5	+5.6	+4.1	49.7	49.3	99.0	111.5	210.5

(1) Including inter-segment sales/transfers

FY2019 OP Outlook by Segment

(¥billion)

	FY2018 Actual							FY2019 Outlook as of Nov. 2019							Change			FY2019 Outlook as of May 2019				
	1Q	2Q	1H	3Q	4Q	2H	Total	1Q Actual	2Q Actual	1H Actual	3Q	4Q	2H	Total	1H Actual	2H	Total	1Q	2Q	1H	2H	Total
Chem	1.6	-0.4	1.2	1.0	0.8	1.8	3.0	0.9	-0.6	0.3	1.4	1.7	3.1	3.4	-0.9	+1.3	+0.4	1.4	-0.1	1.3	2.7	4.0
P.M	3.9	4.2	8.1	4.3	2.6	6.9	15.0	3.9	4.3	8.2	3.5	3.4	6.9	15.1	+0.1	+0.0	+0.1	3.6	3.8	7.4	7.6	15.0
Agro	5.1	4.7	9.8	-1.3	9.9	8.6	18.4	4.5	4.9	9.4	-2.2	12.4	10.2	19.6	-0.4	+1.6	+1.2	3.6	5.6	9.2	9.8	19.0
Pharma	0.3	0.3	0.6	0.4	0.0	0.4	1.0	0.4	0.1	0.5	0.2	0.4	0.6	1.1	-0.1	+0.2	+0.1	0.1	0.4	0.5	0.5	1.0
Trading	0.6	0.5	1.1	0.6	0.3	0.9	2.0	0.5	0.5	1.0	0.5	0.6	1.1	2.1	-0.1	+0.2	+0.1	0.6	0.4	1.0	1.0	2.0
Others	0.1	0.1	0.2	0.2	0.5	0.7	0.9	0.1	0.0	0.1	0.0	0.5	0.5	0.6	-0.1	-0.2	-0.3	0.0	0.0	0.0	0.6	0.6
Adjust	-0.9	-0.7	-1.6	-0.8	-0.8	-1.6	-3.2	-1.0	-0.5	-1.5	-0.8	-1.0	-1.8	-3.3	+0.1	-0.2	-0.1	-0.6	-1.0	-1.6	-1.3	-2.9
Total	10.7	8.7	19.4	4.4	13.3	17.7	37.1	9.3	8.7	18.0	2.6	18.0	20.6	38.6	-1.4	+2.9	+1.5	8.7	9.1	17.8	20.9	38.7

FY2019 Sales Outlook of Future Growth Engines

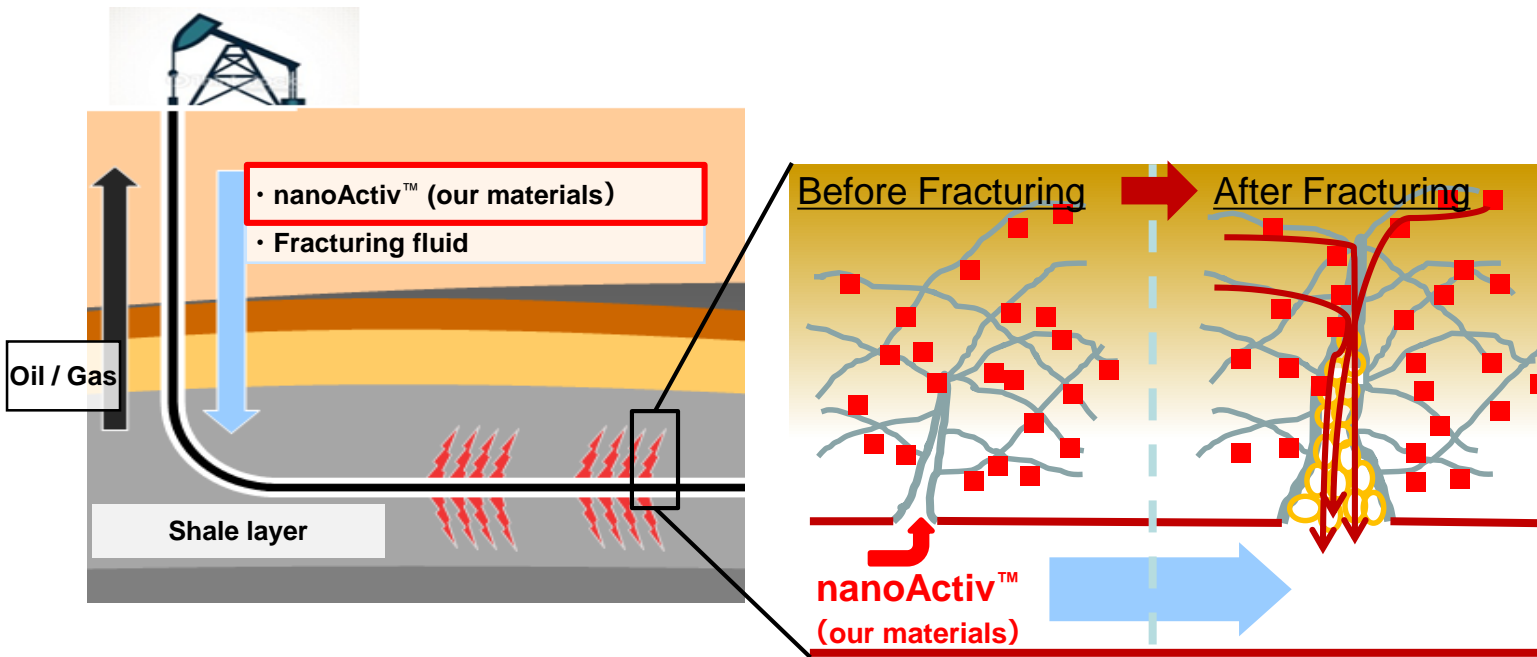
(Announced in May 2019)

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

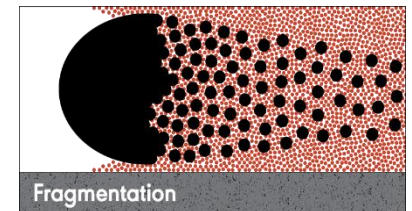
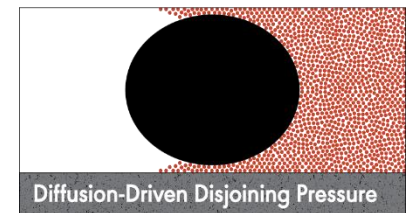
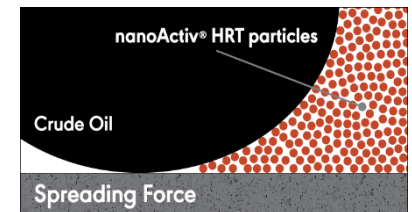
Total ¥9.4 billion

Oilfield Materials



Brownian Motion/Diffusion
⇒ Spreading Force

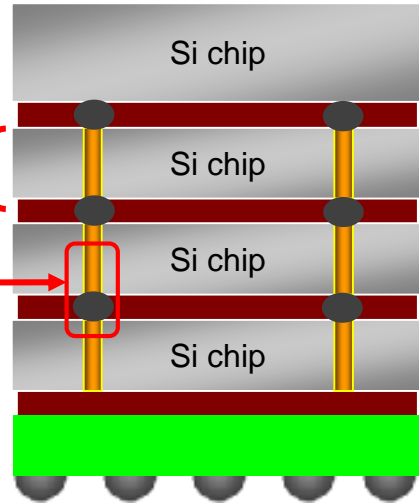
Wasan & Nikolov, *Nature*, Vol. 423, 2003.



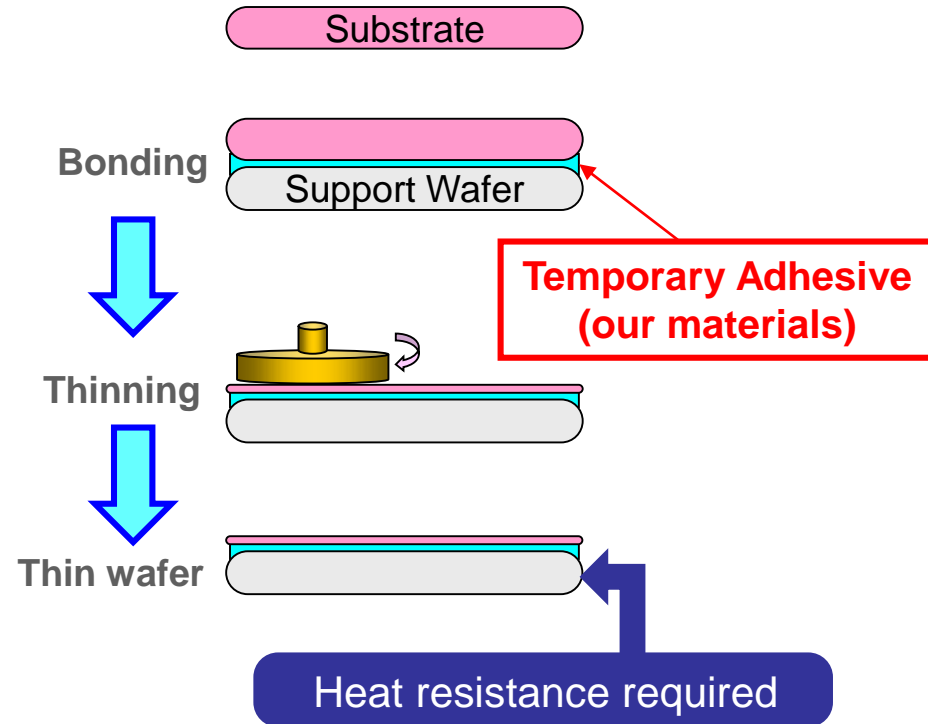
3D Packaging Process Materials

TSV (Through silicon via) technology

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

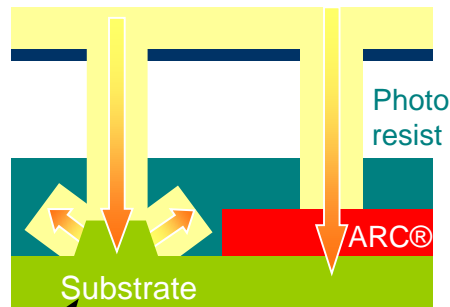


Using Temporary Adhesive system



EUV Under Layer

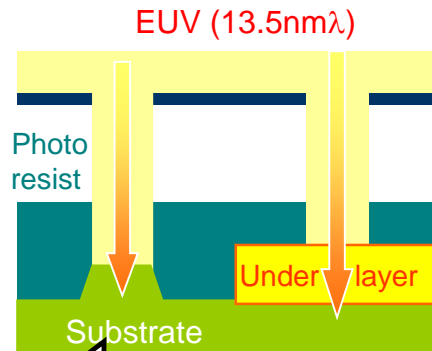
~ ArF lithography



Reflection

ARC® eliminates reflection effectively from substrate

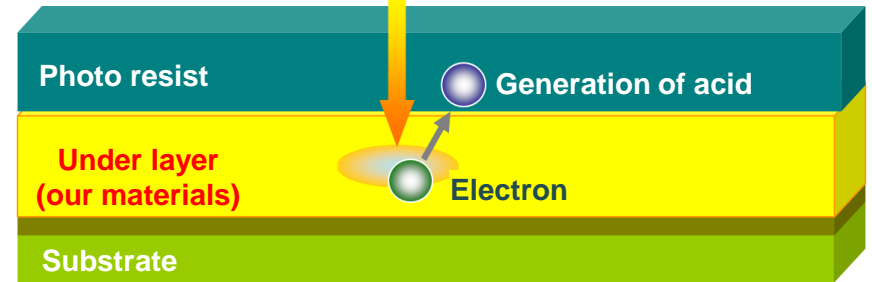
EUV lithography



Pass through

Reflection control is NOT necessary due to no reflection from substrate

EUV



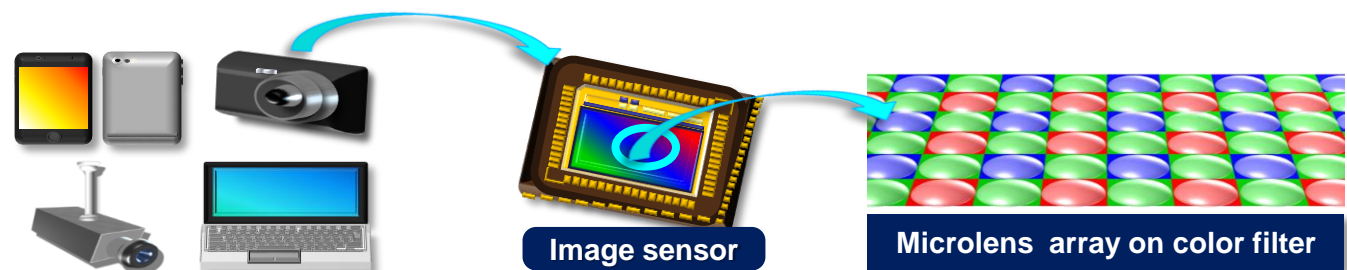
Without under layer

With under layer

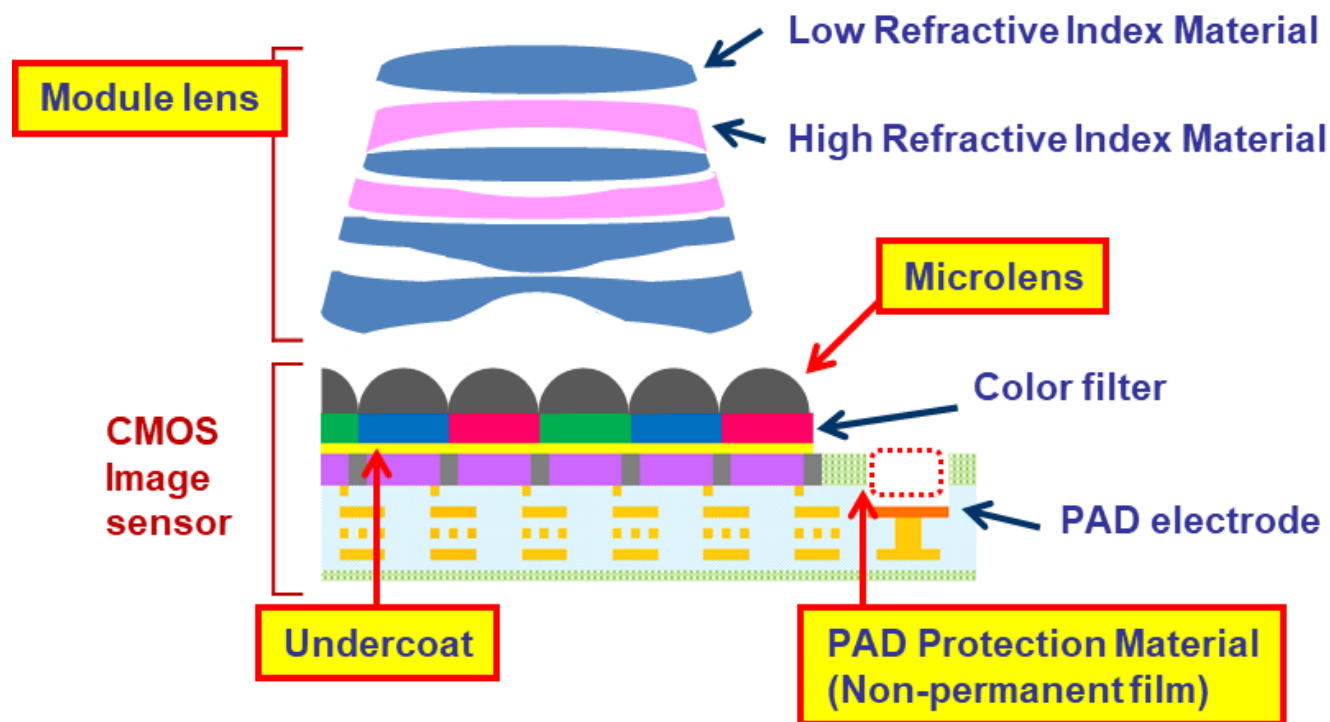


Under layer (our materials)

