

2021 Consolidated Financial Results

(February 14, 2022)



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Summary

1. In 2021, due to the full-year consolidation of Showa Denko Materials and the strong performance of semiconductor-related products, sales increased by ¥445.9 billion and operating income increased by ¥ 106.6 billion.
2. In the forecast for 2022, it is expected that net sales will increase by ¥ 90.7 billion and operating income will increase by ¥ 10.3 billion, excluding the impact of the business transfer.
We will focus on prior investment to lay a solid foundation for long-term growth.
3. We are steadily implementing the “Long-term Vision for the Newly Integrated Company (2021-2030)” announced in December 2020.
From 2022, we introduce new segments for information disclosure, which is in line with the new management system.

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Summary (2020 vs. 2021)

(Unit: Billions of Yen)

	2020*1	2021	Increase/ decrease
Net sales	973.7	1,419.6	445.9
Operating income	(19.4)	87.2	106.6
Non-operating income and expenses, net*2	(24.5)	(0.3)	24.2
Ordinary income	(44.0)	86.9	130.8
Extraordinary profit/loss*2	(24.3)	(63.9)	(39.6)
Income before income taxes	(68.3)	22.9	91.2
Net income	(65.1)	2.7	67.8
Net income attributable to owners of the parent	(76.3)	(12.1)	64.2
EBITDA	58.5	202.6	144.1
EBITDA margin%	6.0%	14.3%	8.3p
ROIC	(0.8%)	4.3%	5.2p

EBITDA: Operating income + Depreciation expense + Amortization of goodwill, etc.
 ROIC: (Operating income + Equity in earnings of affiliates – Income taxes) / (Interest-bearing debt + Total net assets)

(Ref.) Based on ongoing business (Unit: Billions of Yen)

	2020*3	2021*4	Increase/ decrease
Net sales	1,056.6	1,259.3	202.7
Operating income	(33.8)	73.7	107.5
EBITDA	70.0	182.9	112.9
EBITDA margin%	6.6%	14.5%	7.9p

*1 Showa Denko Materials (SDMC) has been consolidated into SDK's financial results since July 2020.

*2 Refer to page 10 for the breakdown of non-operating income and extraordinary income.

*3 These data are for reference where we included results of SDMC in the first half of 2020, and excluded results of businesses transferred in 2021, including aluminum cans, rolled aluminum products, food wrap, substrates for printed wiring, and energy storage devices.

*4 These data are for reference where we excluded results of businesses transferred in 2021, which are aluminum cans, rolled aluminum products, food wrap, substrates for printed wiring, and energy storage devices.

Summary of Consolidated Sales and Operating Income by Segment (2020 vs. 2021)*¹



(Unit: Billions of Yen)

		2020	2021	Increase/decrease	
Petrochemicals	Sales	193.4	283.1	89.8	46%
	Operating Income	4.9	20.7	15.8	320%
Chemicals	Sales	155.8	186.9	31.1	20%
	Operating Income	13.5	21.6	8.1	60%
Electronics	Sales	97.4	120.9	23.5	24%
	Operating Income	9.1	16.2	7.0	77%
Inorganics	Sales	82.9	102.3	19.4	23%
	Operating Income	(32.3)	14.4	46.7	—
Aluminum	Sales	80.2	76.2	(4.0)	(5%)
	Operating Income	0.4	6.9	6.5	1,540%
Showa Denko Materials* ²	Sales	302.7	635.0	332.3	110%
	Operating Income	(6.3)	20.3	26.6	—
Others	Sales	107.3	44.1	(63.2)	(59%)
	Operating Income	1.2	(0.0)	(1.2)	—
Adjustments	Sales	(46.0)	(28.8)	17.2	—
	Operating Income	(10.0)	(12.8)	(2.8)	—
Total	Sales	973.7	1,419.6	445.9	46%
	Operating Income	(19.4)	87.2	106.6	—

*1 Refer to page 6-8 for details. *2 Showa Denko Materials has been consolidated into SDK's financial results since July 2020.

Consolidated Sales and Operating Income by Segment (1) (2020 vs. 2021)



Petrochemicals

(Unit: Billions of Yen)

	2020	2021	Increase/Decrease
Sales	193.4	283.1	89.8
Operating Income	4.9	20.7	15.8

Olefins: sales increased, profit increased substantially
(demand recovery from COVID-19, market prices up due to a rise in prices of raw naphtha)
Organic Chemicals: sales and profit increased
(vinyl acetate and ethyl acetate: shipment volumes up due to no SDM in 2021, market prices and raw materials prices up)
SunAllomer Ltd.: Sales increased, profit decreased
(time lag between a rise in product prices and a rise in naphtha price)

Chemicals

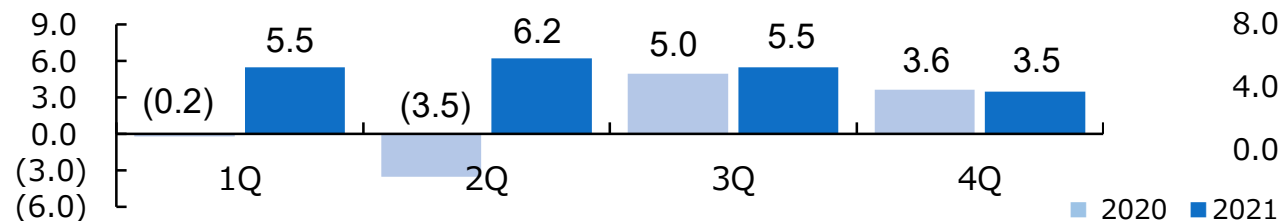
(Unit: Billions of Yen)

	2020	2021	Increase/Decrease
Sales	155.8	186.9	31.1
Operating Income	13.5	21.6	8.1

Basic chemicals: sales and profit increased
(ammonia, chloroprene rubber: shipment volumes up, AN: shipment volumes up, market prices up substantially)
Electronic chemicals: sales and profit increased
(shipment volumes up due to strong demand from semiconductor industry)
Industrial gases: sales and profit increased
Functional chemicals: sales and profit increased
(demand recovery from COVID-19)
Coating materials: sales and profit increased
(shipment volumes up due to steady demand resulting from staying at home)

[Quarterly Operating Income]

(Billion yen)



[Quarterly Operating Income]

(Billion yen)



Consolidated Sales and Operating Income by Segment (2) (2020 vs. 2021)



Electronics

(Unit: Billions of Yen)

	2020	2021	Increase/ decrease
Sales	97.4	120.9	23.5
Operating Income	9.1	16.2	7.0

HDs: sales and profit increased
(shipment volumes up due to steady demand for data centers and PCs)
Compound semiconductors: sales and profit increased
(demand recovery, cost reduction)
LIB materials: sales and profit increased
(shipment volumes of SPALF™ up due to a strong demand for consumer devices such as PCs and smartphones)
SiC epitaxial wafers: sales and profit increased (expansion of demand, shipment volumes up due to long-term supply contracts with several companies)

Inorganics

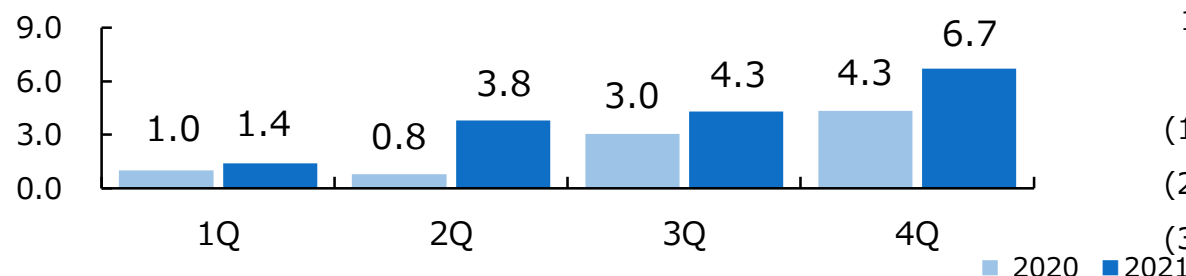
(Unit: Billions of Yen)

	2020	2021	Increase/ decrease
Sales	82.9	102.3	19.4
Operating Income	(32.3)	14.4	46.7

Ceramics: sales and profit increased
(shipment volumes of abrasives for steel and auto, and those of fine ceramics for electronics up due to demand recovery)
Graphite electrodes: sales increased (shipment volumes up substantially due to a recovery of demand), profit significantly increased (recovery from the devaluation of inventory caused by an application of the "lower of cost or market" accounting method in 2020)

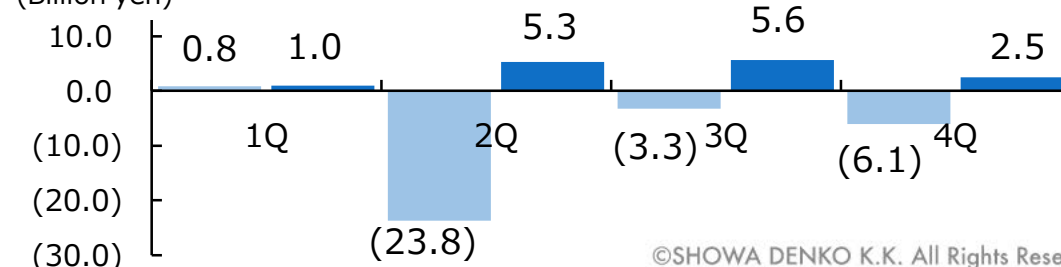
[Quarterly Operating Income]

(Billion yen)



[Quarterly Operating Income]

(Billion yen)



Consolidated Sales and Operating Income by Segment

(3) (2020 vs. 2021)



Aluminum

(Unit: Billions of Yen)

	2020	2021	Increase/ decrease
Sales	80.2	76.2	(4.0)
Operating Income	0.4	6.9	6.5

Aluminum specialty components: sales and profit increased (shipment volumes up due to a recovery of demand for auto and OA/FA industries)
 Rolled aluminum products: sales decreased, profit increased (incorporated sales figures and operating income till mid-CQ3, 2021, high-purity foil for capacitors: shipment volumes up)
 Aluminum cans: incorporated sales figures and operating income till CQ2, 2021

Others

(Unit: Billions of Yen)

	2020	2021	Increase/ decrease
Sales	107.3	44.1	(63.2)
Operating Income	1.2	(0.0)	(1.2)

Incorporated sales figures and operating income of SHOKO till CQ1, 2021.

