FY19-1 Creating New Customer Value through Innovations



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FY18 - Operating incomes driven down by Osaka Works fire etc. (△5 bn yen) and inventory valuation losses FY19 - Record high profit expected

(JPY bn) △Denotes a minus								
Items	FY2016	FY2017	FY2018	FY2019	Increase (Decrease)			
	Results	Results	Results	Outlook	FY18→FY19			
Sales	1,212	1,329	1,483	1,540	57.1			
Operating income	102.1	103.5	93.4	105.0	11.6			
Non-operating income	△ 4.9	6.7	9.6	5.0	△ 4.6			
Ordinary income	97.2	110.2	103.0	110.0	7.0			
Extraordinary gains/losses	△ 11.4	△ 16.0	2.3 Record high	△ 5.0	△ 7.3			
Net income*	64.8	71.6	76.1	76.0	△ 0.1			
Exchange rate (JPY/USD) Domestic standard naphtha price (JPY/KL)	108 34,700	111 41,900	111 49,400	110 46,000	△ 1 △ 3,400			

*Net income refers to Profit attributable to owners of parent

Operating Income Outlook by Segment

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(JPY bn)

Segment	FY2016	FY2017	FY2018	FY2019	Increase (Decrease
Malatin	Results	Results	Results	Outlook	FY18→FY19
Mobility	40.7	42.3	42.7	44.5	1.8
Health Care	10.1	10.8	13.6	15.5	1.9
Food&Packaging	20.6	19.9	17.8	20.5	2.7
3 Targeted Domains Subtotal	71.4	73.0	74.1	80.5	6.
Basic Materials	38.5	38.9	27.8	33.0	5.2
Others	△7.8	∆ 8.4	∆ 8.5	∆ 8.5	0.0
Total	102.1	103.5	93.4	105.0	11.6
Exchange rate (JPY/USD)	108	111	111	110	
Domestic standard naphtha price (JPY/KL)	34,700	41,900	49,400	46,000	△ 340

✓ Continue to grow in 3 Targeted Business Domains
 ✓ Secure stable profit from Basic Materials domain despite
 Osaka Works fire etc. (△5 bn yen) and inventory valuation losses



 \triangle Denotes a minus

Management Targets





*ROIC : Return on Invested Capital = NOPAT/Invested capital

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Focusing investments in high-ROIC targeted domains





Net Income Mitsui Chemicals May 31, 2019

Expand investments for further growth



Issues toward Growth Path



8 Issues in FY19

	①Expansion in 3 targeted business domains
Business	 Increase in investment themes Including peripheral business area Secure production capacity corresponding to demands
Strategy	②Accelerate development of new next generation businesses and create new products
	③Further strengthen competitiveness of Basic Materials
Manufacturing	④Enhance manufacturing bases by utilizing advanced IoT/AI technologies
	⑤Ensure safety and enhance safety culture globally
	6 Secure investment returns and improve inventory control
Management	⑦Enhance group-global management





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comprehensive strengths Provide solutions making full use of

Mobility





No.1 pellicle supplier in cutting-edge fields (ArF, EUV)



-Metal substitution

-Total production capacity:10.5KTA -Meet global lightweight needs

Application

-Automotive inner/outer parts

Continue production increases at 8 global bases











APEL[™] Reforming application portfolio

 Expand business in smartphone camera lens use
 Continue high growth amid trend toward double-camera, triple-camera smartphones



New products under development



Automotive camera lenses



New devices



Medical applications

ADMER™ Expanding applications

- ✓ Growth due to gasoline tanks trending toward resins (adhesiveness, durability)
- ✓ Accelerating growth in LiB applications



Launching new products adherable to more materials

(Modified fluoropolymers, PPS, POK, PC, fiber-fillers etc.)





Strengthen capabilities for creation and development Opened "Design & Solution Center" (Mar. 2019, Niigata)





 ✓ Group synergies for creation and development
 ✓ Speed up development in Mobility, Health Care and Food & Packaging domains

Enhance capability to propose total solutions





Carbon fiber composite material - commercializing UD tapes

TAFNEX™ Carbon fiber reinforced UD tape





UD tape

Proposing applications in rear doors (Insert molding)

New facility

-Installed UD tape production facilities (Nagoya, Oct. 2017)

Marketing

-Expand matrix resins line-up -In combination with CAE and production tech

Offer lightweighting solutions

Installation of laser equipment for UD tape production





Laser equipment

Multilayer sheet by laser New facility

Winding tube

-Installed AFPT's laser equipment (Design & Solution Center, March 2019)

Partial heat High-speed layer fusion sealing

Marketing

- -Pursuing market development by combining processing technologies with UD tape
- -Evaluations moving forward
 - (oil field excavation pipes, auto parts etc.)