CMOS Image Sensor Materials

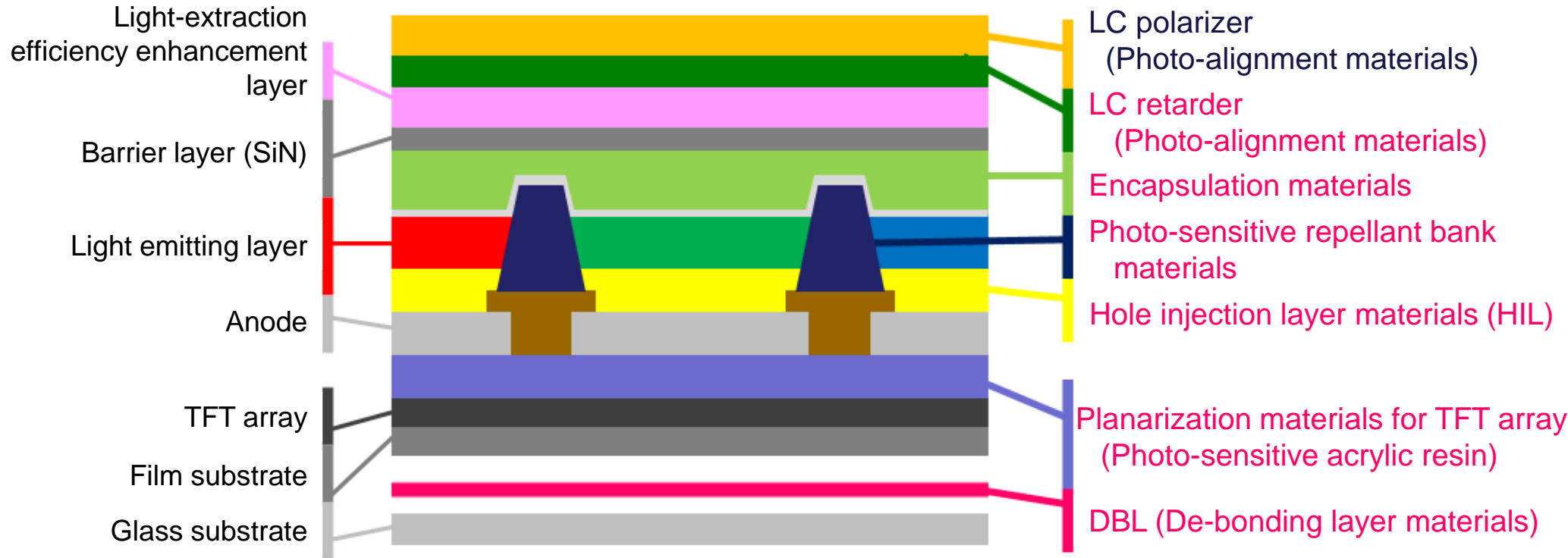


Our Materials



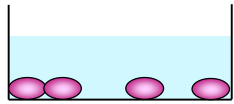
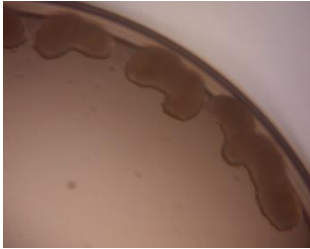
OLED-related Materials

Our Materials

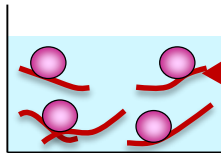


3D Cell Culture Medium

Conventional 2D method



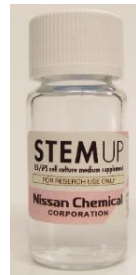
New 3D method for cultivating large amounts of cells



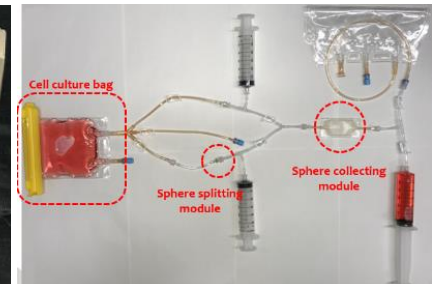
**Our
material**

- 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



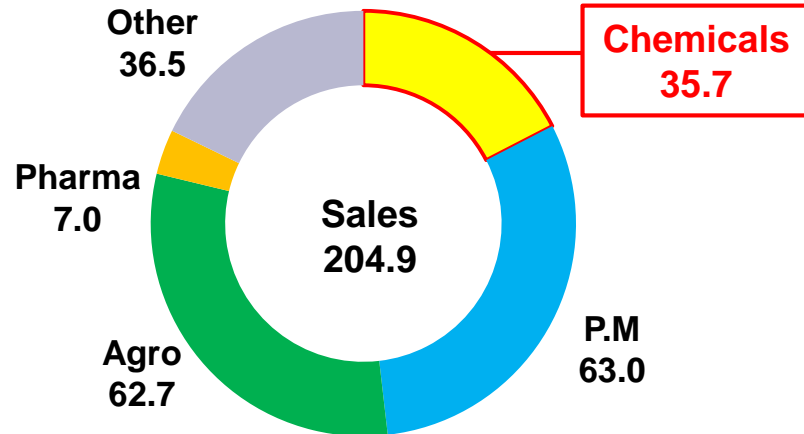
Culture system



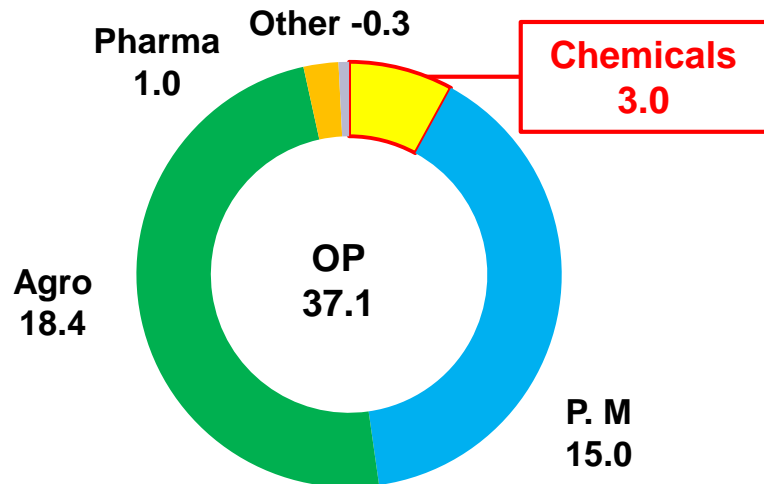
(Blank)

Chemicals – (A) Recent Financial Performance

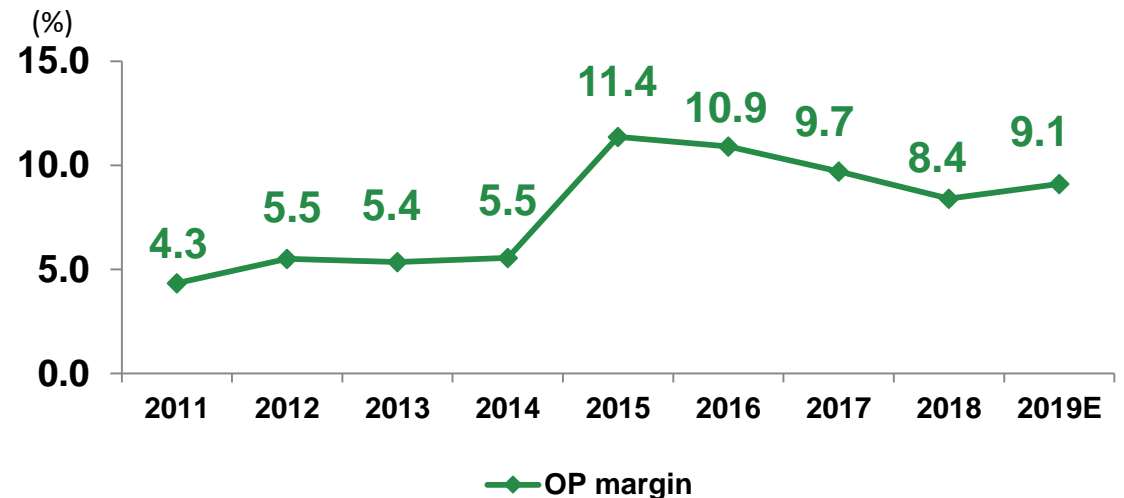
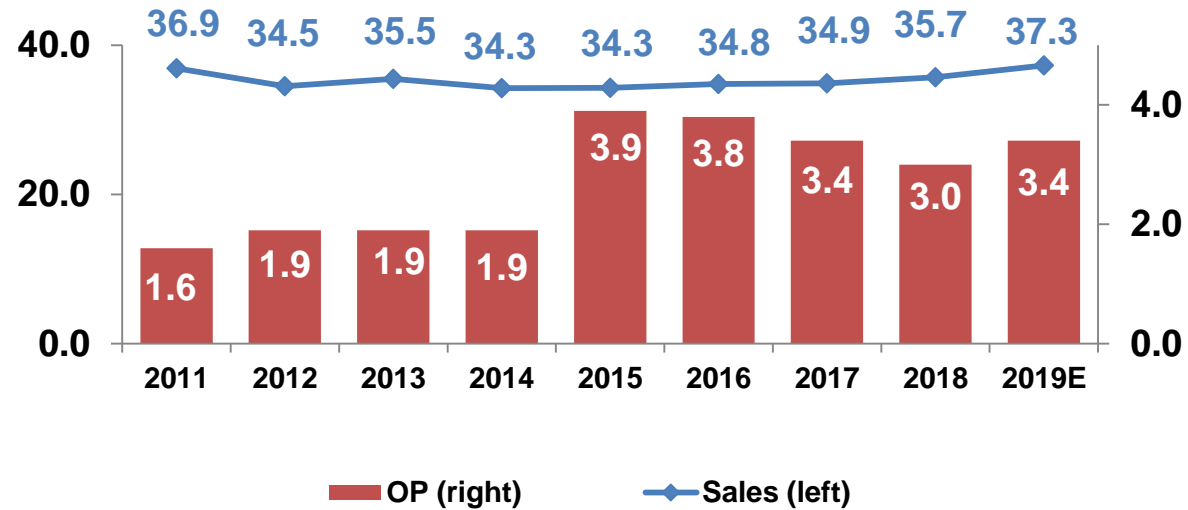
1. FY2018 Sales Distribution (¥billion)



2. FY2018 OP Distribution (¥billion)

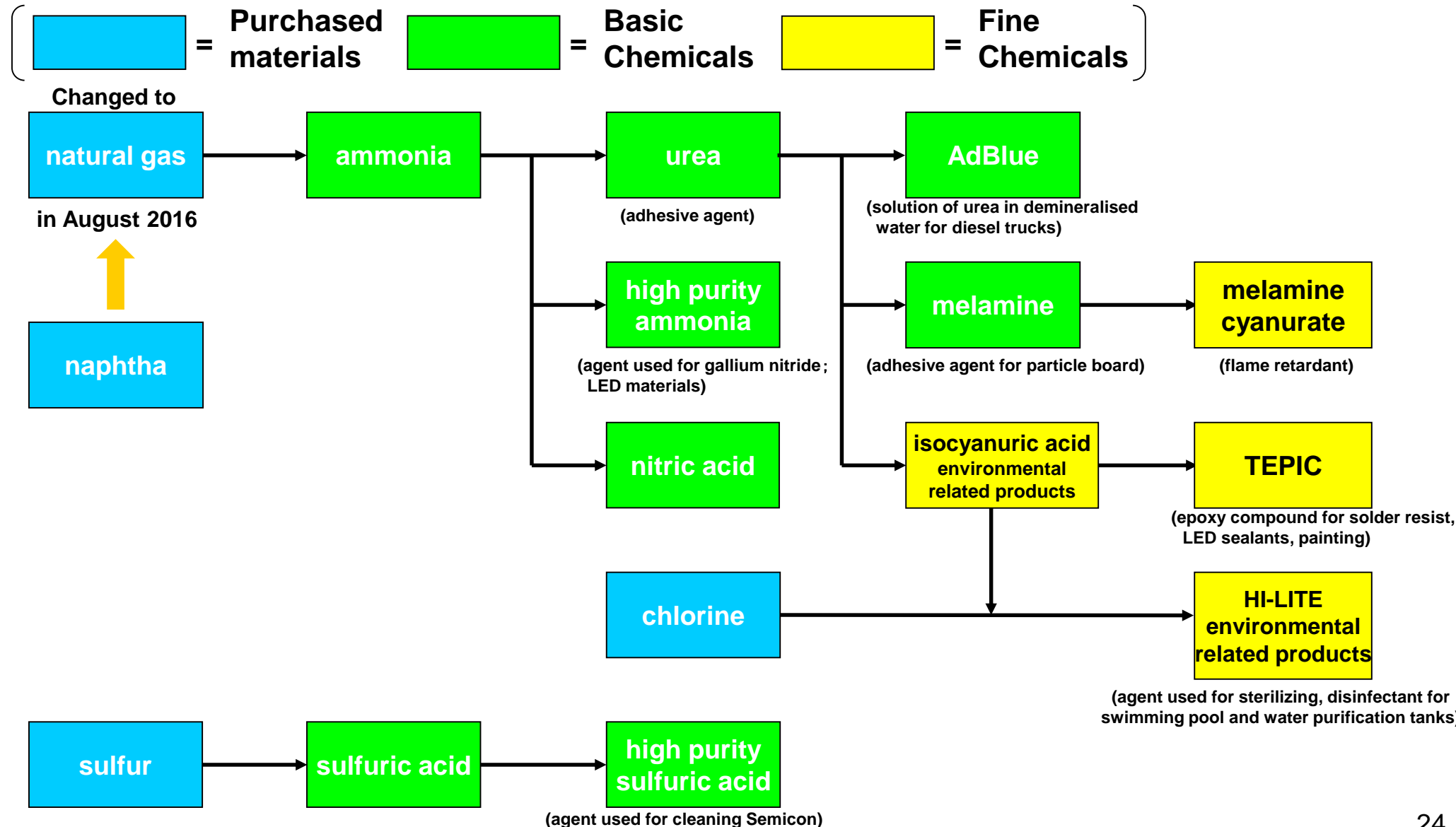


3. Recent Financial Performance (¥billion)



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

1H FY2019 Sales Review

<vs. 1H FY2018>

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

<vs. 1H FY2019 Outlook as of May 2019>

- ◆ TEPIC : Export sales for general applications below target(volume in line with target, price below target), sales for electronic materials below target (volume below target)
- ◆ Environmental related products : Both domestic and export sales below target

2H FY2019 Sales Outlook

<vs. 2H FY2018>

- ◆ TEPIC : Export sales for general applications up (volume up, price down), sales for electronic materials up due to addition of new customers
- ◆ Environmental related products : Both domestic and export sales up

<vs. 2H FY2019 Outlook as of May 2019>

- ◆ TEPIC : Export sales for general applications in line with target (volume above target, price below target), sales for electronic materials in line with target
- ◆ Environmental related products : Both domestic and export sales in line with target

Main Products		Sales YOY Change								
		FY2018 Actual			FY2019 Outlook as of May 2019			FY2019 Outlook as of Nov. 2019		
		1H	2H	Total	1H	2H	Total	1H Actual	2H	Total
Total Subsegment		-3%	-1%	-2%	+14%	+14%	+14%	+3%	+14%	+8%
TEPIC	◆ Epoxy compound for : (A) electronic materials (solder resist, LED sealants), (B) general applications such as powder coating agent for paint ◆ World largest producer	-6%	-5%	-6%	+21%	+17%	+19%	+5%	+17%	+12%
Environmental related products	◆ HI-LITE : made from chlorinated isocyanuric acid, used for sterilizing, disinfectant for swimming pool as well as water purification tank	+8%	+6%	+7%	+6%	+7%	+6%	+2%	+7%	+4%

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

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

Chemicals – (D) Basic Chemicals Subsegment

1H FY2019 Sales Review

<vs. 1H FY2018>

◆ Melamine

: Domestic sales down (volume down, price down), export sales up (volume up, price down), temporary plant troubles in 1H FY2018 (1)

◆ Urea including AdBlue

: Urea flat, AdBlue up

◆ High purity sulfuric acid

: Down for semis customers

<vs. 1H FY2019 Outlook as of May 2019>

◆ Melamine

: Both domestic and export sales below target (volume below target, price below target), global market demand below expectations, cheap Chinese products exported

◆ Urea including AdBlue

: Both urea and AdBlue in line with target

◆ High purity sulfuric acid

: Sales for semis customers below target

2H FY2019 Sales Outlook

<vs. 2H FY2018>

◆ Melamine

: Domestic sales down (volume down, price down), export sales up (volume up, price up) due to better demand/supply balance and pricing