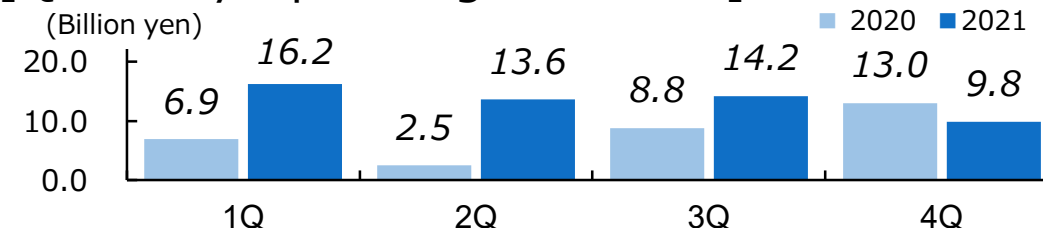
Showa Denko Materials

(Unit: Billions of Yen)

	2020* ¹	2021	Increase/ decrease
Sales	302.7 581.0* ²	635.0	332.3 54.1
Operating Income	(6.3)	20.3	26.6
Operating Income* ³	21.8	53.8	32.0

Information and communications have been firm against the backdrop of strong demand for semiconductors.
 Mobility components were recovering due to the recovery of automobile production in the first half of the year, but in the second half of the year, it slowed down due to the impact of production cuts due to a shortage of semiconductor supply.
 The segment as a whole secured a certain level of profit despite being affected by soaring raw material prices.

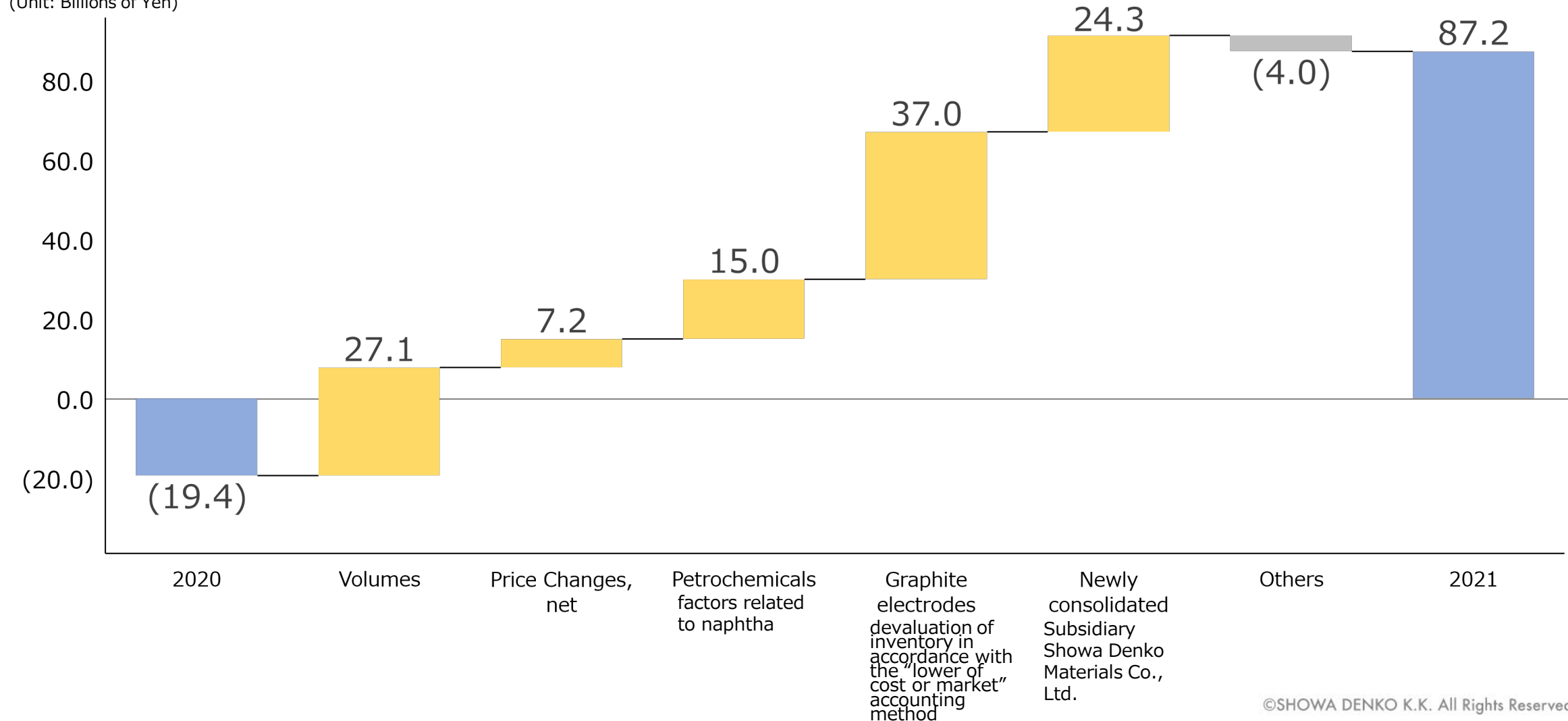
[Quarterly Operating Income*³]



*¹ Consolidation from July 2020 *² Reference: Sales of Showa Denko Materials from January to December, 2020
 *³ 1Q and 2Q, 2020: Adjusted operating income of former Hitachi Chemical Co., Ltd. (for reference)
 From 3Q, 2020: Amounts are excluding amortization of goodwill, etc. and expenses for step-up of inventories due to its consolidation from operating income of Showa Denko Materials segment.

Operating Income Breakdown by Factor (2020 vs. 2021)

(Unit: Billions of Yen)



Non-operating income/expenses, Extraordinary profit/loss



Non-operating income/expenses

(Unit: Billions of Yen)

	2020	2021	Increase/ decrease	Main factors
Interest/Dividends income and expenses	(4.6)	(7.7)	(3.2)	Interest expenses increased
Equity in earnings of affiliates	1.2	5.3	4.0	Equity method newly applied to affiliates of Showa Denko Materials (SDMC) from July 2020
Foreign exchange gains or losses	(3.0)	4.3	7.3	
Financing expenses	(16.1)	–	16.1	
Other	(2.1)	(2.1)	0.0	
Net	(24.5)	(0.3)	24.2	

Extraordinary profit/loss

(Unit: Billions of Yen)

	2020	2021	Increase/ decrease	Main factors
Gain on sales of investment securities	5.0	6.0	1.0	Sell-off of cross-held shares etc.
Gain (loss) on sale of businesses	–	3.0	3.0	Transfer of aluminum can, rolled aluminum products, wiring board businesses
Impairment losses	(16.6)	(11.6)	5.0	Equipment for production of thermal insulation parts
Environmental expenses	–	(9.0)	(9.0)	
Business structuring expenses	(5.9)	(32.8)	(26.9)	Impairment loss related to transfer of energy storage devices and systems business
Other	(6.7)	(19.7)	(12.9)	
Net	(24.3)	(63.9)	(39.6)	

Consolidated Balance Sheet

Consolidated Balance Sheet

(Unit: Billions of Yen)

Assets	Dec. 31, 2020	Dec. 31, 2021	Increase/Decrease	Liabilities and net assets	Dec. 31, 2020	Dec. 31, 2021	Increase/Decrease
Cash and deposits	199.0	236.2	37.3	Notes and accounts payable	164.4	207.7	43.4
Notes and accounts receivable	271.6	278.6	7.0	Interest-bearing debt	1,060.1	850.6	(209.5)
Inventories	190.2	203.9	13.7	Other liabilities	261.0	265.6	4.6
Other current assets	61.8	79.8	17.9	Total liabilities	1,485.5	1,323.9	(161.6)
Total current assets	722.6	798.5	75.9	Total shareholders' equity	372.7	433.6	60.9
Total tangible fixed assets	727.1	659.5	(67.6)	incl. Retained earnings	165.6	143.3	(22.2)
Goodwill	359.2	311.8	(47.4)	Total accumulated other comprehensive income	33.3	80.4	47.1
Other intangible fixed assets	239.2	210.7	(28.5)	incl. Valuation difference on available-for-sale securities	3.7	2.8	(0.9)
Total intangible fixed assets	598.4	522.5	(76.0)	incl. Foreign currency translation adjustment	(0.5)	38.4	38.9
Investments and other assets	155.4	161.8	6.5	Non-controlling interests	312.1	304.5	(7.7)
Total fixed assets	1,481.0	1,343.9	(137.1)	Total net assets	718.1	818.5	100.4
Total assets	2,203.6	2,142.4	(61.2)	Total liabilities and net assets	2,203.6	2,142.4	(61.2)

Major Indicators

Adjusted net D/E ratio (Times)	1.84	1.15	(0.68p)	Equity ratio (%)	18.4	24.0	5.6p
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Adjusted net D/E ratio : $\{(Loans\ payable + Commercial\ papers + Bonds\ payable + Lease\ liabilities) - Cash\ and\ deposits + preferred\ stocks\ as\ equity\ capital \times 50\%\} / (Total\ shareholders'\ equity + preferred\ stocks\ as\ equity\ capital \times 50\%)$

*The assumption that we consider 50% of the total value of issued preferred stocks as equity capital is based on the credit rating given by Japan Credit Rating Agency, Ltd. on April 21, 2020.