UD tape business to launch in FY2019 utilizing materials, CAE and processing technologies

Carbon Fiber Composite Materials – Part 2

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Showcasing TAFNEX[™] - "hour's Pod[™]" concept car exhibit at JEC World convention in France (Mar. 2019)





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Expand scope of investments in high-ROIC Mobility domain accelerate growth

Mobility investment projects (partial list)		Capacity Schedule for profit contribution					tion			
		(KTA)	Stable growth		Accelerate growth		rowth	Note		
			FY17	FY18	FY19	FY20	FY21	FY22		
	Increased capacity@India	10								
	Increased capacity@N.A	20							✓Global top strategy in 8 global bases	
DD Compounds	Increased capacity@Mexico	10					1		✓Increase in automobile production ✓PP usage continues to increase along with	
PP Compounds	Increase capacity@India	12					1		lightweight needs	
	Increase capacity@Thailand	13								
	New base@Netherland	30								
Long slose filmer	Increase capacity@Japan	3.5							•	
Long glass fiber reinforced PP	New base@N.A	3.5					1		√Establish 3-base global network √Expand resin parts	
	New base@China	3.5								
	Increased capacity@Japan	5								
Milastomer™	Acquired TPS business	-					ł		✓Global expansion via 7-base global network ✓Enhance solution capability for inner parts	
	Increase capacity@N.A	6								
	Electolyte: Increased capacity@Japan	5							✓Adopted major LiB manufacturer in Japan	
LiB related materials	Electolyte: Increased capacity@China	5							and China utilizing original additive technology √Secure global standard position in LiB separator	
	HZ million: Increased capacity@Japan	1							material	
Elastomers	Tafmer™: Increase capacity@Singapore	25							✓Secure global top share	
Semiconductor materials	EUV pellicle: New facility@Japan	-							✓Be a No.1 in cutting-edge area	
Lubricant oil materials	Lucant™: New base@Japan	20							✓Expansion with Lubrizol	
	Acquired ARRK	-								
Solution	Mobility Development Center	-							✓Offer total solution globally ✓Promote trend toward resin	
	Design & Solution Center	-					I I			

Health Care Provide products & services contributing to Quality of Life through chemical innovations



Vision Care

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Bolster global No. 1 position with full range of refractive index and functional lens materials



- Capacity increase under feasibility study

UV+420cut[™]

✓Cuts out harmful UV rays and high-energy visible (HEV) light ✓Adopted by major European retailers for main products

NeoContrast[™]

 \checkmark Reduces glare; helps distinguish between different colors ✓Adopted by major Chinese retailers as anti-glare lenses











[Mitsui Fine Chemicals] Accelerate Development of New Products



Polyolefin surface modifier Exfola[™]



Adds new functions to polyolefins



Expand applications

✓ Package for reduced food losses
 ✓ Protective films for LCD, building materials
 ✓ Antifouling films

Low skin irritation Hair coloring material



- ✓Developed hair coloring material with both low skin irritation and good coloration by using original technology
- ✓Applicable to variety of colors
- ✓Successfully developed technology for stabilization in storage



Provide solutions for world food problems, seizing new business opportunities Food &





19



Mi		Active ingredient	Target market	Progress			
Mitsui Chemicals	Existing active ingredient	Tolprocarb	Fungicide for wetland rice Domestic market 40 billion yen	 ◆ 日本農業学会第44回大会 総会 授賞式 ◆ Domestic sales launched in FY2015 ◆ Positive feedback for new efficacy, receiving award from the Pesticide Science Society of Japan ✓ Expanded to 15 formulations 			
Agro	New active ingredients	CYRA™ Generic name: Cyclopyrimorate	Herbicide for wetland rice Domestic market 70 billion yen	 ✓ Has new efficacy for weeds resistant to ALS inhibitors ✓ Completed registration ✓ Co-developed with ZEN-NOH 			
		TENEBENAL™ Generic name: Broflanilide Insecticide Global market 1,600 billior yen		 ✓ Long-term commercialization contract with BASF ✓ Registered new category with IRAC* ✓ Completed registration in eight countries (inc. Japan, U.S., India, South Korea, ASEAN) *Insecticide Resistance Action Committee 			

Steady progress with new product development

20 Eco-friendly Packaging Materials





Offer valuable solutions to customers and brand owners Sales growing in India and Europe as environmental regulations tighten Create solution & system businesses at the boundary or peripheral areas

Business **Next Generation**





Next Generation Business



Energy Solution



Medical Solution



Rapid diagnosis system for bacterial identification

 \checkmark Enter certification business in India (Oct. 2019)

- ✓ Provide re-agent for research
- ✓ Overseas deployment (Singapore, EU)
- ✓ Selected for AMED's ACT-M scheme

✓ Diagnosis accounts over 3.1GW





Advanced cultivation system (iCAST[™])