◆ Urea including AdBlue

: Urea down, AdBlue up

◆ High purity sulfuric acid

: Up due to new plants of semis customers

<vs. 2H FY2019 Outlook as of May 2019>

◆ Melamine

: Domestic sales below target (volume below target, price below target), export sales above target (volume above target, price above target)

◆ Urea including AdBlue

: Both urea and AdBlue above target

◆ High purity sulfuric acid

: Sales for semis customers in line with target

Main Products		Sales YOY Change								
		FY2018 Actual			FY2019 Outlook as of May 2019			FY2019 Outlook as of Nov. 2019		
		1H	2H	Total	1H	2H	Total	1H Actual	2H	Total
Total Subsegment		+4%	+4%	+4%	+10%	+5%	+7%	-2%	+8%	+3%
Melamine	◆ Mainly used as adhesive agent for particle board, medium density fiberboard, plywood	+27%	+6%	+15%	+22%	+12%	+16%	-0%	+14%	+7%
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%	+1%	-1%	+7%	+1%	+4%	+7%	+5%	+6%
High purity sulfuric acid	◆ Used to clean semiconductors ◆ Largest in domestic market	-4%	-4%	-4%	+3%	+17%	+10%	-2%	+18%	+8%

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

(1) 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)

	FY2018 Actual (A)							FY2019 Outlook as of May 2019					FY2019 Outlook as of Nov. 2019 (B)								Change (B)-(A)		
	1Q	2Q	1H	3Q	4Q	2H	Total	1Q	2Q	1H	2H	Total	1Q Actual	2Q Actual	1H Actual	3Q	4Q	2H	Total	1H Actual	2H	Total	
Sales	8.7	8.3	17.0	9.6	9.1	18.7	35.7	9.4	9.5	18.9	20.1	39.0	8.4	8.4	16.8	10.0	10.5	20.5	37.3	-0.2	+1.8	+1.6	
	Fine	2.7	2.4	5.1	2.6	2.7	5.3	10.4	2.9	3.0	5.9	6.0	11.9	2.6	2.6	5.2	2.9	3.2	6.1	11.3	+0.1	+0.8	+0.9
	Basic	6.0	5.9	11.9	7.0	6.4	13.4	25.3	6.5	6.5	13.0	14.1	27.1	5.8	5.8	11.6	7.1	7.3	14.4	26.0	-0.3	+1.0	+0.7
OP	1.6	-0.4	1.2	1.0	0.8	1.8	3.0	1.4	-0.1	1.3	2.7	4.0	0.9	-0.6	0.3	1.4	1.7	3.1	3.4	-0.9	+1.3	+0.4	

1Q FY2019 Review

<vs. 1Q FY2018>

(Fine Chemicals)

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

(Basic Chemicals)

- ◆ Sales of melamine down (cheap Chinese export up, price down)
- ◆ Sales of urea including AdBlue up
- ◆ Sales of high purity sulfuric acid down
- ◆ Fixed cost up, Inventory adjustment cost up
- ◆ Sales down, OP down

(Total Segment)

- ◆ Sales down ¥0.3 billion, OP down ¥0.7 billion

<vs. 1Q FY2019 Outlook as of May 2019>

(Fine Chemicals)

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

(Basic Chemicals)

- ◆ Sales of melamine below target (cheap Chinese export up, price down)
- ◆ Sales of high purity sulfuric acid below target
- ◆ Sales of urea including AdBlue in line with target
- ◆ Sales below target, OP below target

(Total Segment)

- ◆ Sales down ¥1.0 billion, OP down ¥0.5 billion

2Q FY2019 Outlook

<vs. 2Q FY2018>

(Fine Chemicals)

- ◆ Sales of TEPIC up (general applications up, electronic materials flat)
- ◆ Sales of environmental related products up
- ◆ Sales up, OP flat

(Basic Chemicals)

- ◆ Sales of melamine flat (domestic down, export up)
- ◆ Sales of urea including AdBlue up
- ◆ Sales of high purity sulfuric acid flat
- ◆ Sales of other products down
- ◆ Sales down, OP down

(Total Segment)

- ◆ Sales up ¥0.1 billion, OP down ¥0.2 billion

<vs. 2Q FY2019 Outlook as of May 2019>

(Fine Chemicals)

- ◆ Sales of TEPIC below target
(both general applications and electronic materials below target)
- ◆ Sales of environmental related products above target
- ◆ Sales below target, OP below target

(Basic Chemicals)

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

(Total Segment)

- ◆ Sales down ¥1.1 billion, OP down ¥0.5 billion

Chemicals – (E-2) Profit Overview

1H FY2019 Review

<vs. 1H FY2018>

(Fine Chemicals)

- ◆ Sales of TEPIC up (general applications up, electronic materials down)
- ◆ Sales of environmental related products up
- ◆ Inventory adjustment cost up
- ◆ Sales up, OP down

(Basic Chemicals)

- ◆ Sales of melamine flat (domestic down, export up)
- ◆ Sales of urea including AdBlue up
- ◆ Sales of high purity sulfuric acid down
- ◆ Plant troubles in FY2018 (see p26)
- ◆ Sales down, OP down

(Total Segment)

- ◆ Sales down ¥0.2 billion, OP down ¥0.9 billion

<vs. 1H FY2019 Outlook as of May 2019>

(Fine Chemicals)

- ◆ Sales of TEPIC below target
(both general applications and electronic materials below target)
- ◆ Sales of environmental related products below target
- ◆ Sales below target, OP below target

(Basic Chemicals)

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

(Total Segment)

- ◆ Sales down ¥2.1 billion, OP down ¥1.0 billion

2H FY2019 Outlook

<vs. 2H FY2018>

(Fine Chemicals)

- ◆ Sales of TEPIC up (general applications up, electronic materials up due to addition of new customers)
- ◆ Sales of environmental related products up (export expand)
- ◆ Sales up, OP up

(Basic Chemicals)

- ◆ Sales of melamine up (domestic down, export up due to better demand/supply balance and pricing)
- ◆ Sales of urea including AdBlue up
- ◆ Sales of high purity sulfuric acid up due to new plants of semis customers
- ◆ Feedstock and raw materials cost down
- ◆ Inventory adjustment cost up
- ◆ Sales up, OP up

(Total Segment)

- ◆ Sales up ¥1.8 billion, OP up ¥1.3 billion

<vs. 2H FY2019 Outlook as of May 2019>

(Fine Chemicals)

- ◆ Sales of TEPIC in line with target
(both general applications and electronic materials in line with target)
- ◆ Sales of environmental related products in line with target
- ◆ Inventory adjustment cost above target
- ◆ Sales in line with target, OP below target

(Basic Chemicals)

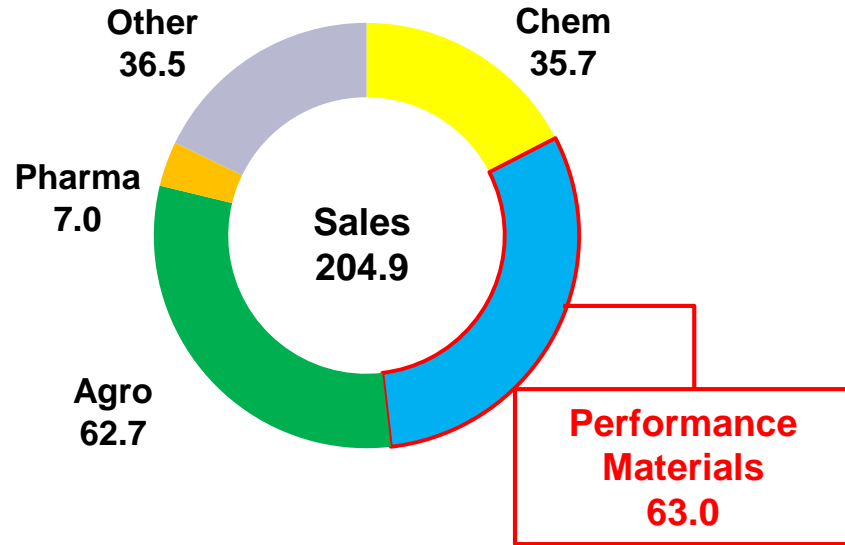
- ◆ Sales of melamine above target (domestic below target, export above target)
- ◆ Sales of urea including AdBlue above target
- ◆ Sales of high purity sulfuric acid in line with target
- ◆ Sales above target, OP above target

(Total Segment)

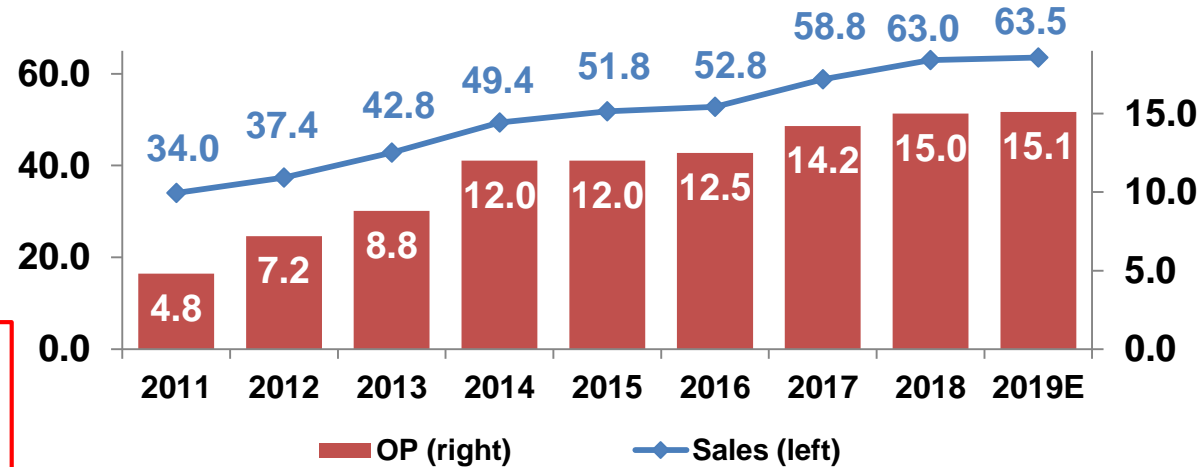
- ◆ Sales up ¥0.4 billion, OP up ¥0.4 billion

Performance Materials – (A) Recent Financial Performance

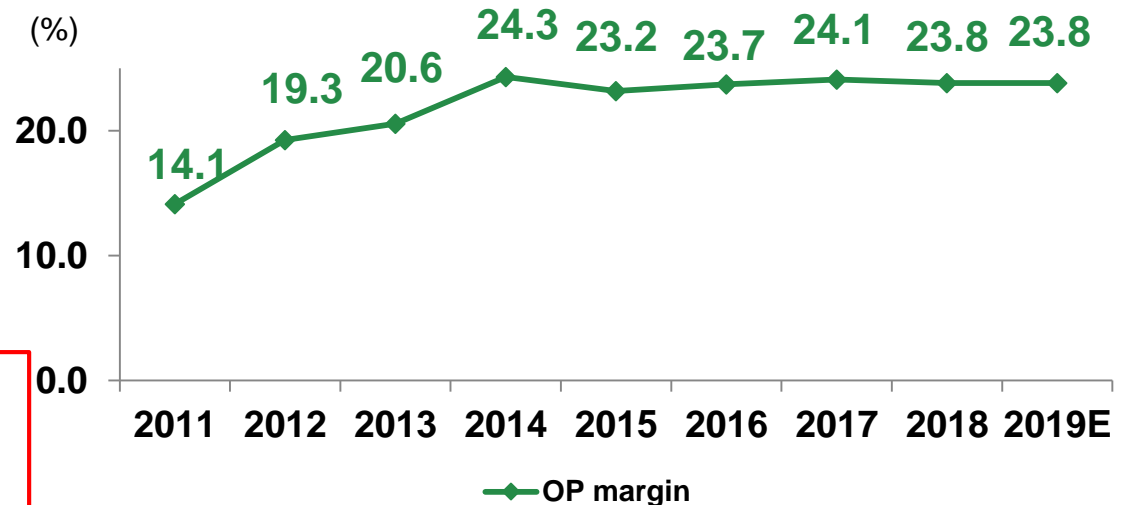
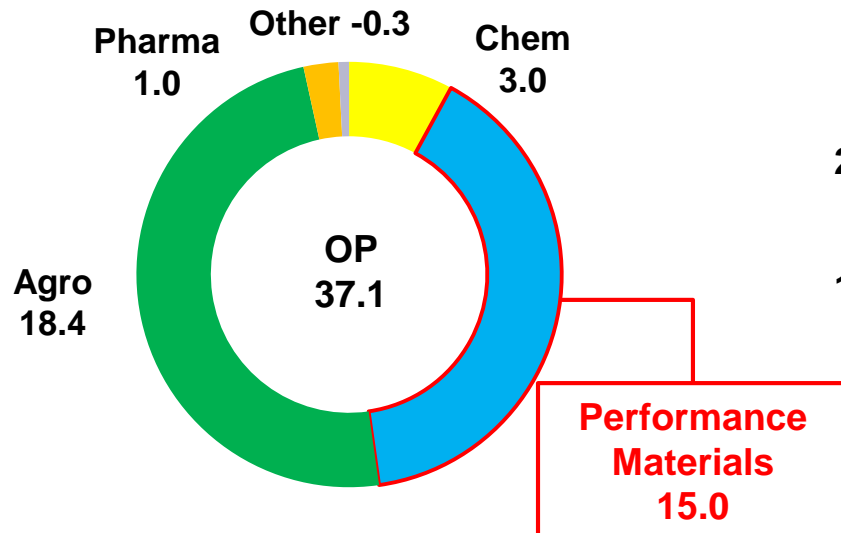
1. FY2018 Sales Distribution (¥billion)



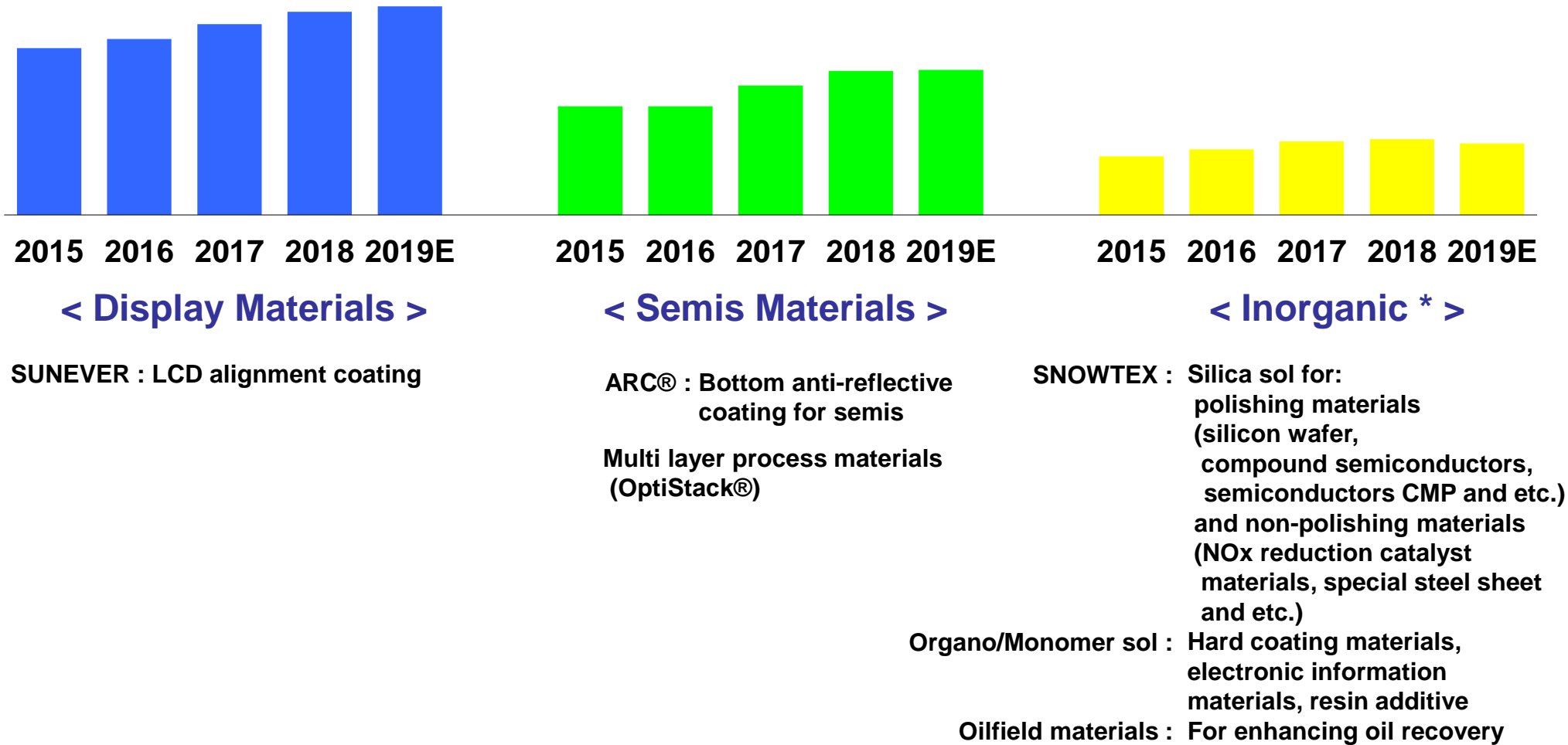
3. Recent Financial Performance (¥billion)