Equity ratio: $(Total\ net\ assets - Non-controlling\ interests) / Total\ liabilities\ and\ net\ assets \times 100$

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2022 Forecast (Consolidated)

(Unit: Billions of Yen except Cash dividends per Share and Net income per Share)

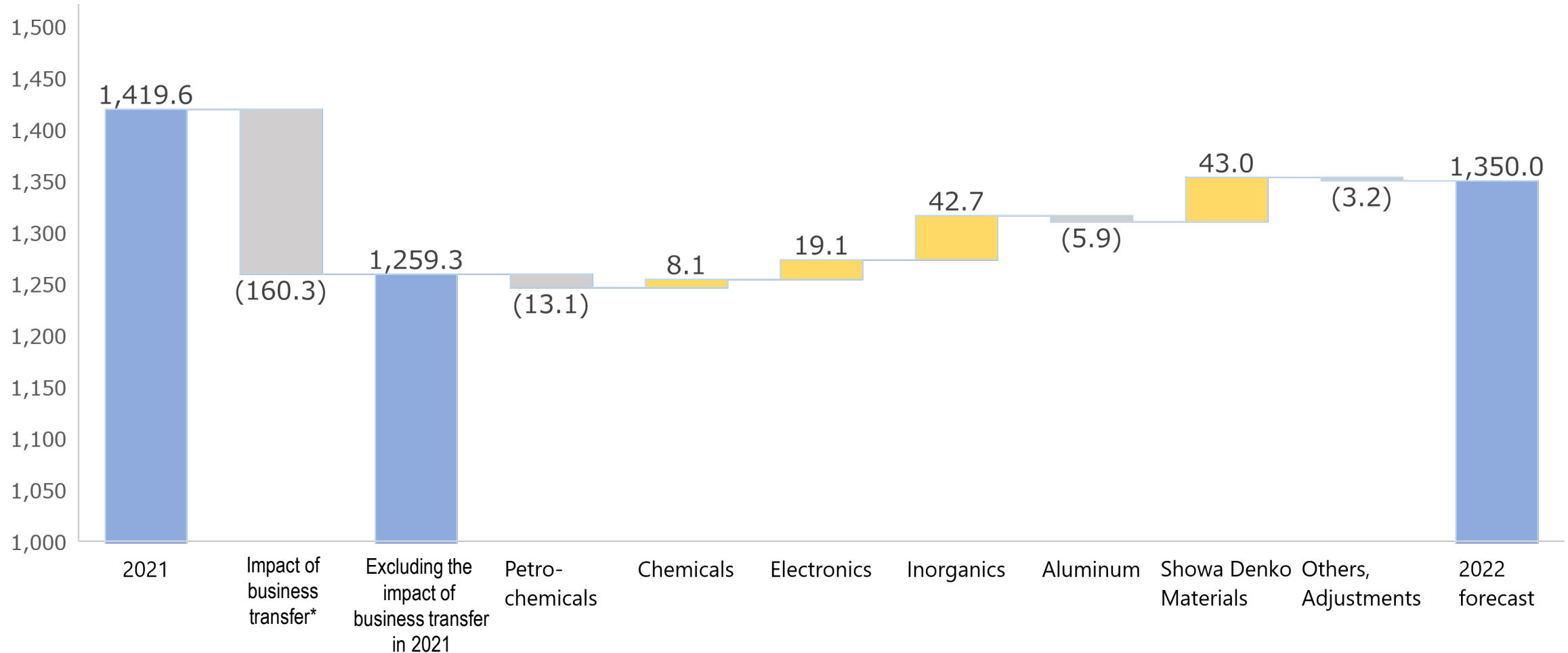
	2021	2022 Forecast	Increase / decrease
Net sales	1,419.6	1,350.0	(69.6)
Operating income	87.2	84.0	(3.2)
Non-operating income and expenses	(0.3)	(5.0)	(4.7)
Ordinary income	86.9	79.0	(7.9)
Extraordinary profit/loss	(63.9)	(24.0)	39.9
Net income attributable to owners of the parent	(12.1)	27.0	39.1
EBITDA	202.6	193.7	(8.9)
EBITDA margin%	14.3%	14.4%	0.1p
ROIC	4.3%	4.8%	0.5p
Net income attributable to owners of the parent per share	(¥77.40)	¥149.11	¥226.51
Cash dividends per share	¥65 (planned)	¥65	¥0

2022 Forecast	
1 st Half	2 nd Half
640.0	710.0
29.0	55.0
(2.0)	(3.0)
27.0	52.0
(7.0)	(17.0)
6.0	21.0

EBITDA: Operating income + Depreciation expense + Amortization of goodwill, etc.
 ROIC: (Operating income + Equity in earnings of affiliates – Income taxes) / (Interest-bearing debt + Total net assets)

Net Sales Breakdown by Factor (2021 vs. 2022 forecast)

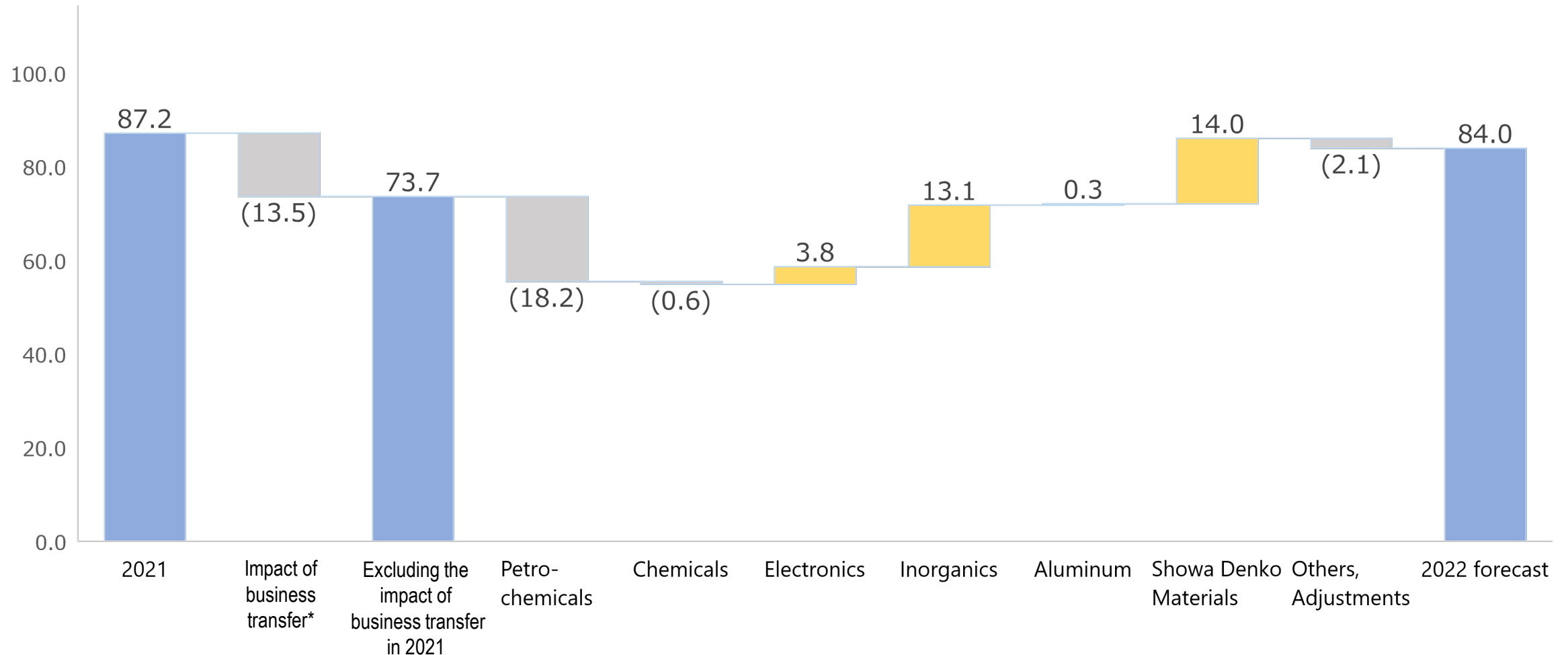
(Unit: Billions of Yen)



* Excluding the impact of deconsolidation of Shoko Co., Ltd.

Operating Income Breakdown by Factor (2021 vs. 2022 forecast)

(Unit: Billions of Yen)



* Excluding the impact of deconsolidation of Shoko Co., Ltd.