✓ Good field test results and good evaluation at large-scale farmers in US and Australia

IoT Solution



Piezo-electric material for next generation display sensor

- ✓ Collaborate with MURATA for Piezo-electric film
- ✓ Application development for Piezola™
- ✓ Customer evaluation on transparent-PI for OLED

Corporate Venturing



Open innovation & CVC

✓ Joint development of new models for surgical practice

Open Innovation

*Japanese Cabinet Office's ImPACT program JST Nagoya University University of Tokyo



Joint development* of new models for surgical practice

Eyeball model for practicing glaucoma surgery Layered structure with human collagen fibers



Social issue

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- ✓ Glaucoma: #1 cause for loss of eyesight in Japan 200,000 glaucoma surgeries per year in Japan
- \checkmark No detailed models for surgical practice previously
- ✓ Bionic-EyE[™] will improve surgeon skills

Technology

Ophthal

moloaist

✓ Material combination technologies

"Feels like a human eye" "Can use it for multiple surgery practices" Nasal cavity/skull base model with Piezola™ Visualize surgical training



Social issue

✓ High skill necessary for endoscopic endonasal skull base surgery - touching the optical nerve risks loss of eyesight

Technology

✓ Piezoelectric line PIEZOLA™

used in equipment to monitor contact and provide feedback, helping improve surgical skills



asic Materials





Operating income(JPY bn) Mitsui Chemicals ROS(%)

May 31, 2019

-Reduce volatility through restructuring -Establish stable profit base for around 30 billion yen







Bolster presence in Asia market and build stable profit base

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Resistance to market fluctuation

Phenol, Polyurethane, PTA Local production for local consumption

✓Restructure and establish sales strategies tailored to each region

Polyolefin, Phenol, Polyurethane, PTA Formula-based pricing

70%

80%

✓Establish sales strategies that are more resilient to market fluctuations

Preparing for impact of shale products

In-house ethylene consumption

80%

✓Export ratio is 10% or less

High value-added **90**%

✓Closed general-use PE plants

✓Expand high value-added polymers such as Evolue[™] and Elastomers

Reduce volatility and establish stronger profit base



FY18

Further Strengthen Cracker Competitiveness





 ✓ Cut costs by improving proportion of private power generation and recycling waste heat
 ✓ Reduce CO₂ emissions by 70,000 tons/year

FY20

Expand cracking furnace (Ichihara)

- \checkmark Cut costs by improving olefin yield
- ✓ Improve stability and facilitate maintenance of cracker facilities

FY22

Expand sales of olefin-based polymers; New plants; Improve on C3 shortage positon

FY21

For derivatives high-purity propylene (Ichihara)

FY19

- ✓ Boost propylene purification capacity for polymers
- Prepare for bolstering propylene-based polymers
- ✓ Address propylene shortage position

Diversifying raw materials

Removing

bottlenecks

Increase propane cracking capacity (Osaka)

FY23

 ✓ Shale-derived propane cracking
 ✓ Diversify raw materials at Osaka (23% ➡ 40% of total raw materials)

Maintain world-leading naphtha cracker by further boosting cost competitiveness



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Tackling climate change and plastic waste to achieve circular economy







Pursuing circular economy model throughout value chain




-Dealing with climate change is our top priority -Pursue cooperation and co-creation throughout global value chain

Mitigation	Adaptation
Realizing low-carbon society by reducing GHG emissions	Realizing healthy and happy society resilient to climate change risks
Opportunities / Risks	Opportunities / Risks
Lower carbon emissions in manufacturing	Managing water security
-Energy conservation, renewable energy -Transitioning to new raw materials/fuels	-Dealing with production base risks -More efficient use of water resources
Reducing GHG via products	Expanding products enabling adaptation
-Blue Value™ products	 -Rose Value[™] products -Products for preventing and mitigating disasters
Improving recycling technologies	
-Innovation with raw materials and design	
TASK FORCE ON Supporter of TCFD Recommendations	

(announced Jan. 2019)





Targeting commercialization of Bio-PP as Japan's leading supplier







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Cash Flow

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-Cash flow from operating income remains high -Maintain active investment phase



Outlook



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-Improve Net D/E of 0.65 and continue active investments -Further enhance corporate value





*In October 2017, Mitsui Chemicals conducted a 5-to-1 share consolidation. All dividends are re-calculated based on the share consolidation. **Targeted Position**

Mobility





34

ROS(%)

14%

12%

(FY16→25)





Constantly pursuing innovation and growth to become a chemical group with an undisputed global presence



Creating new customer value and solving social challenges through business activities



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Automotive Engineering Exposition 2019



Propose interior design for next mobility in collaboration with ARRK





Translucent surface materials for display use made from **Milastomer™**