2. FY2018 OP Distribution (¥billion)



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



*2015 : Non-consolidated basis

Performance Materials – (C-1) Display Materials

1H FY2019 Sales Review

<vs. 1H FY2018>

- ◆ Total SUNEVER up +3% IPS up (photo-alignment up, rubbing down), VA up, TN down
CPT (Taiwan) restructuring caused negative impact on rubbing IPS sales

<vs. 1H FY2019 Outlook as of May 2019>

- ◆ Total SUNEVER above target IPS above target (photo-alignment above target, rubbing below target),
VA above target, TN in line with target

2H FY2019 Sales Outlook

<vs. 2H FY2018>

- ◆ Total SUNEVER up +2% IPS up (photo-alignment up, rubbing down), VA up, TN down
CPT (Taiwan) restructuring caused negative impact on rubbing IPS sales

<vs. 2H FY2019 Outlook as of May 2019>

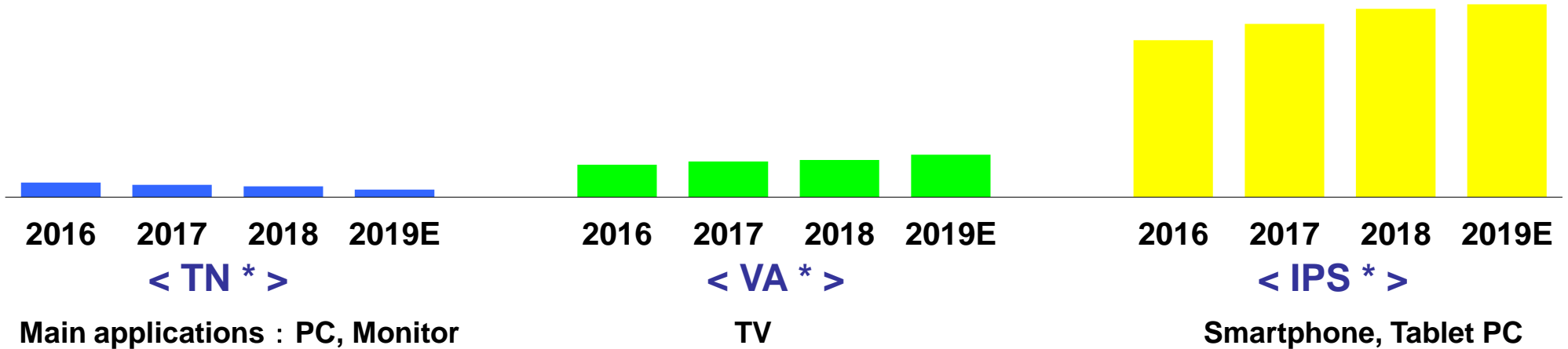
- ◆ Total SUNEVER in line with target IPS above target (photo-alignment above target, rubbing below target),
VA in line with target, TN below target

Main Products	Sales YOY Change								
	FY2018 Actual			FY2019 Outlook as of May 2019			FY2019 Outlook as of Nov . 2019		
	1H	2H	Total	1H	2H	Total	1H Actual	2H	Total
Total SUNEVER	+8%	+5%	+7%	-3%	+2%	-0%	+3%	+2%	+3%
Total Display Materials	+8%	+5%	+7%	-3%	+4%	+0%	+3%	+2%	+3%

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

Performance Materials – (C-2) SUNEVER

<SUNEVER Sales Distribution by Mode>



<SUNEVER Sales YOY Change by Mode>

	FY2018 Actual			FY2019 Outlook as of May 2019			FY2019 Outlook as of Nov.2019			YOY Change
	1H	2H	Total	1H	2H	Total	1H Actual	2H	Total	
TN	↗	↘↘↘	↘↘	↘↘↘↘	↘↘	↘↘↘	↘↘↘↘	↘↘↘	↘↘↘	+20~+29% ↗↗↗
VA	↗	↗	↗	↗↗	↗	↗↗	↗↗↗	↗	↗↗	+10~+19% ↗↗
IPS	↗↗	↗	↗	↘	↗	↘	↗	↗	↗	+0~+9% ↗
Total	+8%	+5%	+7%	-3%	+2%	-0%	+3%	+2%	+3%	-0~-9% ↘
										-10~-19% ↘↘
										-20~-29% ↘↘↘
										-30~-39% ↘↘↘↘

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

Performance Materials – (D) Semiconductors Materials

1H FY2019 Sales Review

<vs. 1H FY2018>

◆ Total Semis Materials sales down -4%

KrF and ArF down, other semis materials down

(Multi layer process materials down, EUV under layer up,
CMOS image sensor materials and 3D packaging process materials down)

<vs. 1H FY2019 Outlook as of May 2019>

◆ Total Semis Materials sales below target

KrF above target, ArF and other semis materials below target

(Multi layer process materials below target, EUV under layer,
CMOS image sensor materials and 3D packaging process materials below target)

2H FY2019 Sales Outlook

<vs. 2H FY2018>

◆ Total Semis Materials sales up +6%

KrF down, ArF flat, other semis materials up

(Multi layer process materials up, EUV under layer down,
CMOS image sensor materials and 3D packaging process materials up)

<vs. 2H FY2019 Outlook as of May 2019>

◆ Total Semis Materials sales above target

KrF in line with target, ArF below target, other semis materials above target

(Multi layer process materials above target, EUV under layer in line with target
CMOS image sensor materials and 3D packaging process materials below target)

Main Products		Sales YOY Change								
		FY2018 Actual			FY2019 Outlook as of May 2019			FY2019 Outlook as of Nov. 2019		
		1H	2H	Total	1H	2H	Total	1H Actual	2H	Total
	KrF (ARC®)	-1%	-9%	-5%	-9%	-2%	-5%	-5%	-2%	-3%
	ArF (ARC®)	+14%	+6%	+10%	-1%	+5%	+2%	-3%	-0%	-2%
	Total	+9%	+2%	+6%	-3%	+3%	-0%	-3%	-1%	-2%
	Other Semis Materials (1)	+43%	+20%	+31%	+8%	+13%	+11%	-8%	+26%	+9%
	Total Semis Materials	+17%	+6%	+11%	-0%	+5%	+3%	-4%	+6%	+1%

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

◆ Semiconductor capex plan to capture long-term future business: Main capex (approval basis)

FY2014 Analyzing and evaluation R&D equipment (¥1.1 billion)

FY2015 Product development facilities(¥2.8 billion), Analyzing and evaluation R&D equipment (¥0.8 billion), Production capacity expansion (¥0.8 billion),
NCK* (¥0.7 billion), Material Research Lab. (¥0.5 billion)

FY2016 NCK* production capacity expansion (¥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)

*NCK: Consolidated subsidiary in South Korea.

R&D, production and sales of display and semis materials.

Performance Materials –

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

1H FY2019 Sales Review

<vs. 1H FY2018>

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

<vs. 1H FY2019 Outlook as of May 2019>

- ◆ SNOWTEX : Below target (polishing materials below target, non-polishing materials in line with target)
- ◆ Organo/Monomer sol : Below target
- ◆ Oilfield materials : Below target

2H FY2019 Sales Outlook

<vs. 2H FY2018>

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

<vs. 2H FY2019 Outlook as of May 2019>

- ◆ SNOWTEX : Below target (polishing materials below target, non-polishing materials in line with target)
- ◆ Organo/Monomer sol : Below target
- ◆ Oilfield materials : Below target

Main Products	Sales YOY Change								
	FY2018 Actual			FY2019 Outlook as of May 2019			FY2019 Outlook as of Nov. 2019		
	1H	2H	Total	1H	2H	Total	1H Actual	2H	Total
SNOWTEX	+2%	-1%	+1%	+3%	+0%	+2%	-2%	-4%	-3%
Organo/Monomer sol	-8%	+8%	-1%	+3%	+7%	+5%	-11%	+6%	-3%
Oilfield materials	+40%	-39%	-3%	+40%	+196%	+95%	-64%	+63%	-19%

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

Total Inorganic Materials	+8%	-1%	+3%	+3%	+8%	+5%	-11%	+0%	-6%
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Performance Materials – (F-1) Profit Overview

(¥billion)

	FY2018 Actual (A)							FY2019 Outlook as of May 2019					FY2019 Outlook (B) as of Nov. 2019								Change (B)-(A)		
	1Q	2Q	1H	3Q	4Q	2H	Total	1Q	2Q	1H	2H	Total	1Q Actual	2Q Actual	1H Actual	3Q	4Q	2H	Total	1H Actual	2H	Total	
Sales	15.6	16.4	32.0	16.6	14.4	31.0	63.0	15.9	15.8	31.7	32.6	64.3	15.1	16.3	31.4	16.2	15.9	32.1	63.5	-0.6	+1.1	+0.5	
OP	3.9	4.2	8.1	4.3	2.6	6.9	15.0	3.6	3.8	7.4	7.6	15.0	3.9	4.3	8.2	3.5	3.4	6.9	15.1	+0.1	+0.0	+0.1	

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

1Q FY2019 Review

<vs. 1Q FY2018>

- ◆ SUNEVER sales up (IPS flat (photo-alignment up, rubbing down), VA up, TN down)
- ◆ Total Semis Materials sales down
(KrF and ArF down, other semis materials down (multi layer down, other new materials up))
- ◆ Inorganic Materials sales down
(SNOWTEX down, Organo/Monomer sol down, Oilfield Materials down)
- ◆ Fixed cost down ¥0.2 billion
- ◆ Sales down ¥0.5 billion, OP flat
(OP: DP up, Semis down, Inorganic down)

<vs. 1Q FY2019 Outlook as of May 2019>

- ◆ SUNEVER sales in line with target
(IPS below target (photo-alignment above target, rubbing below target), VA above target, TN below target)
- ◆ Total Semis Materials sales below target
(KrF in line with target, 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 below target, Oilfield Materials below target)
- ◆ Fixed cost below expectations (¥0.7 billion)
- ◆ Sales down ¥0.8 billion, OP up ¥0.3 billion
(OP: DP up, Semis in line with target, Inorganic up)

2Q FY2019 Outlook

<vs. 2Q FY2018>

- ◆ SUNEVER sales up (IPS up (photo-alignment up, rubbing down), VA up, TN down)
- ◆ Total Semis Materials sales down
(KrF flat, ArF up, other semis materials down (Multi layer and other new materials down))
- ◆ Inorganic Materials sales down
(SNOWTEX flat, Organo/Monomer sol down, Oilfield materials down)
- ◆ Fixed cost down ¥0.3 billion
- ◆ Inventory adjustment cost up ¥0.2 billion
- ◆ Sales down ¥0.1 billion, OP up ¥0.1 billion
(OP: DP up, Semis up, Inorganic down)

<vs. 2Q FY2019 Outlook as of May 2019>

- ◆ SUNEVER sales above target (IPS above target (photo-alignment above target, rubbing below target), VA and TN above target)
- ◆ Total Semis Materials sales below target
(ArF and KrF above target, other semis materials below target (Multi layer below target, other new materials below target))
- ◆ Inorganic Materials sales below target
(SNOWTEX below target, Organo/Monomer and Oilfield materials below target)
- ◆ Fixed cost below expectations (¥0.6 billion)
- ◆ Inventory adjustment cost above expectations (¥0.2 billion)
- ◆ Sales up ¥0.5 billion, OP up ¥0.5 billion
(OP: DP up, Semis up, Inorganic down)

Performance Materials – (F-2) Profit Overview

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

1H FY2019 Review

<vs. 1H FY2018>

- ◆ SUNEVER sales up (IPS up (photo-alignment up, rubbing down), VA up, TN down)
- ◆ Total Semis Materials sales down (KrF and ArF down, other semis materials down (Multi layer and other new materials down))
- ◆ Inorganic Materials sales down (SNOWTEX down, Organo/Monomer sol down, Oilfield materials down)
- ◆ Fixed cost down ¥0.4 billion
- ◆ Inventory adjustment cost up ¥0.1 billion
- ◆ Sales down ¥0.6 billion, OP up ¥0.1 billion (OP: DP up, Semis flat, Inorganic down)

<vs. 1H FY2019 Outlook as of May 2019>

- ◆ SUNEVER sales above target (IPS above target (photo-alignment above target, rubbing below target), VA above target, TN in line with target)
- ◆ Total Semis Materials sales below target (KrF above target, ArF below target, other semis materials below target (Multi layer and other new materials below target))
- ◆ Inorganic Materials sales below target (SNOWTEX below target, Organo/Monomer sol and Oilfield materials below target)
- ◆ Fixed cost below expectations (¥1.2 billion)
- ◆ Inventory adjustment cost above expectations (¥0.2 billion)
- ◆ Sales down ¥0.3 billion, OP up ¥0.8 billion (OP: DP up, Semis up, Inorganic down)

2H FY2019 Outlook

<vs. 2H FY2018>

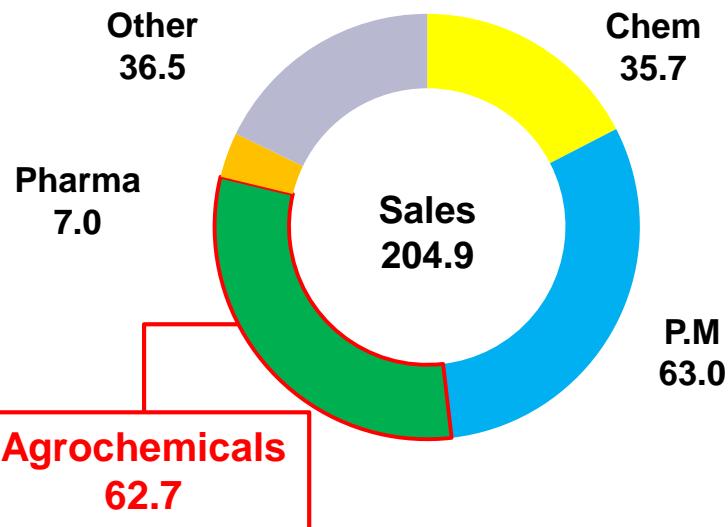
- ◆ SUNEVER sales up (IPS up (photo-alignment up, rubbing down), VA up, TN down)
- ◆ Total Semis Materials sales up (KrF down, ArF flat, other semis materials up (Multi layer and other new materials up))
- ◆ Inorganic Materials sales flat (SNOWTEX down, Organo/Monomer sol and Oilfield materials up)
- ◆ Fixed cost up ¥0.4 billion
- ◆ Sales up ¥1.1 billion, OP flat (OP: DP up, Semis up, Inorganic down)