Change of disclosure segment

To be changed to a disclosure segment based on the new management structure from Jan. 2022

<Relationship between new segments and major products>

Old \ New	Semiconductor and Electronic Materials	Mobility	Innovation Enabling Materials	Chemicals	Others
Petrochemicals	-	-	-	Olefins, Organic Chemicals, Polymer	-
Chemicals	Electronic chemicals	-	Functional chemicals, Coating materials	Industrial gases, Basic chemicals	-
Electronics	HDs, Compound semiconductors	Lithium-ion Batteries (LIB) materials	-	-	-
	SiC epitaxial wafers				
Inorganics	-	-	Ceramics	Graphite electrodes	-
Aluminum	-	-	Aluminum specialty components	-	-
Showa Denko Materials	Information and communication (Electronics materials, Wiring boards Materials)	Mobility components (Automotive Products, Carbon Anode Materials for LIB)	Mobility components (Varnishes, Functional Resins)	-	Life Science
Others	-	-	-	-	Others

Note: each business is colored by based on business portfolio of the Long-term vision.

■ : "Core Growth" business
 ■ : "Fundamental Technologies/Materials" business
 ■ : "Stable Earnings" business
 ■ : "Next-Generation" business

Sales and Operating Income by New Segment, 2022 Forecast (Consolidated)



(Unit: Billions of Yen)

		2022 Forecast		
		1 st Half	2 nd Half	Full Year
Semiconductor and Electronic Materials	Sales	210.0	220.0	430.0
	Operating Income	22.0	31.0	53.0
Mobility	Sales	90.0	100.0	190.0
	Operating Income	1.0	5.0	6.0
Innovation Enabling Materials	Sales	70.0	70.0	140.0
	Operating Income	6.0	7.0	13.0
Chemicals	Sales	220.0	260.0	480.0
	Operating Income	11.0	23.0	34.0
Others	Sales	56.0	65.0	121.0
	Operating Income	(0.8)	1.8	1.0
Adjustments	Sales	(6.0)	(5.0)	(11.0)
	Operating Income	(10.2)	(12.8)	(23.0)
Total	Sales	640.0	710.0	1,350.0
	Operating Income	29.0	55.0	84.0

Sales and Operating Income by Old Segment, 2022 Forecast (Consolidated)

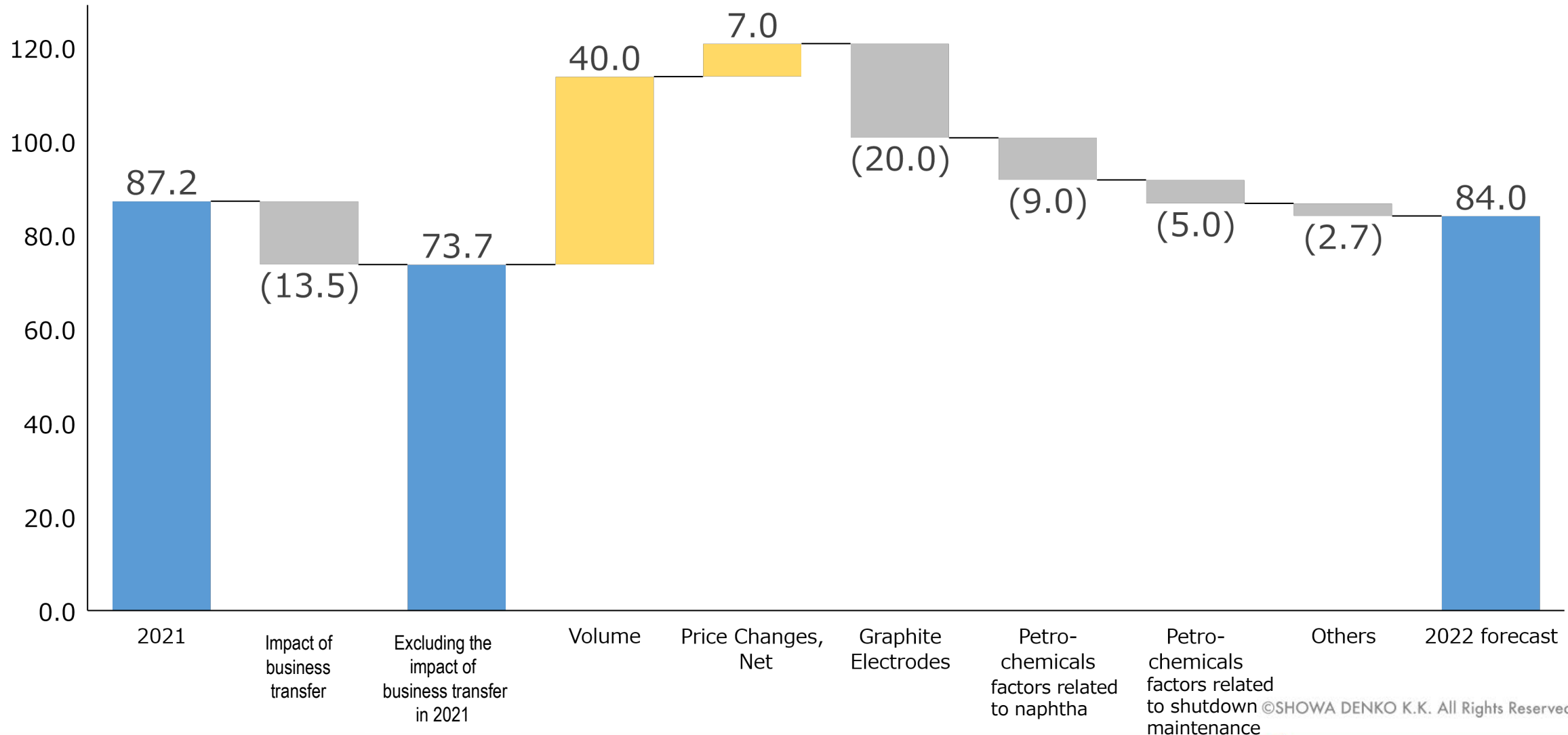


(Unit: Billions of Yen)

		2021	2022 Forecast	Increase /decrease	
Petrochemicals	Sales	283.1	270.0	(13.1)	(5%)
	Operating Income	20.7	2.5	(18.2)	(88%)
Chemicals	Sales	186.9	195.0	8.1	4%
	Operating Income	21.6	21.0	(0.6)	(3%)
Electronics	Sales	120.9	140.0	19.1	16%
	Operating Income	16.2	20.0	3.8	23%
Inorganics	Sales	102.3	145.0	42.7	42%
	Operating Income	14.4	27.5	13.1	91%
Aluminum	Sales	76.2	38.0	(38.2)	(50%)
	Operating Income	6.9	3.0	(3.9)	(57%)
Showa Denko Materials	Sales	635.0	550.0	(85.0)	(13%)
	Operating Income	20.3	25.0	4.7	23%
Others	Sales	44.1	23.0	(21.1)	(48%)
	Operating Income	(0.0)	0.4	0.4	—
Adjustments	Sales	(28.8)	(11.0)	17.8	—
	Operating Income	(12.8)	(15.4)	(2.6)	—
Total	Sales	1,419.6	1,350.0	(69.6)	(5%)
	Operating Income	87.2	84.0	(3.2)	(4%)

Operating Income Breakdown by Factor (2021 vs. 2022 Forecast)

(Unit: Billions of Yen)



Capital expenditures by Segment

(Unit: Billions of Yen)

Old segmentation	2020(A)	2021(B)	2022 Forecast(C)	Increase/decrease	
				(B-A)	(C-B)
Petro-chemicals	5.1	2.7	8.7	(2.4)	6.0
Chemicals	11.4	10.0	10.1	(1.4)	0.1
Electronics	8.3	14.8	15.7	6.5	0.9
Inorganics	8.1	8.3	9.7	0.2	1.4
Aluminum	9.7	3.9	2.3	(5.8)	(1.6)
Showa Denko Materials	23.1	35.2	79.5	12.0	44.3
Others	3.4	3.9	7.5	0.5	3.6
Total	69.1	78.6	133.5	9.6	54.8

New segmentation	2022 Forecast
Semiconductor and Electronic Materials	61.5
Mobility	12.6
Innovation Enabling Materials	8.0
Chemicals	21.0
Others	30.4
Total	133.5

Measures Taken in Semiconductor and Electronic Materials Segment (semiconductor materials)

We will continue to grow as a global top-level semiconductor materials manufacturer



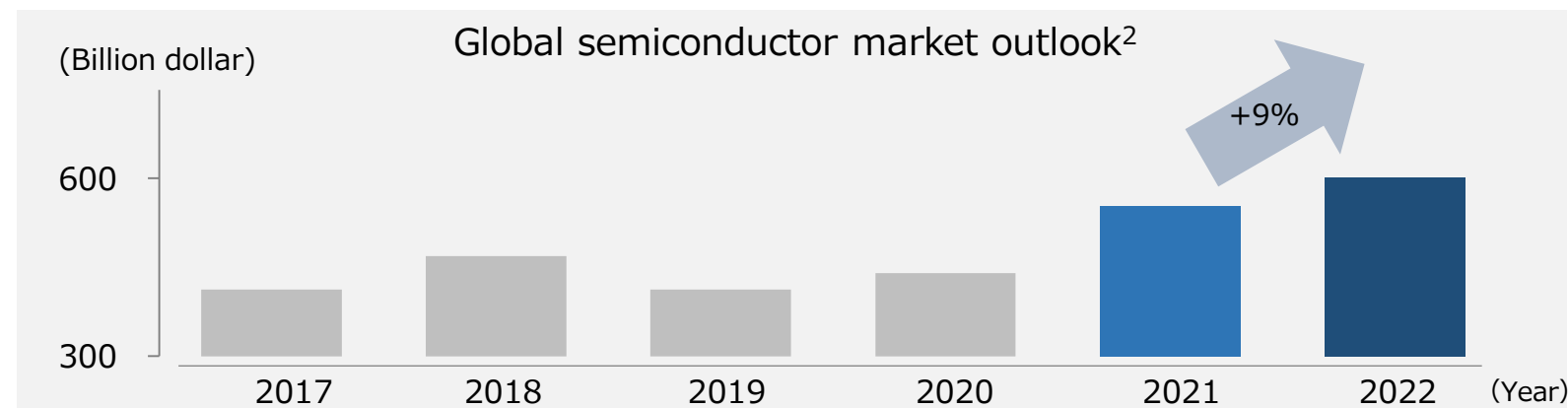
Performance / Measures

2021

- Sales and profit continued to increase since 2020
- Strong demand continued. We established stable production system in each business base. Expanded production capacity for copper-clad laminates and CMP slurry increased profit.
- We decided to establish a network of companies to develop leading-edge semiconductor packaging material evaluation platform (JOINT¹2)

2022

- We aim to achieve growth of our mobility business exceeding market growth
- We will arrange timely investment to increase production capacity to cope with increase in the used amount of materials caused by miniaturization of semiconductor chips and number of layers in integrated circuits
- We will strengthen supply chain management in order to fulfill responsibility to supply
- We will accelerate development of 2.xD/3D next-generation packages through JOINT²



1. JOINT : Jisso Open Innovation Network of Tops 2. Source: WSTS

Measures Taken in Semiconductor and Electronic Materials Segment (HDs·SiC epitaxial wafers)

We will increase sales through development of HD media with largest capacity in the industry for use in HDDs for data centers, which are “the Best in Class”

As the technology leader of SiC epitaxial wafers, we will provide solutions to contribute to energy conservation in the world



HDs

2021

- The demand for HD media used in near-line servers for use in data centers increased. Demand for HD media used in PCs also increased due to the spread of teleworking and online teaching
- We concluded a contract to develop HAMR-based next-generation HD media with Seagate
- Started to mass-produce MAMR² HD media for TOSHIBA
- We developed MAS-MAMR³ HD media as second-generation MAMR media
- We expanded aluminum platter production capacity and improved productivity

2022

- We will increase sales, centering on media for large-capacity near-line servers the demand for which is rapidly increasing through development and mass-production of Best in Class HD media first in the world
- We will maximize our capacity to produce aluminum platters and media through improvement of existing production facilities' efficiency and operating rates
- We will promote cost reduction in order to cope with the increase in fixed costs caused by increase in production and sales volumes, and rises in raw-material prices

SiC

- We concluded sales contract and joint development contract with Infineon Technologies
- We concluded long-term supply contract with ROHM Co., Ltd.
- We concluded long-term supply contract with Toshiba Electronic Devices & Storage Corporation
- Sales volumes significantly increased due to long-term supply contracts, and we turned into black

- We will meet increasing demand for SiC epi-wafers centering on use for onboard devices and industrial equipment caused by acceleration of energy conservation and de-carbonization
- We will provide best-in-class SiC epi-wafers with high reliability and low cost for high voltage and high current applications
- To respond to expanding demand, we will make timely plan to expand our production capacity

1. Heat assisted magnetic recording, 2. Microwave-assisted magnetic recording, 3. Microwave Assisted Switching-Microwave Assisted Magnetic Recording ©SHOWA DENKO K.K. All Rights Reserved.

Measures Taken in Mobility Segment

We will continue to start production of parts/materials for new models surely, and positively invest in production of parts/materials for next-generation cars

2021

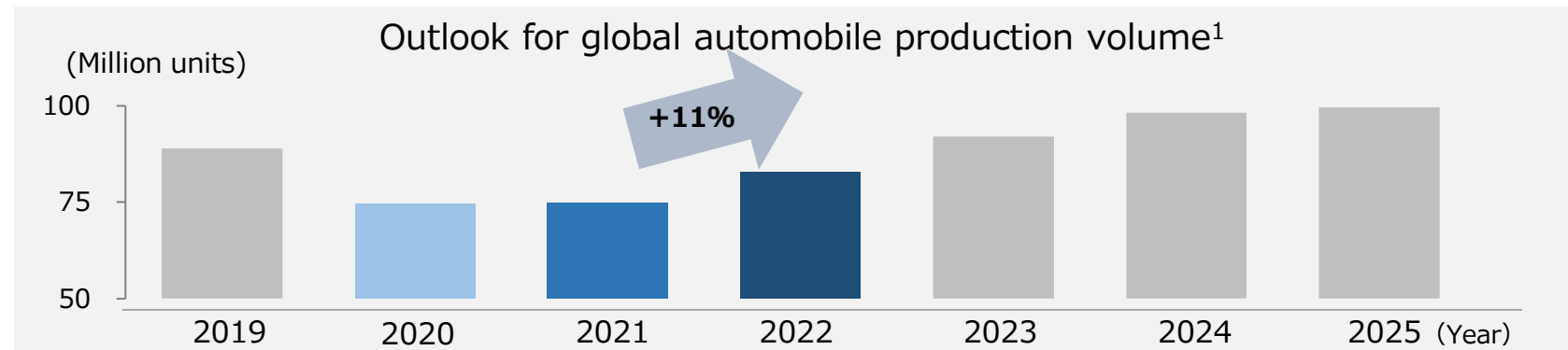
- Although there was a recovery in production of cars in the first half of 2021 from the impact of COVID-19, our performance in 2021 was worse than our original plan due to a decrease in production of cars caused by short-supply of semiconductors in the second half of 2021
- We started production of rear door modules and copper-free disk pads for 15 new car models
- We established a production base for rear door modules in Wuhan, China

2022

- Although the impact of short supply of semiconductors is expected to continue, we expect recovery of car production in the second half of 2022, and therefore, we plan to have increases in sales and operating income
- We will start production of resin rear door modules, interior/exterior parts, and copper-free disk pads for 10 or more new models
- We will strengthen supply chain management in order to meet responsibility to supply
- We will positively invest in production and development of products for next-generation cars including technologies for weight reduction, electrification, and heat control



Performance / Measures



1. Source : IHS Markit Inc.

Measures Taken in Chemicals Segment

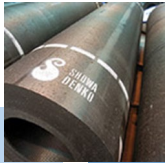
(Graphite electrodes, Petrochemicals)

We will strengthen measures for stabilization of profitability of graphite electrodes by introducing price formula and multi-year contract.

We will also surely execute periodic maintenance of our petrochemical plant

2021

2022



Graphite
Electrodes
(GE)

- Shipment volumes of GE remained high due to tight supply-demand situation caused by recovery in demand for steel and completion of inventory adjustment by customers
- Improved quality of GE and streamlined GE production capacity globally (Complete stop of Meitingen Plant)
- Profit earned by rebound from application of lower-of-cost-or- market method almost ended in 2021
- We acquired shares in AMI Automation
We started marketing of consultation for customers to reduce GHG emission by customers in cooperation with AMI

- Demand for GE will gradually increase due to shift to electric steel production in order to achieve carbon neutrality
- We will implement measures to stabilize earnings
-We will introduce Strategic Supply Partnership which includes price formula to incorporate changes in material costs and guarantee for stable supply, and promote introduction of VMI¹
- We will improve customer experience, strengthen relationship with customers, and stabilize sales
- Provision of service to optimize operation of electric furnaces by utilizing services provided by AMI
- We will promote provision of sustainability-conscious services including consulting by AMI to optimize operation of electric furnaces and global optimization of production bases aiming to reduce CO₂ emission through local production and local consumption of GEs



Petro-
chemicals

- Chinese economy lead recovery in demand, but supply-demand situation eased by the increase in supply of ethylene in China, South Korea, etc. in the second half of 2021
- Continued cull-capacity operation through thorough implementation of safe and stable operation
- We achieved two-year continuation of operation of vinyl acetate and ethyl-acetate plants
- We improved profitability and stability of the plant through continuous implementation of measures to strengthen revenue base

- Supply-demand situation of petrochemical products will continue to be tight. However, it will ease due to an increase in supply of ethylene in China and South Korea
- Periodic shutdown maintenance of the plant (March to April)
We will continue full capacity operation, before and after the shutdown maintenance
- We will promote development of environment friendly products and measures to enhance sustainability in procurement and distribution, aiming to achieve carbon neutrality