<vs. 2H FY2019 Outlook as of May 2019>

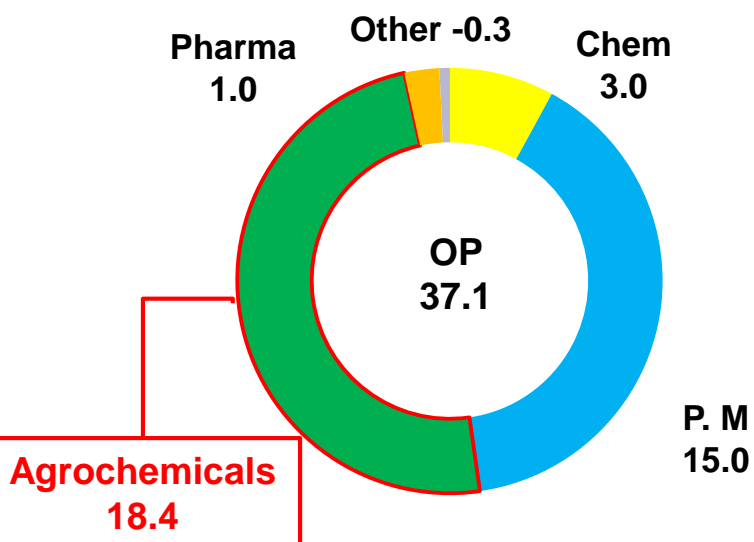
- ◆ SUNEVER sales in line with target (IPS above target, (photo-alignment above target, rubbing below target), VA in line with target, TN below target)
- ◆ Total Semis Materials sales above target (KrF in line with target, ArF below target, other semis materials above target (Multi layer above target, other new materials below target))
- ◆ Inorganic Materials sales below target (SNOWTEX below target, Organo/Monomer and Oilfield materials below target)
- ◆ Fixed cost above expectations (¥0.1 billion)
- ◆ Sales down ¥0.5 billion, OP down ¥0.7 billion (OP: DP flat, Semis down, Inorganic down)

Agrochemicals – (A) Recent Financial Performance

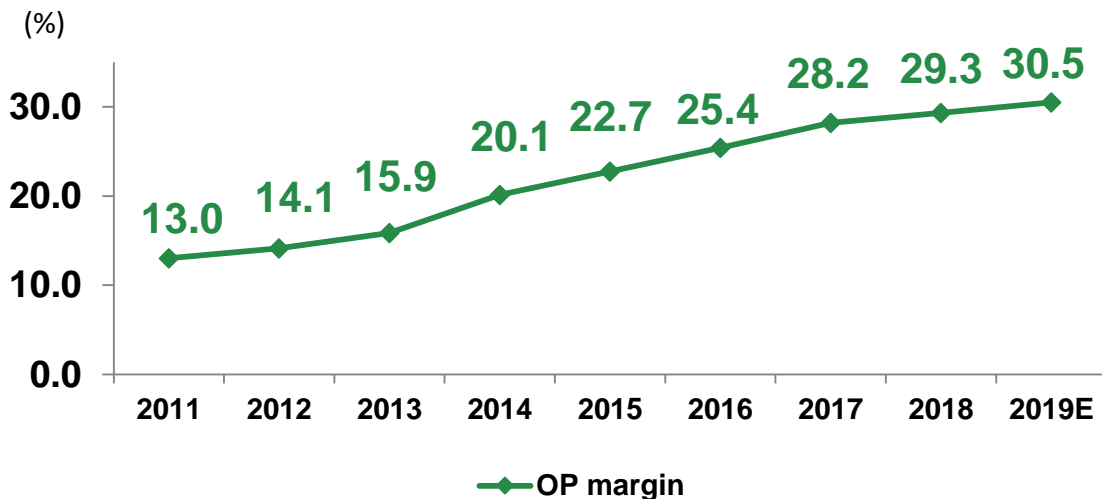
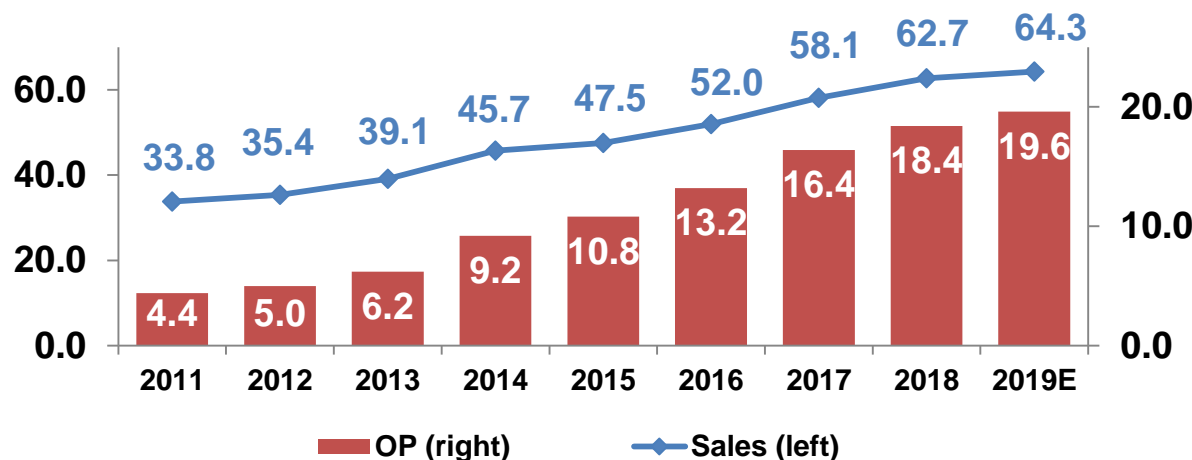
1. FY2018 Sales Distribution (¥billion)



2. FY2018 OP Distribution (¥billion)



3. Recent Financial Performance (¥billion)



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

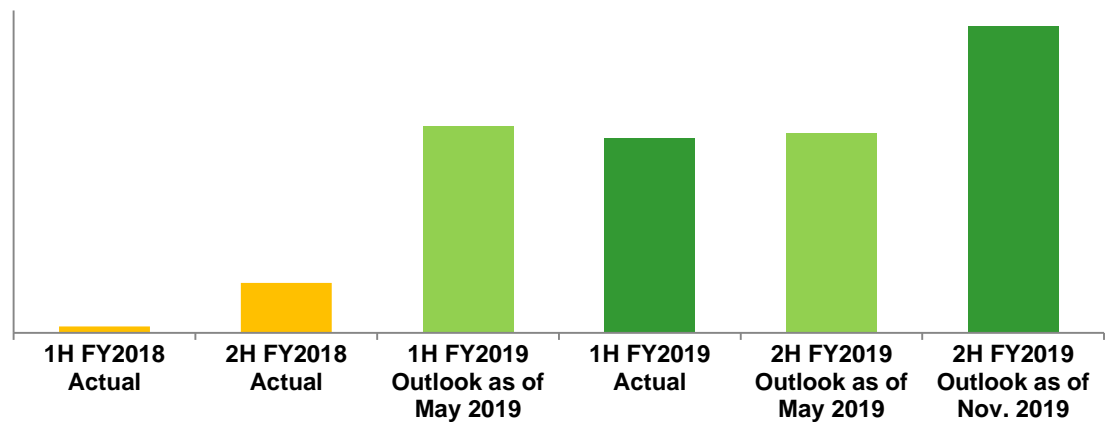
		Consolidated Sales YOY Change		
Main Products (in order of FY2018 sales amount)		FY2018 Actual	FY2019 Outlook as of May 2019	FY2019 Outlook as of Nov.2019
Fluralaner	Animal health products	↗↗↗	↘	↘
ROUNDUP (1)	Herbicide	-6%	+8%	+5%
ALTAIR	Herbicide	↗↗	↘	↗
TARGA	Herbicide	↗↗	↘	↘↘
PERMIT	Herbicide	↗	↗↗	↗↗
GRACIA	Insecticide	-	over +600%	over +700%
Total segment	-	+7%	+3%	+4%

YOY Change

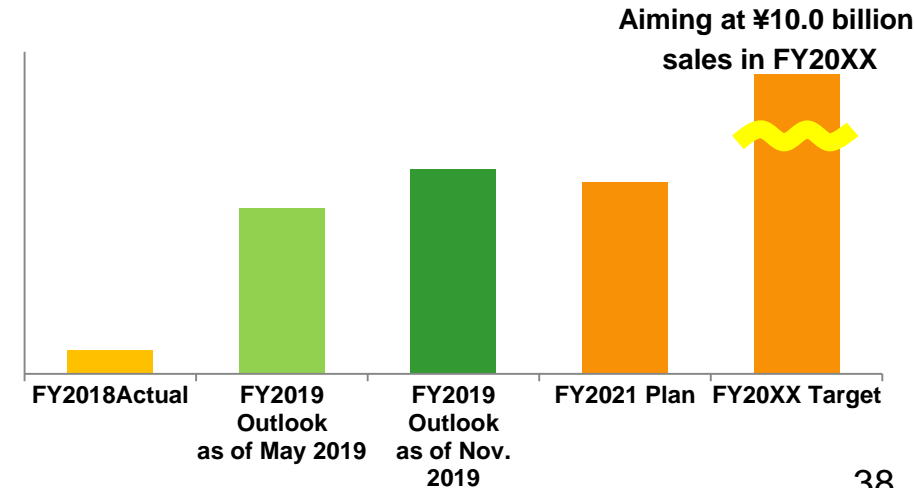
+20~+29%	↗↗↗
+10~+19%	↗↗
+0~+9%	↗
-0~-9%	↘
-10~-19%	↘↘

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

GRACIA Sales (FY2018 Actual, FY2019 Outlook)



GRACIA Sales Long-term Growth forecast



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	ALTAR	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 2014, in the USA in June 2014 and in Japan in July 2015
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™	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 (expected peak sales 10.0 billion yen)

Pipeline

2022	NC-241(PYRAPROPOYNE)	Fungicide	In-house	General fungicide (expected peak sales 5.0 billion yen)
2024	NC-653	Herbicide	In-house	Effective against resistant weeds, having excellent safety to rice, (expected peak sales 3.0 billion yen)
2027	NC-656 (new addition)	Herbicide	In-house	Our first foliar application rice herbicide with excellent efficacy against resistant grass weeds (expected peak sales 10.0 billion yen)

*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%)
- ◆ Acquired 3% share of IHARABRÁS (leading agro company in Brazil) in September 2011 *Including Fluralaner
- ◆ Established subsidiaries in China (January 2014), Brazil (August 2016) and India (July 2017) for sales support and product development
- ◆ 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 (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, **July 2019 China**
- *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)

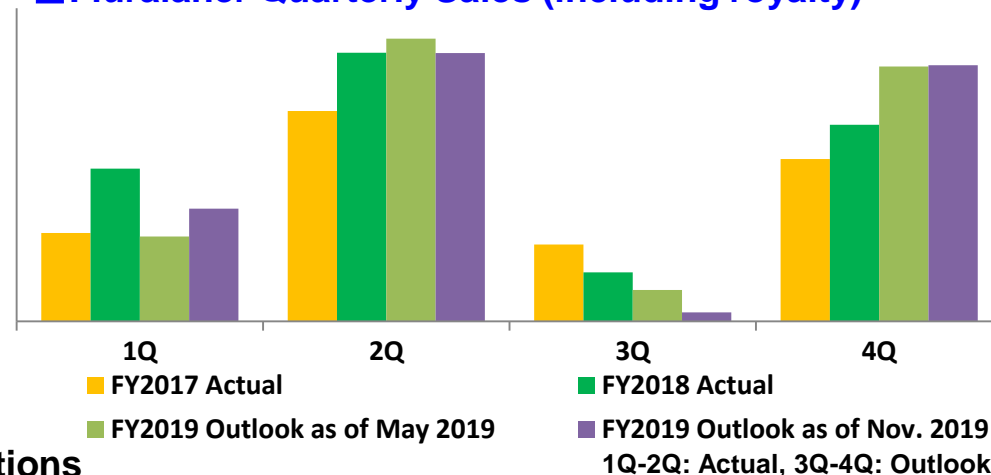
◆ EXZOLT

- *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
- July 2018 Europe

■ 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)

	FY2018 Actual (A)							FY2019 Outlook as of May 2019					FY2019 Outlook (B) as of Nov. 2019								Change (B)-(A)		
	1Q	2Q	1H	3Q	4Q	2H	Total	1Q	2Q	1H	2H	Total	1Q Actual	2Q Actual	1H Actual	3Q	4Q	2H	Total	1H Actual	2H	Total	
Sales	16.4	12.3	28.7	5.9	28.1	34.0	62.7	14.1	14.2	28.3	35.9	64.2	14.7	13.2	27.9	5.2	31.2	36.4	64.3	-0.8	+2.4	+1.6	
OP	5.1	4.7	9.8	-1.3	9.9	8.6	18.4	3.6	5.6	9.2	9.8	19.0	4.5	4.9	9.4	-2.2	12.4	10.2	19.6	-0.4	+1.6	+1.2	

1Q FY2019 Review

<vs. 1Q FY2018>

- ◆ Sales up : GRACIA(domestic)
- ◆ Sales down : Fluralaner (BRAVECTO inventory adjustment), TARGA(export), LEIMAY(export), PULSOR(export), STARMITE(export), ROUNDUP
- ◆ Fixed cost down ¥0.2 billion
- ◆ Inventory adjustment cost up ¥0.3 billion
- ◆ Sales down ¥1.7 billion, OP down ¥0.6 billion

<vs. 1Q FY2019 Outlook as of May 2019>

- ◆ Sales above target : Fluralaner, GRACIA(domestic)
- ◆ Sales below target : TARGA(export), LEIMAY(domestic), PULSOR(export), ROUNDUP
- ◆ Fixed cost below expectations (¥0.3 billion)
- ◆ Sales up ¥0.6 billion, OP up ¥0.9 billion

2Q FY2019 Outlook

<vs. 2Q FY2018>

- ◆ Sales up : GRACIA(domestic, export), ROUNDUP((ML,AL) in 1H FY2018, sales down due to abnormal weather (typhoons, long rainy season, hot weather)), PULSOR(export), TARGA(export), ALTAIR
- ◆ Sales flat : Fluralaner
- ◆ Sales down : PERMIT(export), SANMITE(export)
- ◆ Fixed costs up ¥0.2 billion
- ◆ Sales up ¥0.9 billion, OP up ¥0.2 billion

<vs. 2Q FY2019 Outlook as of May 2019>

- ◆ Sales above target : PULSOR(export), ALTAIR
- ◆ Sales below target : GRACIA(shipment shift from 2Q to 1Q), Fluralaner(strong yen), ROUNDUP AL(changes in product mix to gain new users), LEIMAY
- ◆ Sales down ¥1.0 billion, OP down ¥0.7 billion

Agrochemicals – (E-2) Profit Overview

1H FY 2019 Review

<vs. 1H FY2018>

- ◆ Sales up : GRACIA(domestic, export, launched in May 2019 in Japan), ROUNDUP((ML,AL) in 1H FY2018, sales down due to abnormal weather (typhoons, long rainy season, hot weather)), ALTAIR, PULSOR(export)
- ◆ Sales down : Fluralaner(BRAVECTO inventory adjustment), TARGA(export), LEIMAY(export), PERMIT(export)
- ◆ Inventory adjustment cost up ¥0.3 billion
- ◆ Sales down ¥0.8 billion, OP down ¥0.4 billion

<vs. 1H FY2019 Outlook as of May 2019>

- ◆ Sales above target : GRACIA(domestic), Fluralaner, PULSOR(export), ALTAIR
- ◆ Sales below target : TARGA(export), ROUNDUP AL(changes in product mix to gain new users), LEIMAY, GRACIA(export, prioritized domestic sales)
- ◆ Fixed costs below expectations (¥0.4 billion)
- ◆ Inventory adjustment cost above expectations (¥0.1 billion)
- ◆ Sales down ¥0.4 billion, OP up ¥0.2 billion

2H FY 2019 Outlook

<vs. 2H FY2018>

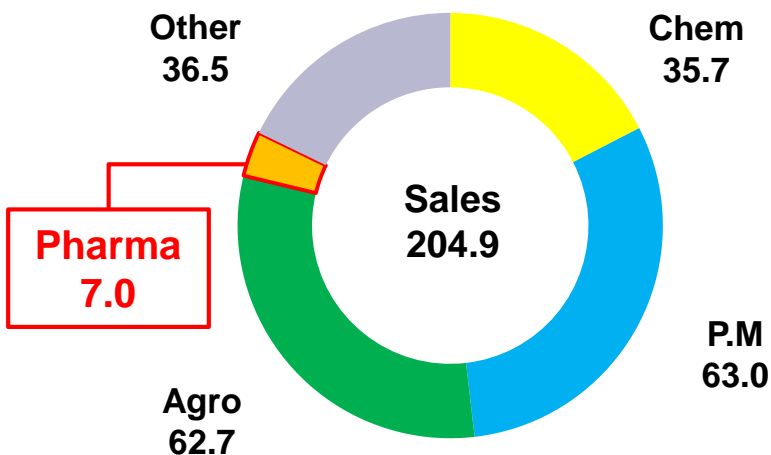
- ◆ Sales up : GRACIA(domestic, export, launched in May 2019 in Japan), PERMIT(export), Fluralaner(shipment shift, see p40 quarterly sales bar chart), ROUNDUP ML
- ◆ Sales down : SIRIUS(domestic), LEIMAY(export), SANMITE(export)
- ◆ Fixed costs up ¥0.4 billion
- ◆ Inventory adjustment cost up ¥0.2 billion
- ◆ Sales up ¥2.4 billion, OP up ¥1.6 billion