1. VMI: Vender Managed Inventory

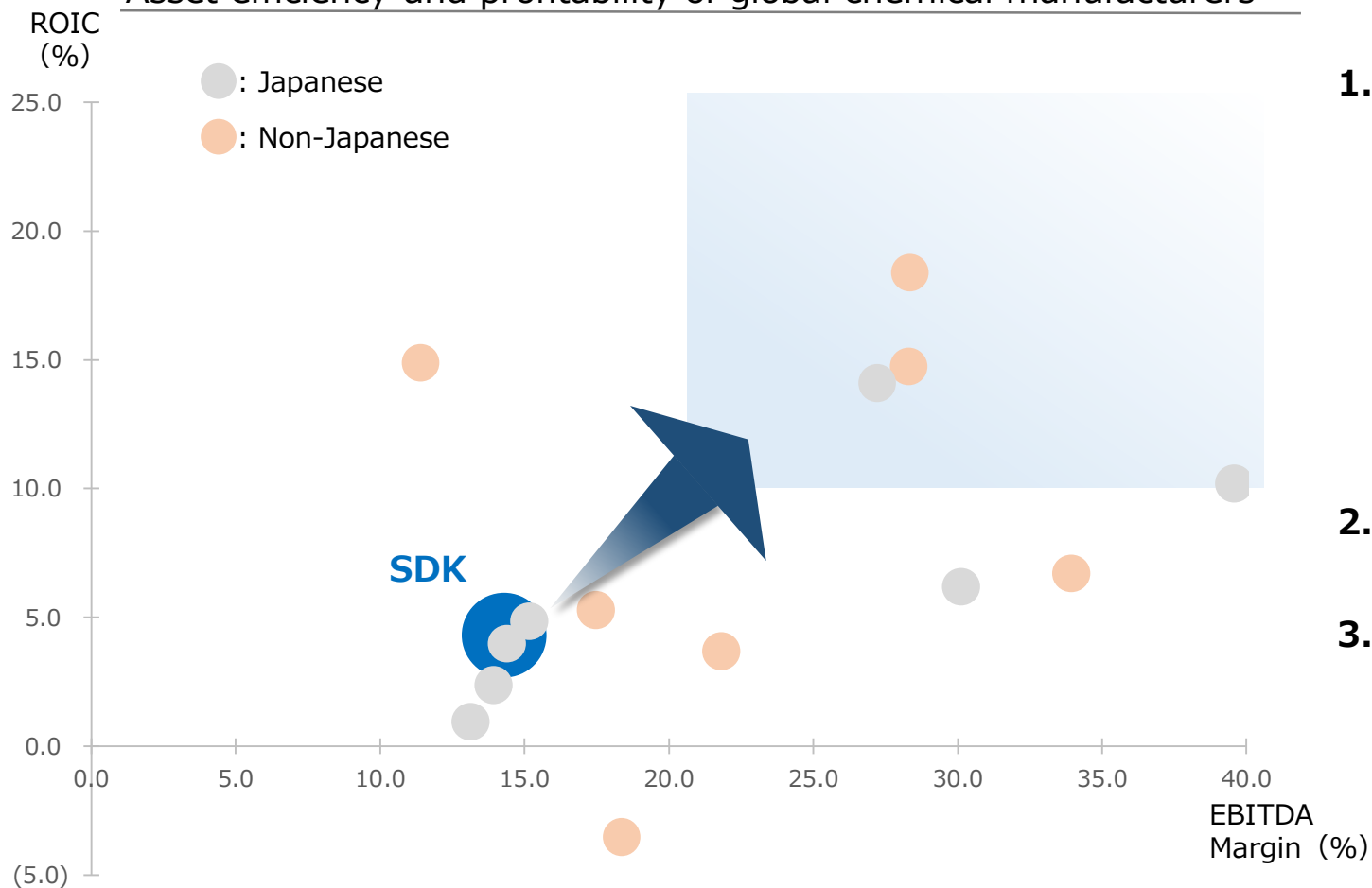
Table of Contents

1. Consolidated Financial Statements for 2021
2. 2022 Performance Forecast
3. Progress in Implementation of “Long-term Vision for Newly Integrated Company (2021~2030)”

Measures of improving ROIC

We will achieve ROIC of more than 10% in medium- to long-term through propagation of ROIC conscious management and monitoring

Asset efficiency and profitability of global chemical manufacturers



1. **Propagation of ROIC-oriented management**
 - Measurement of ROIC in each Division and Sub-Division (Sub-Business Unit)
 - Introduction of KPI ranking of sub-business units and promotion of propagation of ROIC-oriented management
 - Monitoring of ROIC in each quarter
 - Connection between ROIC and evaluation of and remuneration for management executives
2. **Initiatives to improve profit structure** (Refer to Page 27-28)
3. **Asset streamlining** (Refer to Page 33)

Initiatives to improve profit structure

Expected to improve profitability by more than 30 billion yen in 2022, one year ahead of schedule
 We will also promote measures to reduce costs by additional ¥10 billion in and after 2023, starting from this year

	Initiative description	Amount of profit improvement		
		(Unit: Billions of Yen)		
		as announced in the Long term Vision	Updated this time	
		(2023 Forecast)	(2021 Actual)	(2022 Forecast)
Sales-related profit improvement	<ul style="list-style-type: none"> Review sales policy for customers/agents, etc. 	3.0	3.2	3.0
Procurement/logistics cost reduction	<ul style="list-style-type: none"> Consolidate common materials/logistics-related suppliers Share transportation vehicles, warehouses, staff, etc. 	3.0	2.6	3.0
Rent reduction	<ul style="list-style-type: none"> Reduce rent by integrating head offices 	1.0	1.0	1.0
Operational optimization/Productivity improvement	<ul style="list-style-type: none"> Carry out structural reforms through organizational integration and operational efficiency improvement Improve productivity of production lines 	14.0	7.3	15.0
Reduction of other costs	<ul style="list-style-type: none"> Reduce common costs, SG&A, etc. 	7.0	6.7	8.0
Companywide total		28.0	20.8	30.0

Initiatives to improve profit structure

We will enhance synergy in development of semiconductor materials and mobility products, and also promote integration of procurement, production process, and business bases

Efforts to create synergies



Profit increase through new product development/cross-selling

- CMP Slurry: Expand production capacity by utilizing SDK's plants, and increase applications
- ANISOLM™: Develop and mass-produce new high-performance products by utilizing materials produced by SDK
- Photosensitive Dry Films: Achieve stable quality and high-performance through utilization of SDK's material technology
- Lithium-ion Battery materials: Improve performance by combining the two companies' technologies and selling in sets



Further reduction of variable cost through integration

- Cost reduction through integrated procurement and internal production
- Reduce distribution cost through introduction of competitive bids among forwarders, following the normalization of international distribution network



Consolidation of operational sites

- Integration of branches in Fukuoka
- Integration of offices in Kansai and Chubu districts
- Integration of sales offices in Singapore

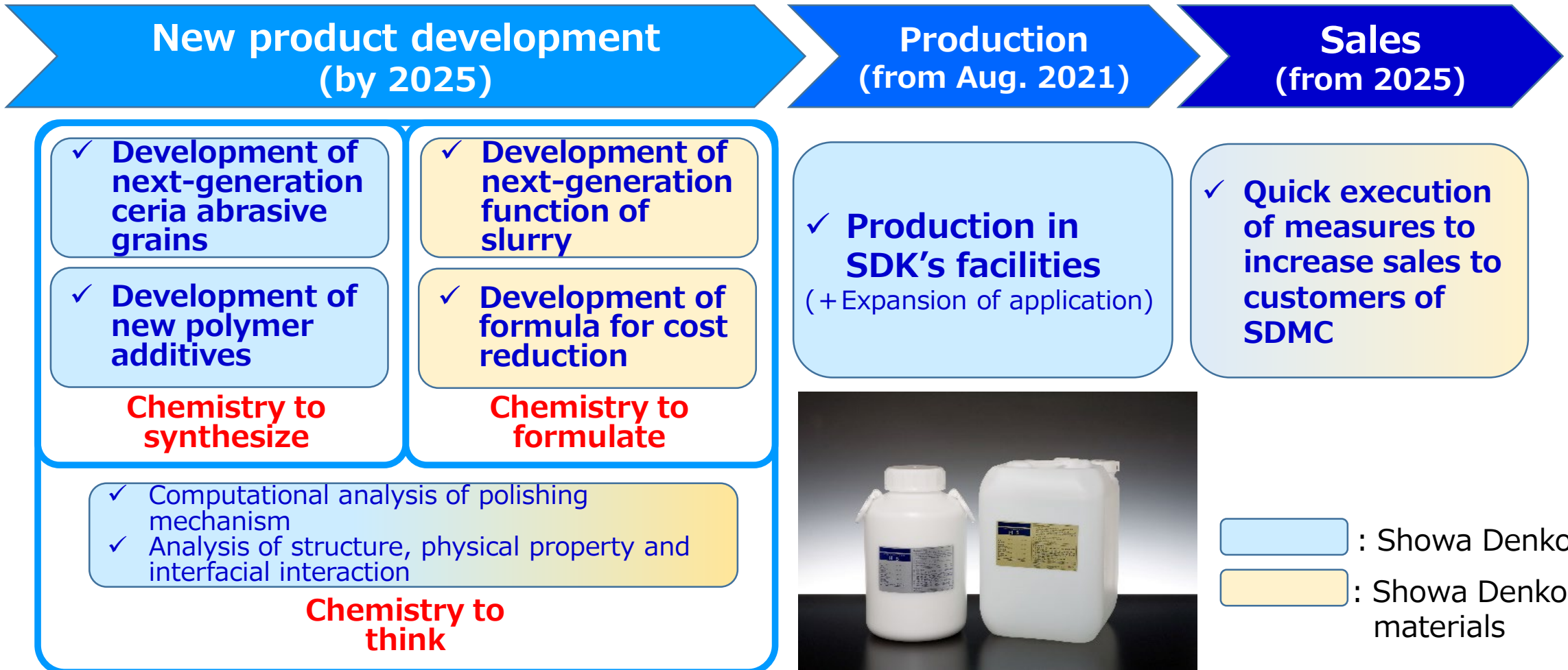


Productivity improvement for post-integration organization

- Started production of CMP Slurry at Shiojiri plant
- Increase production of varnish (by utilizing unused facilities of Isesaki Plant)