<vs. 2H FY2019 Outlook as of May 2019>

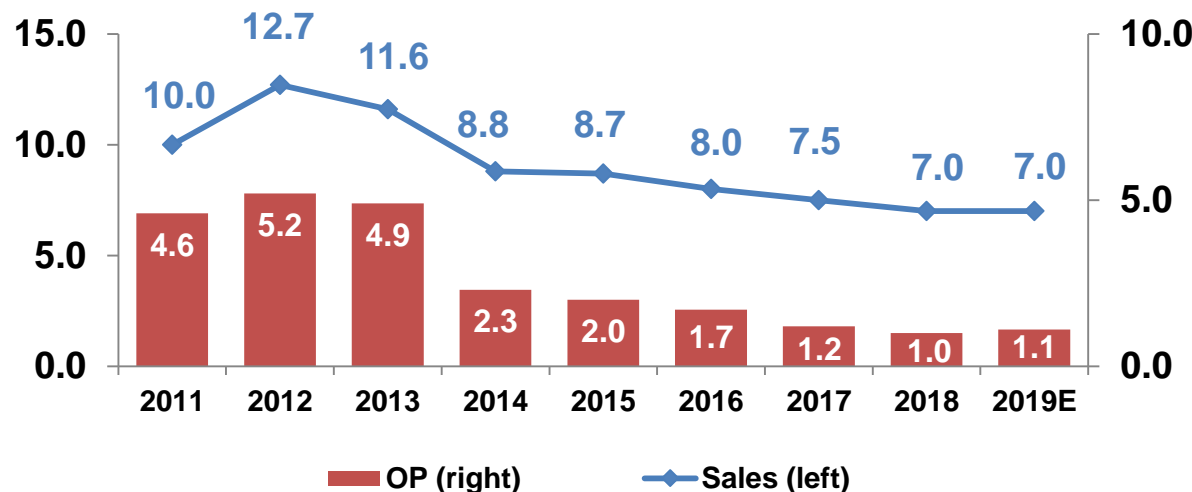
- ◆ Sales above target : GRACIA(domestic, strong sales), ALTAIR(domestic)
- ◆ Sales in line with target : ROUNDUP (ML above target, AL below target)
- ◆ Sales below target : Fluralaner(shipment shift from 2H to 1H, strong yen), SIRIUS(domestic), PULSOR(export)
- ◆ Fixed costs above expectations (¥0.3 billion)
- ◆ Inventory adjustment cost below expectations (¥0.2 billion)
- ◆ Sales up ¥0.5 billion, OP up ¥0.4 billion

Pharmaceuticals – (A) Recent Financial Performance

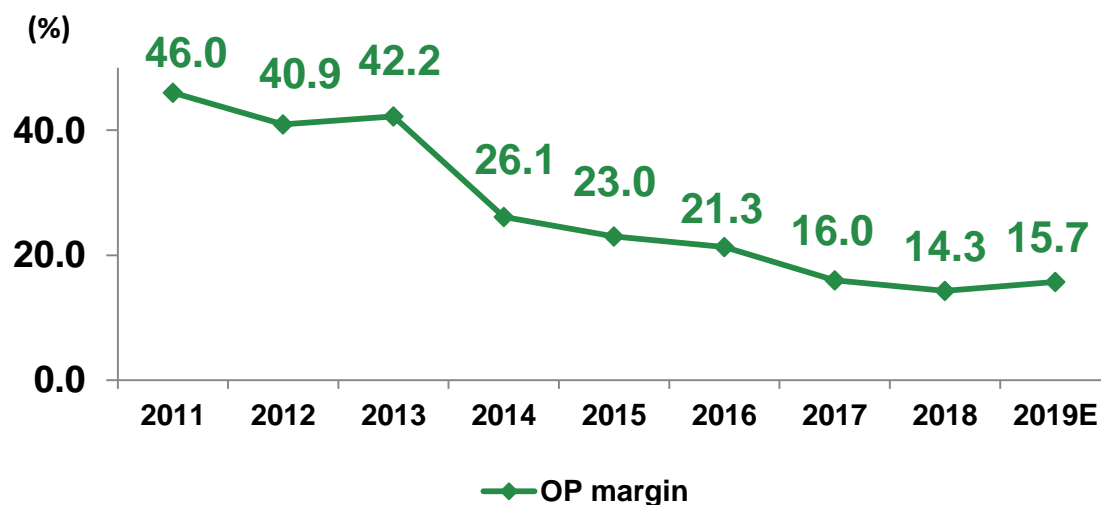
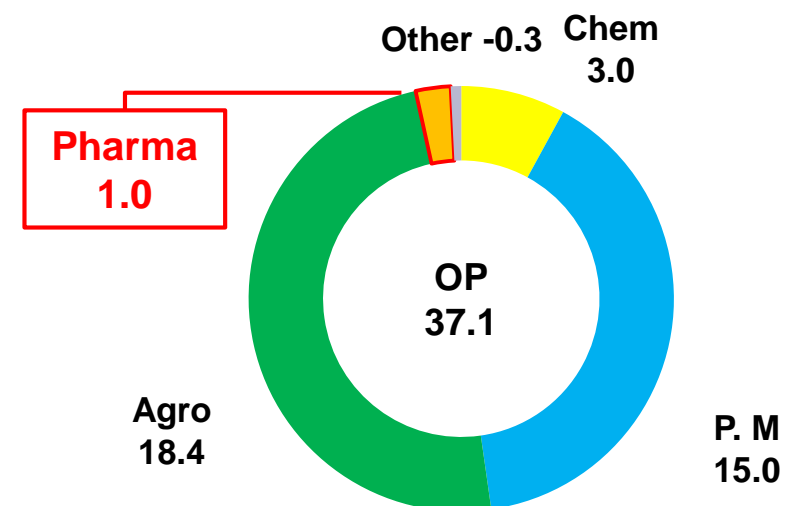
1. FY2018 Sales Distribution (¥billion)



3. Recent Financial Performance (¥billion)

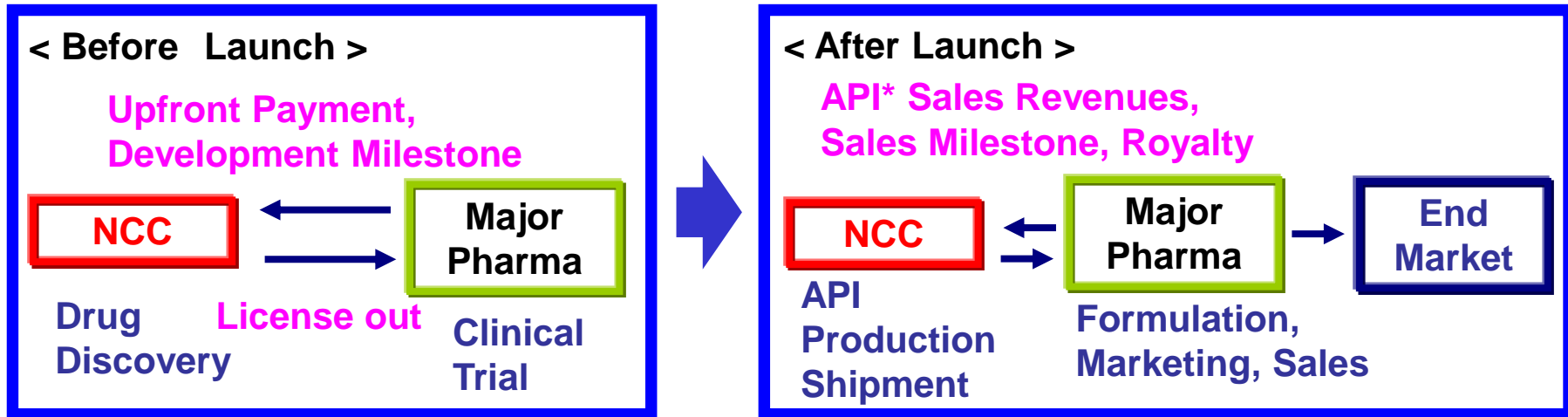


2. FY2018 OP Distribution (¥billion)



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 Actual	FY2019 Outlook as of May 2019	FY2019 Outlook as of Nov. 2019
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	4.3	4.1	3.9
Our Domestic and Export API Sales YOY Change	-2%	-32%	-15%	-11%	-7%	-11%	-5%	-10%
(Domestic API Sales YOY Change)	(-2%)	(-46%)	(-27%)	(-42%)	(-73%)	(-53%)	(+59%)	(+59%)
(Export API Sales YOY Change)	(-1%)	(+21%)	(+5%)	(+26%)	(+29%)	(-6%)	(-9%)	(-14%)

- 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
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

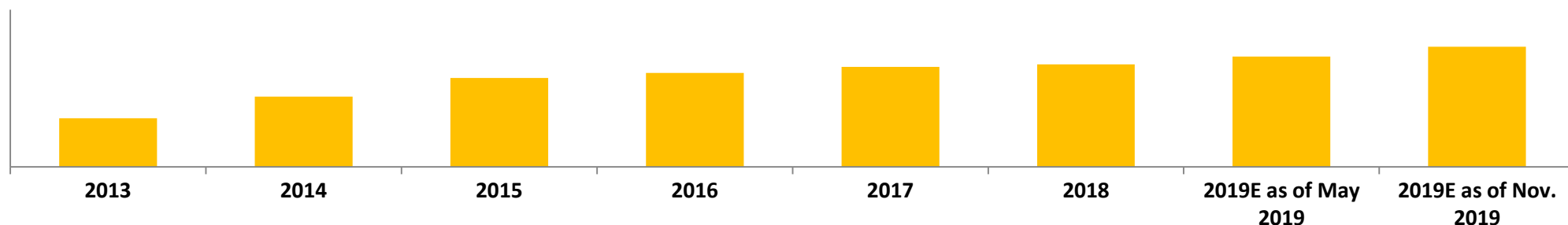
◆ Collaborative research

- 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-value added GE API products
 - 2016- Maxacalcitol (Secondary hyperparathyroidism and Psoriasis)
 - 2017- Eldecalcitol (Osteoporosis)

◆ Custom Chemicals Sales Growth



1H FY2019 Sales Review

<vs. 1H FY2018>

<vs. 1H FY2019 Outlook as of May 2019>

◆ Flat

◆ In line with target

2H FY2019 Sales Outlook

<vs. 2H FY2018>

<vs. 2H FY2019 Outlook as of May 2019>

◆ Up due to volume increase, high-value added GE API products increase

◆ Above target (volume above expectations)

Sales YOY Change								
FY2018 Actual			FY2019 Outlook as of May 2019			FY2019 Outlook as of Nov. 2019		
1H	2H	Total	1H	2H	Total	1H Actual	2H	Total
+18%	-10%	+3%	-1%	+16%	+8%	-0%	+35%	+17%

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 :** **Completion of R&D center in April 2019, manufacturing fab in July 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)

	FY2018 Actual (A)							FY2019 Outlook as of May 2019					FY2019 Outlook (B) as of Nov. 2019								Change (B)-(A)		
	1Q	2Q	1H	3Q	4Q	2H	Total	1Q	2Q	1H	2H	Total	1Q Actual	2Q Actual	1H Actual	3Q	4Q	2H	Total	1H Actual	2H	Total	
Sales	1.8	1.9	3.7	1.9	1.4	3.3	7.0	1.6	1.8	3.4	3.6	7.0	1.9	1.5	3.4	1.6	2.0	3.6	7.0	-0.3	+0.3	-0.0	
OP	0.3	0.3	0.6	0.4	0.0	0.4	1.0	0.1	0.4	0.5	0.5	1.0	0.4	0.1	0.5	0.2	0.4	0.6	1.1	-0.1	+0.2	+0.1	

1Q FY2019 Review

<vs. 1Q FY2018>

- ◆ LIVALO sales up
(domestic sales up, export up)
- ◆ Custom Chemicals sales down
- ◆ Sales up ¥0.1 billion, OP up ¥0.1 billion

<vs. 1Q FY2019 Outlook as of May 2019>

- ◆ LIVALO sales above target
(domestic sales above target, export above target)
- ◆ Custom Chemicals sales below target
- ◆ Sales up ¥0.3 billion, OP up ¥0.3 billion

2Q FY2019 Outlook

<vs. 2Q FY2018>

- ◆ LIVALO sales down (domestic sales up, export down)
- ◆ Custom Chemicals sales up
- ◆ Inventory adjustment cost down ¥0.1 billion
- ◆ Sales down ¥0.4 billion, OP down ¥0.2 billion

<vs. 2Q FY2019 Outlook as of May 2019>

- ◆ LIVALO sales below target
(domestic sales below target, export below target)
- ◆ Custom Chemicals sales above target
- ◆ Sales down ¥0.3 billion, OP down ¥0.3 billion

Pharmaceuticals – (F-2) Profit Overview

1H FY 2019 Review

<vs. 1H FY2018>

- ◆ LIVALO sales down (domestic sales up, export down)
- ◆ Custom Chemicals sales flat
- ◆ Inventory adjustment cost down ¥0.2 billion
- ◆ Sales down ¥0.3 billion, OP down ¥0.1 billion

<vs. 1H FY2019 Outlook as of May 2019>

- ◆ LIVALO sales in line with target
(domestic sales above target, export below target)
- ◆ Custom Chemicals sales in line with target
- ◆ Sales in line with target, OP in line with target

2H FY 2019 Outlook

<vs. 2H FY2018>

- ◆ LIVALO sales down (domestic sales up, export down)
- ◆ Custom Chemicals sales up due to volume increase
- ◆ Sales up ¥0.3 billion, OP up ¥0.2 billion

<vs. 2H FY2019 Outlook as of May 2019>

- ◆ LIVALO sales below target
(domestic sales below target, export below target)
- ◆ Custom Chemicals sales above target
(volume above expectations)
- ◆ Sales in line with target, OP up ¥0.1 billion

Capex/Depreciation/R&D by Segment

(¥billion)

	Capex (1)						Depreciation (2)						R&D expenses						% of Sales
	2015	2016	2017	2018	2019E (2019/5)	2019E (2019/11)	2015	2016	2017	2018	2019E (2019/5)	2019E (2019/11)	2015	2016	2017	2018	2019E (2019/5)	2019E (2019/11)	
Chem	2.3	2.0	2.6	2.0	3.2	3.2	1.4	1.6	1.7	1.8	2.0	1.9	0.5	0.5	0.6	0.6	0.5	0.4	1.1%
Performance M.	5.4	8.4	7.2	3.3	4.3	3.8	5.2	4.8	5.9	6.0	5.5	5.2	7.4	7.9	8.1	8.2	8.6	8.1	12.8%
Agro	1.3	2.4	2.6	3.3	0.7	1.5	1.4	1.3	1.4	1.7	1.8	1.8	3.9	3.8	4.3	4.5	4.7	4.5	7.0%
Pharma	0.4	0.9	0.7	0.5	0.5	0.6	0.8	0.7	0.7	0.6	0.6	0.6	2.4	2.2	2.5	2.5	2.5	2.5	35.7%
Trading	0.0	0.0	0.0	0.1	0.4	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-
Others	0.8	0.6	0.6	0.7	0.6	0.7	0.8	0.4	0.7	0.7	0.7	0.7	1.6	1.7	1.7	2.0	2.0	2.0	-
Total	10.2	14.3	13.7	9.9	9.7	10.1	9.7	8.9	10.5	10.9	10.7	10.3	15.8	16.1	17.2	17.8	18.3	17.5	
R&D expenses/Sales													8.9%	8.9%	8.9%	8.7%	8.7%	8.4%	

(1) Capex

Actual - Acceptance basis

Outlook - Production commencement basis

(2) Depreciation Method

SUNEVER, ARC®, OptiStack®

- 4 year declining balance method

(50.0% of initial capex amount in the 1st year)

Other products - 8 year declining balance method

(25.0% of initial capex amount in the 1st year)

R&D Personnel (Sept. 2019) –A	450
Total Professionals (Sept. 2019) –B	1,165
A/B	39%

※Parent company only

※Round number

Main Capex Items (Approval Basis)

(¥billion)

FY2016 Actual		FY2017 Actual		FY2018 Actual		FY2019 Outlook	
NCK Semis (Production capacity expansion)	2.6	Agro (Production facilities)	1.4	Chemical 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	Material Research Lab. (Instruments)	0.7	Isocyanuric acid (1) (Production capacity expansion)	1.9
Semis (Analyzing and evaluation R&D equipment)	1.0	Material Research Lab. (Instruments)	0.9	Agro (Product development facilities)	0.6	Display (Production facilities)	1.6
Chemical Research Lab. (Instruments)	0.6	Chemical Research Lab. (Instruments)	0.6	NSU R&D Center	0.5	Chemical Research Lab. (Instruments)	0.7
SNOWTEX (Production capacity expansion)	0.5	Display (Test facilities)	0.3	TEPIC (Production capacity expansion)	0.5	Material Research Lab. (Instruments)	0.6
NCK SUNEVER (Production capacity expansion)	0.3	Biological Research Lab. (Instruments)	0.3	Biological Research Lab. (Instruments)	0.4	Biological Research Lab. (Instruments)	0.3
SNOWTEX (Production capacity expansion)	0.3	Display (production facilities)	0.3	Semis (Production test facilities)	0.2		
Biological Research Lab. (Instruments)	0.2			SNOWTEX (Production capacity expansion)	0.2		
NCK R&D Center (Instruments)	0.2						

(1) Fine Chemicals materials (see p24)

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

1. PL

	Actual	New Mid-Term Plan announced in May 2019	Mid-Term Plan announced in May 2016
	FY2018	FY2021	FY2021
Sales	204.9	235.0	250.0
Operating Profit	37.1	43.0	40.0
Ordinary Income	39.1	44.0	40.8
Net Income	29.4	33.0	31.0
EPS (¥/share)	197.67	230.00	-
Dividend (¥/share)	82	-	-
FX Rate (¥/\$)	111	110	115
Naphtha (¥/kl)	49,700	43,000	51,100

(¥billion)

(Financial Targets)

	Actual	New Mid-Term Plan announced in May 2019	Mid-Term Plan announced in May 2016
	FY2018	FY2020, FY2021	FY2021
OP Margin	18.1%	Above 18%	Above 15%
ROE	16.6%	Above 16%	Above 14%
Dividend Payout Ratio	41.5%	45%	40%
Total Payout Ratio	72.0%	75%	70%

(¥billion)

2. Segment ⁽¹⁾

	Sales			Operating Profit		
	Actual	New Mid-Term Plan announced in May 2019	Mid-Term Plan announced in May 2016	Actual	New Mid-Term Plan announced in May 2019	Mid-Term Plan announced in May 2016
	FY2018	FY2021	FY2021	FY2018	FY2021	FY2021
Chem	35.7	43.1	40.5	3.0	5.1	4.5
Performance M.	63.0	75.1	82.9	15.0	17.3	18.4
Agro	62.7	70.1	67.0	18.4	21.1	16.7
Pharma	7.0	7.5	8.3	1.0	0.7	2.4
Trading, Others, Adj	36.5	39.2	51.3	-0.3	-1.2	-2.0
Total	204.9	235.0	250.0	37.1	43.0	40.0

(1) Including inter-segment sales/transfers

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

1. Cash Flows

(¥billion)

	Actual	New Mid-Term Plan
	Total FY2016-2018	Total FY2019-2021 (round number)
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

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 and Awards

◆April 2019

Establishment of Nomination and Remuneration Advisory Committee as an optional advisory body of the Board of Directors

◆June 2019

- **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

◆July 2019

NCC was selected for the first time as an inclusion in the MSCI Japan Empowering Woman Index (WIN)

◆August 2019

NCC was selected as one of the 50 candidates of the Corporate Value Improvement Award hosted by the Tokyo Stock Exchange for the second consecutive year. The Award targets all listed companies in Japan (approximately 3,600 companies).

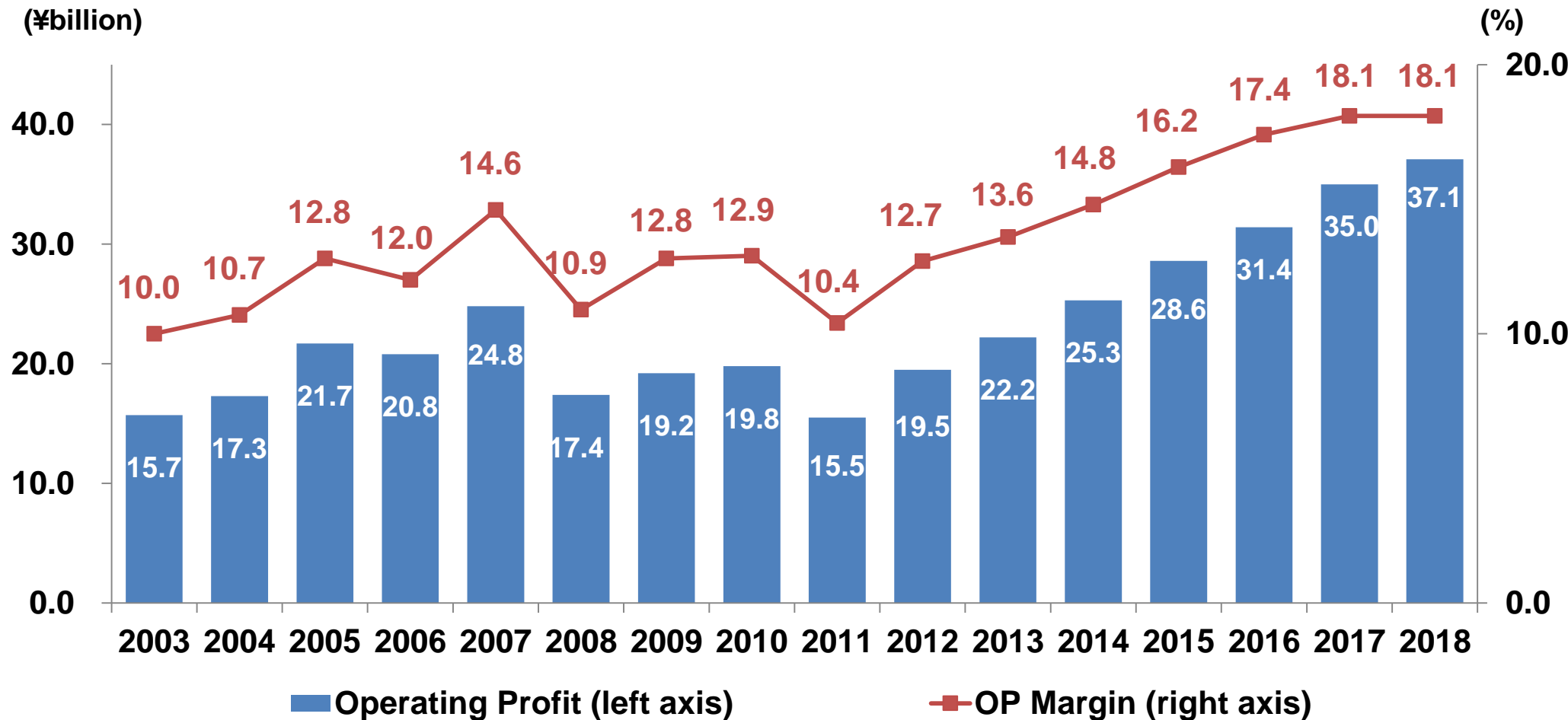
◆September 2019

- **NCC was selected as an inclusion in the Dow Jones Sustainability Asia Pacific Index for the second consecutive year**
- **NCC published its integrated reports “Integrated Reports 2019”
(English translation under preparation)**

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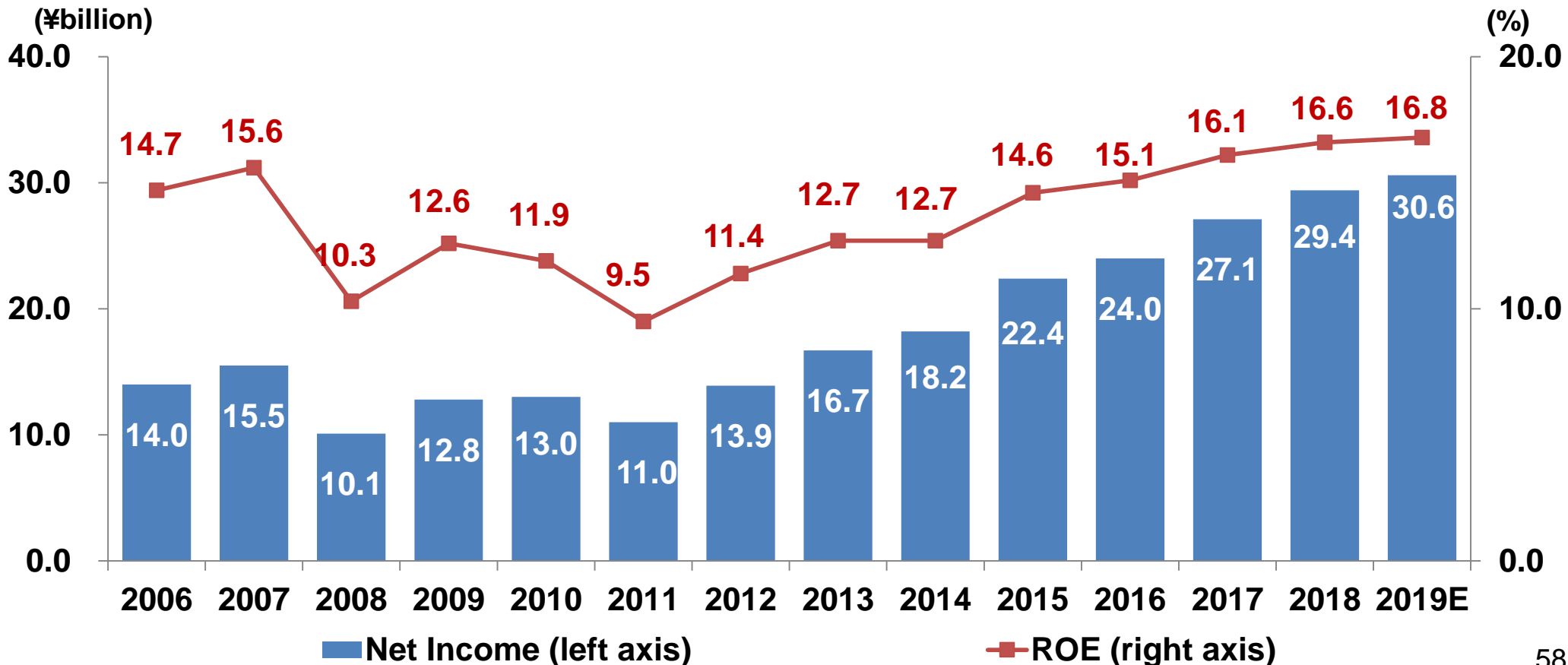
Our Characteristics - (A) Recording Stable OP Margin

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



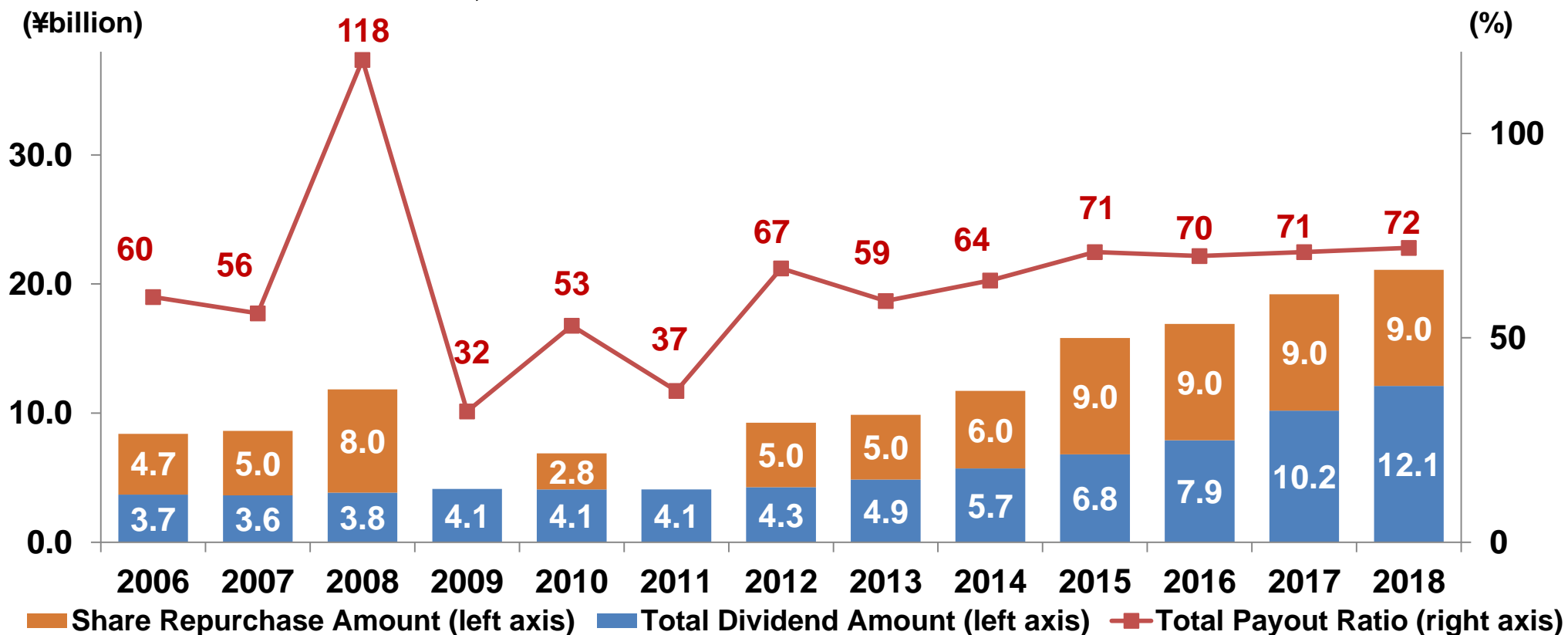
Our Characteristics - (B) High ROE

- ◆ The most important financial indicator for a long time
- ◆ Target : Maintain above 14% (Mid-Term Plan FY2016-2018)
⇒ Achieved in FY2016, 2017 and 2018
- ◆ FY2018 Actual : 16.6%
- ◆ New Mid-Term Plan FY2019-2021 Target : Maintain above 16%



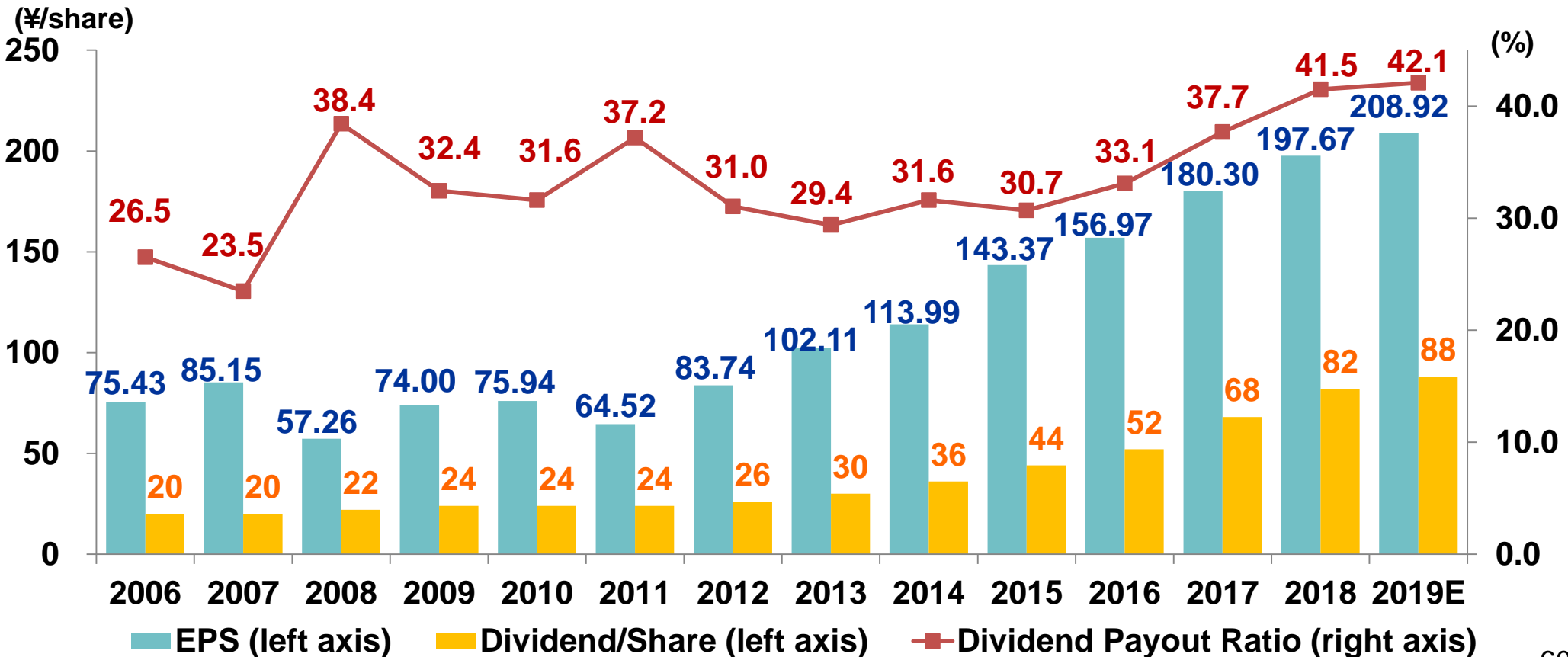
Our Characteristics - (C) Shareholders Return Policy