Progress in pursuing synergies (short term): CMP slurry

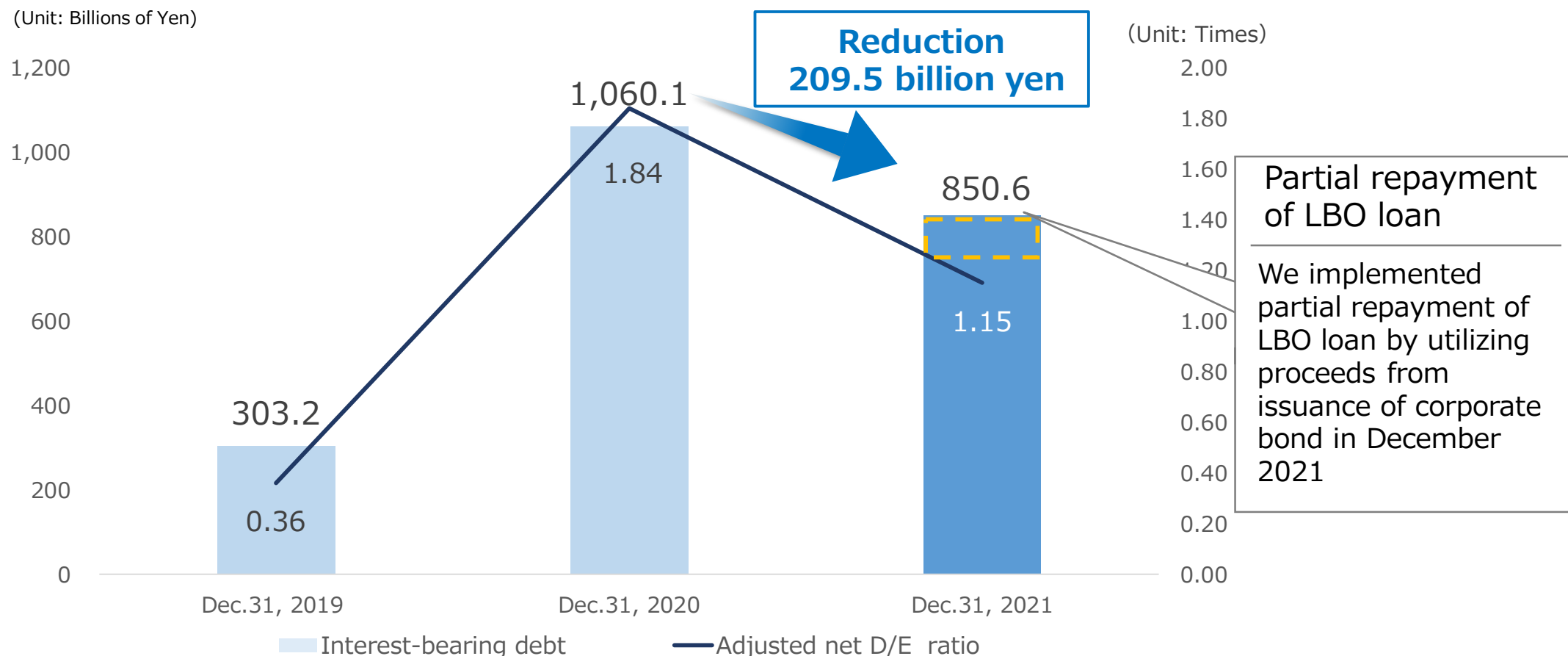
Creation of synergy through integration of operation in value chain of CMP slurry is in progress



Progress in reducing interest-bearing debt

We have promoted interest-bearing debt reduction by selling businesses and streamlining assets. As a result, we steadily reduced interest-bearing debt by 209.5 billion yen from that at the end of 2020. We will continue to reduce interest-bearing debt, strengthen financial standing, and reduce financial costs.

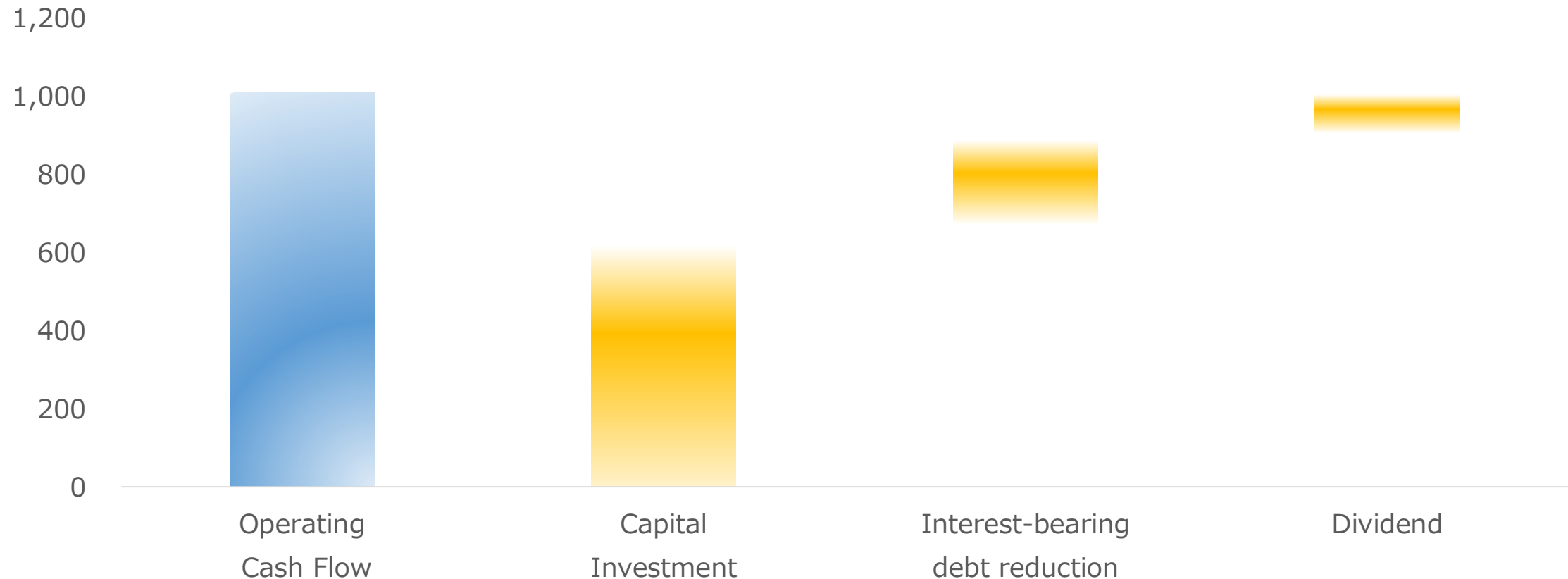
Changes in interest-bearing debt balance



Capital allocation for the next 5 years

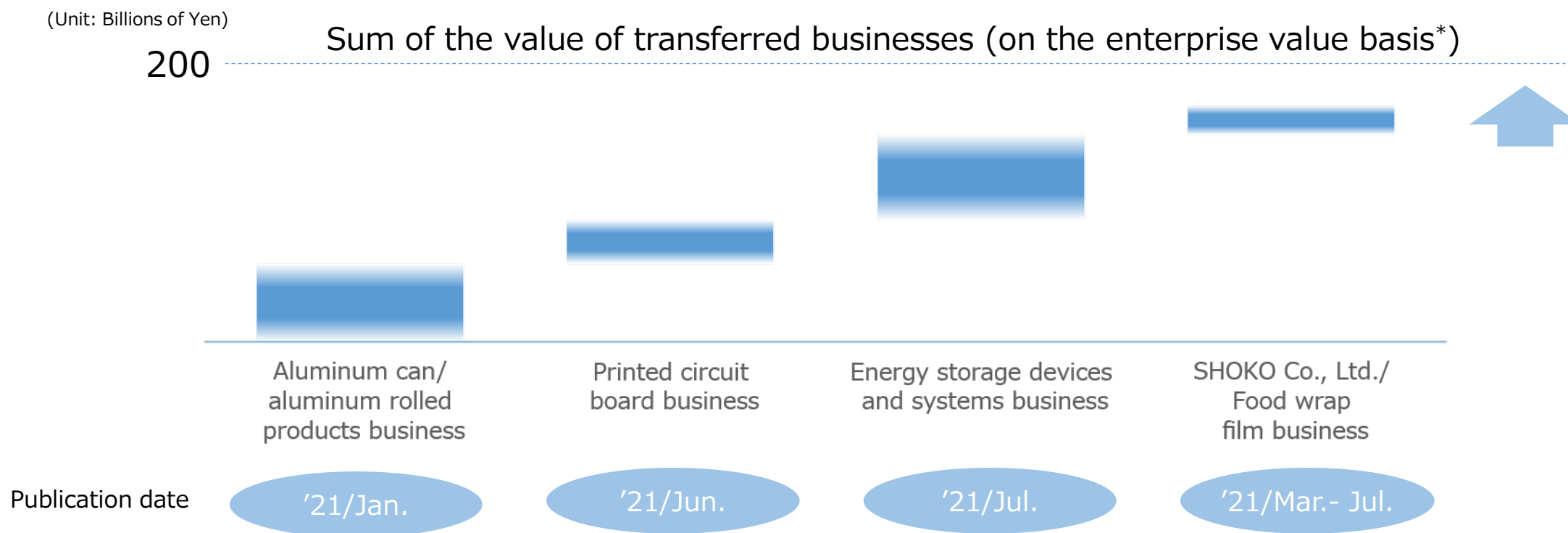
Over the next five years, we will create an operating cash flow of approximately 1 trillion yen, allocate 2/3 of it to capital investment and 1/3 of it to maintenance of stable dividend and reduction of interest-bearing debt. We will raise cash for strategic investment through sale of assets and restructuring of business portfolio.

(Unit: Billions of Yen)



Progress in business portfolio reform

The sale of businesses with enterprise value of 200 billion yen, which was set forth in the long-term vision, has been implemented for about 80% of the initial target as a result of quick decision-making. We will continue portfolio management, aiming for sustainable growth and profitability improvement.



* The sale price of individual projects is not disclosed




Asset streamlining

We have decided to sell cross-held shares in principle. We will reduce assets by more than 130 billion yen by 2025 through sale of idle properties.

Initiatives

Effect

(Unit: Billions of Yen)

	as announced in the Long term Vision		Updated this time	
	2021 forecast	2021 actual results	Forecast for 2025	
 Reduction of Working capital^{*1}	25.0	25.3	30.0	
 Sale of marketable securities^{*2}	20.0	29.4	45.0	
 Sale of other assets^{*2}	5.0	10.0	55.0	
Companywide total	50.0	64.7	130.0	

*1: Calculated from working capital turnover days at the end of 2020, number of days of improvement in 2021 (actual) and 2025 (estimate), and sales figures of retained businesses

*2: Accumulated amount of the sales of shares since 2020, excluding sale of shares in affiliated companies and divested businesses

Long-term numerical targets

To consider discipline more seriously, we have newly introduced ROIC as a new numerical target. By achieving below targets, we aim to be in the top 25% of TSR in chemical industry in medium- to long-term.

		2021 (Results)	2025	2030
Sales*	(Tri. yen)	1.4	1.6	1.8~1.9
EBITDA margin	(%)	14.3	20	
ROIC	(%)	4.3	10% in medium- to long term	
Net D/E ratio	(time)	1.15	Aim to achieve 1.0	

*Approximate values in case of future sale of the business are not taken into consideration

(Reference)

Summary (CQ3 (Jul.-Sep.), 2021 vs. CQ4 (Oct.-Dec.), 2021)



(Unit: Billions of Yen)

	CQ3, 2021	CQ4, 2021	Increase/ decrease
Net sales	358.3	367.9	9.6
Operating income	24.4	15.3	(9.1)
Non-operating income and expenses, net	(1.3)	(1.7)	(0.4)
Ordinary income	23.1	13.6	(9.5)
Extraordinary profit/loss	(8.0)	(5.6)	2.4
Income before income taxes	15.1	8.0	(7.1)
Income taxes	(8.5)	(6.2)	2.3
Net income	6.6	1.8	(4.8)
Net income attributable to non-controlling interests	(3.6)	(3.6)	(0.0)
Net income attributable to owners of the parent	3.1	(1.8)	(4.8)
EBITDA (Operating income + Depreciation expense + Amortization of goodwill, etc.)	52.9	43.4	(9.5)
EBITDA margin%	14.8%	11.8%	(3.0p)

(Reference) Consolidated Companies, Selected Data



Consolidated Companies

Consolidated subsidiaries: 124 (-27 from Dec. 31, 2020)

-29: Related to business transfer (-25)

+ 2: Minaris Regenerative Medicine (newly establishment), Shinshu Showa K.K. (newly consolidated)

Equity method applied: 13 (± 0 from Dec. 31, 2020)

Selected Data

(Average)

	2020		2021		2022 Forecast
	Full Year	Oct.- Dec.	Full Year	Oct.- Dec.	Full Year
Exchange rates					
(¥/US\$)	106.8	104.5	109.8	113.7	110.0
	<i>At Dec. 31, 2020: 103.5</i>		<i>At Dec. 31, 2021: 115.0</i>		
(¥/€)	121.8	124.5	129.9	130.1	130.0
Domestic naphtha price (¥/KL)	32,800	31,300	50,200	60,700	51,600

(Reference) Consolidated Cash Flows



(Unit: Billions of Yen)

	2020 (A)	2021 (B)	2022 Forecast(C)	Increase/decrease	
				(B-A)	(C-B)
CF from operating activities	109.3	115.3	140.0	6.0	24.7
CF from investing activities	(930.0)	28.6	(135.0)	958.7	(163.6)
Free CF	(820.8)	143.9	5.0	964.7	(138.9)
CF from financing activities	896.5	(121.7)	(90.0)	(1,018.3)	31.7
Others	0.4	14.6	0.0	14.2	(14.6)
Increase/decrease of cash and cash equivalents	76.2	36.8	(85.0)	(39.4)	(121.8)

(Reference)
Selected Data (Consolidated)



(Unit: Billions of Yen)

	2020 (A)	2021 (B)	2022 Forecast(C)	Increase/decrease	
				(B-A)	(C-B)
Capital expenditures	69.1	78.6	133.5	9.6	54.8
Depreciation and amortization*1	60.6	81.9	77.5	21.3	(4.3)
R&D expenditures	34.4	46.8	48.1	12.4	1.4
Interest/dividend income less interest expenses	(4.6)	(7.7)	(6.0)	(3.2)	1.8
Interest-bearing Debt	1,060.1	850.6	800.0	(209.5)	(50.6)
Adjusted net D/E ratio (Times)	1.84	1.15	1.19	(0.68)	0.04
Number of employees	33,684	26,054	26,586	(7,630)	532
(Unit: people)					
Japan	15,290	12,727	12,583	(2,563)	(144)
Overseas	18,394	13,327	14,003	(5,067)	676
Total employment cost	142.2*2	199.1	182.8	56.9	(16.3)
(Unit: Billions of Yen)					

*1. Excluding depreciation of intangible fixed assets caused by application of PPA (Purchase Price Allocation)

*2. Employment cost of Showa Denko Materials was incorporated from July 2020.

(Reference) Depreciation by Segment

(Unit: Billions of Yen)

Old segmentation	2020(A)	2021(B)	2022 Forecast (C)	Increase/decrease	
				(B-A)	(C-B)
Petro-chemicals	4.2	4.1	4.3	(0.1)	0.2
Chemicals	9.5	9.9	9.2	0.4	(0.7)
Electronics	9.4	9.7	11.1	0.3	1.4
Inorganics	8.3	8.2	8.7	(0.1)	0.5
Aluminum	4.5	2.8	1.8	(1.7)	(1.0)
Showa Denko Materials*	21.5	43.8	39.3	22.2	(4.5)
Others	3.2	3.4	3.2	0.2	(0.2)
Total	60.6	81.9	77.5	21.3	(4.3)

New segmentation	2022 Forecast
Semiconductor and Electronic Materials	26.4
Mobility	14.4
Innovation Enabling Materials	7.2
Chemicals	16.7
Others	12.8
Total	77.5

* Excluding depreciation of intangible fixed assets caused by application of PPA (Purchase Price Allocation)

(Reference) Costs of the integration with Showa Denko Materials Co., Ltd.



(Unit: Billions of Yen)

Item		2021		2022 Forecast
		Oct.-Dec.	Full Year	Full Year
Post-merger integration (PMI) expenses*2	(Operating expenses)	(2.2)	(7.2)	(7.7)
Interest on borrowing related to share acquisition, etc.	(Non-operating expenses)	(1.8)	(8.0)	(5.0)
Preferred stock dividends	(Net income attributable to non-controlling interests)	(3.3)	(12.9)	(12.9)
Total		(7.3)	(28.1)	(25.7)

* PMI expenses: expenses related to merger processes such as management and operation to maximize the effect of integration after merger.

(Reference)

Amortization of Goodwill and Intangible Fixed Assets Resulting from PPA* at Showa Denko Materials Co., Ltd.



(Unit: Billions of Yen)

	2021 Amortization amount			2022 Forecast
	1H	2H	Full Year	Full Year
Intangible Fixed Assets	8.1	7.8	15.8	15.4
Goodwill	9.1	8.5	17.6	16.7
Subtotal (Operating expenses)	17.2	16.3	33.4	32.1
Investments and other assets Equity in earnings of affiliates (Investment securities) (Non-operating expenses)	1.1	1.1	2.2	2.2
Total	18.3	17.4	35.7	34.4

* PPA (Purchase Price Allocation) is an evaluation procedure, based on Accounting Standard for Business Combination, to distribute acquisition cost incurred during the process of M&A to the acquiring company's assets and liabilities

Topics

Segment	Topics
General	SDK Decides to Choose and Apply to be Listed into TSE Prime Market
	Showa Denko Group Challenges to Realize Carbon Neutrality by 2050
	Issuance of new shares and secondary offering of shares
Chemicals	Showa Denko Decides to Invest in Strengthening Supply Chain of Liquefied CO ₂ Gas Business
Electronics	Showa Denko Contracts with Seagate to Jointly Develop HAMR Technology-based HD Media
	Concluded long-term contract to supply SiC epitaxial wafers for power semiconductors
Showa Denko Materials	Showa Denko Materials started mass production of "MCL-E-795G," an advanced functional laminate material for printed wiring boards with high packaging reliability

*Please refer to each press releases for details.

News Releases: <https://www.sdk.co.jp/english/news.html>
<https://www.mc.showadenko.com/news/english>

Note

Performance forecast and other statements pertaining to the future as contained in this presentation are based on the information available as of today and assumptions as of today regarding risk factors that could affect our future performance. Actual results may differ materially from the forecast due to a variety of risk factors, including, but not limited to, the influence of the coronavirus disease 2019 (COVID-19) on the world economy, the economic conditions, costs of naphtha and other raw materials, demand for our products such as graphite electrodes and other commodities, market conditions, and foreign exchange rates. We undertake no obligation to update the forward-looking statements unless required by law.