- ◆ Maintaining an aggressive shareholders return policy
- ◆ Target : Maintain 70% total payout ratio (Mid-Term Plan FY2016-2018)
⇒ Achieved in FY2016, 2017 and 2018
- ◆ FY2018 Actual : 72.0%
- ◆ New Mid-Term Plan FY2019-2021 Target :
72.5% in FY2019, 75% in FY2020 and 2021



Our Characteristics - (D) Shareholders Return Policy - Dividend

- ◆ Gradually increased from 30.7% in FY2015 to 41.5% in FY2018
- ◆ New Mid-Term Plan FY2019-2021 Target :
42.5% in FY2019, 45% in FY2020 and 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 Actual		2019 Actual	2019 Plan as of Nov. 2019
Period of repurchase	May 14, 2018 - June 8, 2018	Feb. 12, 2019 - March 4, 2019	May 16, 2019 - July 23, 2019	Nov. 11, 2019 - April 30, 2020
Total amount (¥billion)	5.0	4.0	6.0	up to 4.0
Total number of shares repurchased (thousand shares)	976	706	1,270	up to 1,300

◆ Cancellation of treasury shares

Fiscal year	2019 Actual	
Date of cancellation	May 2019	August 2019
Total number of shares cancelled (thousand shares)	1,000	1,000

◆ Cash Management Policy

Aiming to control cash balance around the level of

= Minimum required level

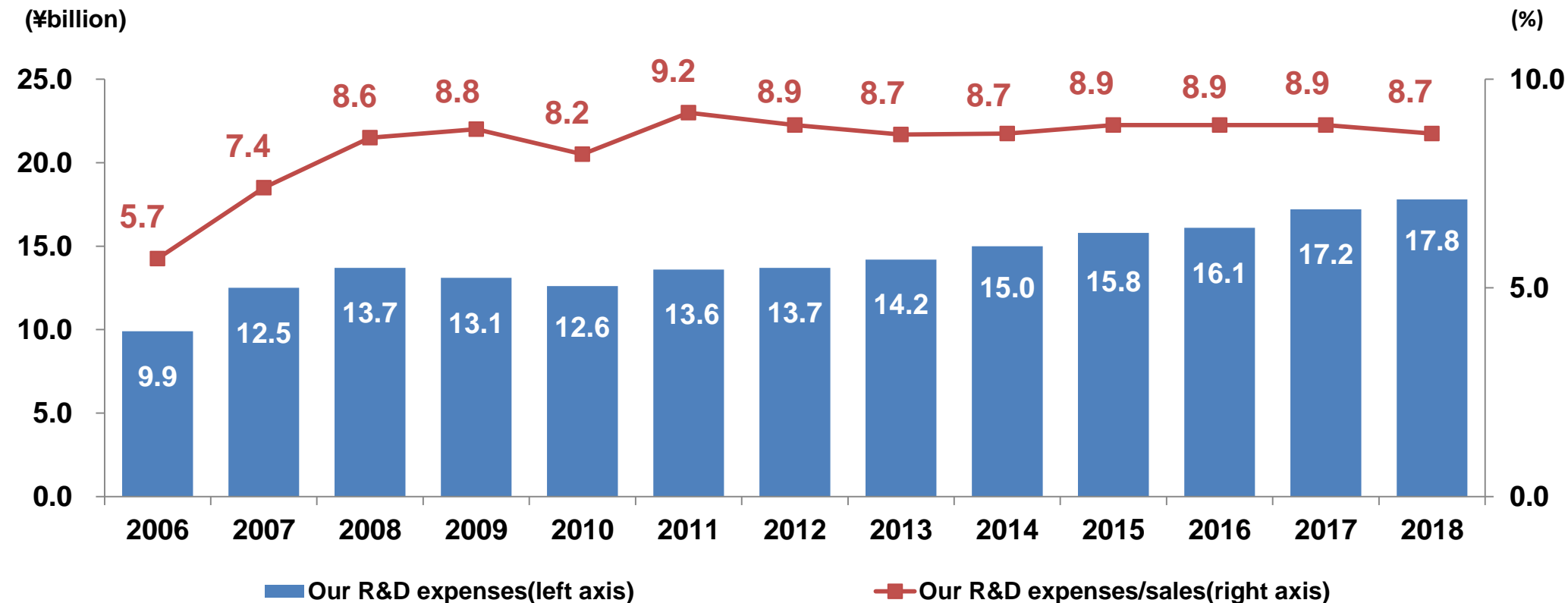
+ 1/3 of annual scheduled long-term borrowings repayment

+ 1/3 of short-term borrowings outstanding + Contingent risk reserves

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

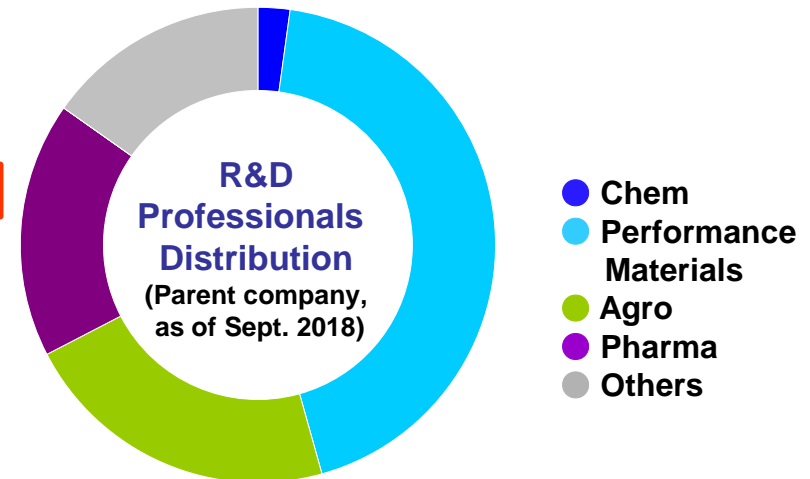
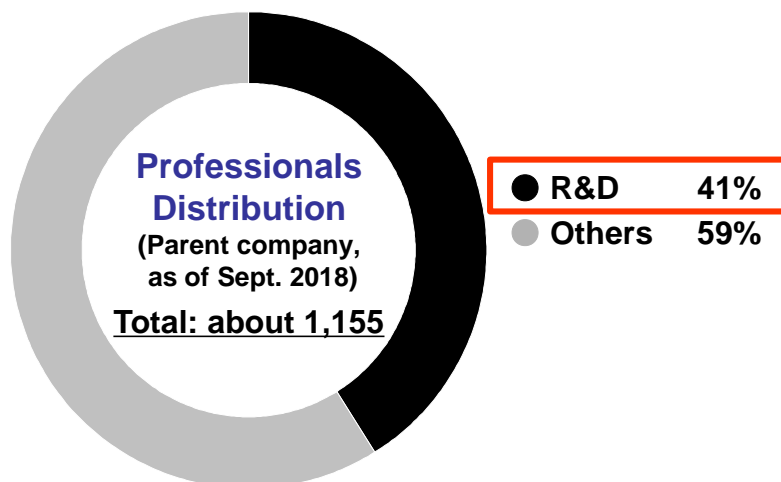
- ◆ FY2018 R&D expenses/sales: 8.7%
- ◆ Maintaining above 8% R&D expenses/sales in recent years
- ◆ About 40% of profession staff assigned to R&D centers



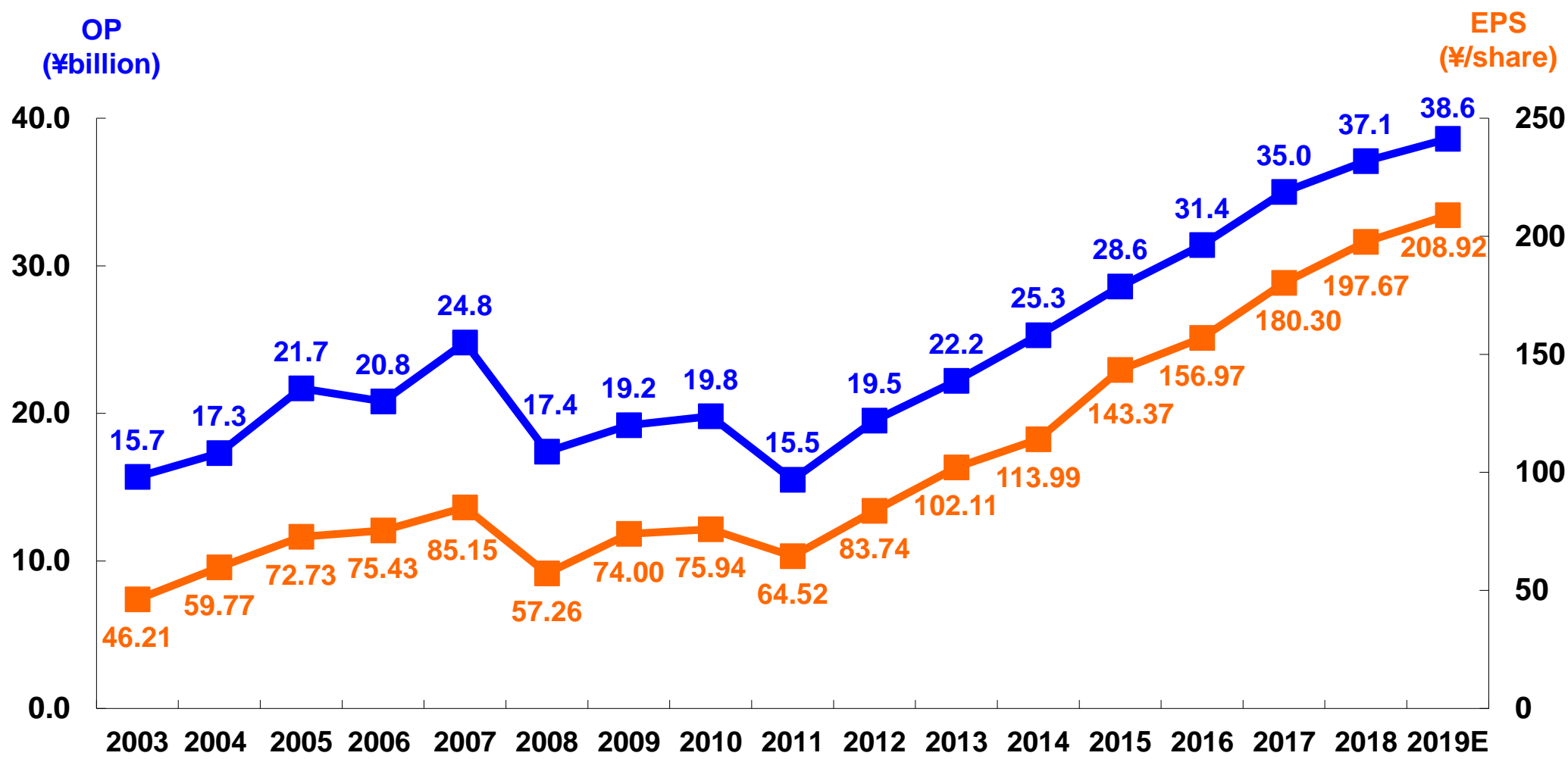
Our Characteristics- (F-2) R&D Oriented Chemical Company

◆ 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



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	209.0
Operating Profit	15.7	17.3	21.7	20.8	24.8	17.4	19.2	19.8	15.5	19.5	22.2	25.3	28.6	31.4	35.0	37.1	38.6
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	39.7
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	30.6
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	48.9
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%	18.5%
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%	16.8%
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	208.92
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%	42.1%
Share Repurchase	-	-	-	4.7	5.0	8.0	-	2.8	-	5.0	5.0	6.0	9.0	9.0	9.0	9.0	10.0
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	10.1
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	10.3
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	17.5
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%	8.4%

FY2015 - 2Q FY2019 Quarterly Sales by Segment (1)

(¥billion)

	FY2015 Actual					FY2016 Actual					FY2017 Actual					FY2018 Actual					FY2019 Actual	
	1Q	2Q	3Q	4Q	Total	1Q	2Q	3Q	4Q	Total	1Q	2Q	3Q	4Q	Total	1Q	2Q	3Q	4Q	Total	1Q	2Q
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	8.4	8.4
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	2.6	2.6
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	5.8	5.8
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	15.1	16.3
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	14.7	13.2
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	1.9	1.5
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	17.5	15.8
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	4.9	4.9
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	-13.8	-12.3
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	48.7	47.8

(1) Including inter-segment sales/transfers

FY2015 - 2Q FY2019 Quarterly OP by Segment

(¥billion)

	FY2015 Actual					FY2016 Actual					FY2017 Actual					FY2018 Actual					FY2019 Actual	
	1Q	2Q	3Q	4Q	Total	1Q	2Q	3Q	4Q	Total	1Q	2Q	3Q	4Q	Total	1Q	2Q	3Q	4Q	Total	1Q	2Q
Chem	1.5	-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	0.9	-0.6
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	3.9	4.3
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	4.5	4.9
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	0.4	0.1
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	0.5	0.5
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	0.1	0.0
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	-1.0	-0.5
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	9.3	8.7

Sales and OP 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	37.3
P.M	38.0	34.0	37.4	42.8	49.4	51.8	52.8	58.8	63.0	63.5
Agro	34.4	33.8	35.4	39.1	45.7	47.5	52.0	58.1	62.7	64.3
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	67.1
Others	27.0	20.0	21.2	21.4	20.9	20.9	24.0	21.5	24.6	22.4
Adjust	-37.0	-30.9	-34.0	-37.4	-42.3	-41.9	-46.5	-46.9	-56.0	-52.6
Total	154.2	148.6	153.8	163.7	171.2	176.9	180.3	193.4	204.9	209.0

<Segment Assets (D)>

<OP (B)>

Chem	2.4	1.6	1.9	1.9	1.9	3.9	3.8	3.4	3.0	3.4
P.M	7.9	4.8	7.2	8.8	12.0	12.0	12.5	14.2	15.0	15.1
Agro	4.8	4.4	5.0	6.2	9.2	10.8	13.2	16.4	18.4	19.6
Pharma	4.4	4.6	5.2	4.9	2.3	2.0	1.7	1.2	1.0	1.1
Trading	1.4	1.3	1.4	1.5	1.7	1.8	1.7	1.8	2.0	2.1
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	-3.3
Total	19.8	15.5	19.5	22.2	25.3	28.6	31.4	35.0	37.1	38.6

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%	9.1%
P.M	20.8%	14.1%	19.3%	20.6%	24.3%	23.2%	23.7%	24.1%	23.8%	23.8%
Agro	14.0%	13.0%	14.1%	15.9%	20.1%	22.7%	25.4%	28.2%	29.3%	30.5%
Pharma	45.8%	46.0%	40.9%	42.2%	26.1%	23.0%	21.3%	16.0%	14.3%	15.7%
Trading	3.2%	2.9%	3.0%	3.0%	3.1%	3.2%	3.1%	3.0%	2.9%	3.1%
Others	3.7%	1.5%	3.3%	3.7%	2.9%	2.4%	4.2%	2.8%	3.7%	2.7%
Total	12.9%	10.4%	12.7%	13.6%	14.8%	16.2%	17.4%	18.1%	18.1%	18.5%

<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.

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