



Evolving unique chemical company

2011 Financial Results

- Consolidated -

SHOWA DENKO K.K.

February 10, 2012

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This presentation contains statements relating to management's projections of future profits and expectations for the Company's product development program. The Company cannot guarantee that these expectations and projections will be realized or correct. Please note that actual results may differ materially from the forecast due to a variety of factors, including changes in the market conditions. The timely commercialization of products under development by the Company may be disrupted or delayed by a variety of factors, including market acceptance, and the introduction of new products by competitors. The foregoing list of factors is not inclusive.

Consolidated Companies

- Consolidated subsidiaries: 42
 Newly consolidated: 2 Showa Denko Rare-Earth Vietnam Co., Ltd. (Electronics)
 Thermal Technology Corporation of America (Aluminum)
- Equity method applied: 18
 Newly applied: 1 NS Styrene Monomer Co., ltd. (Petrochemicals)

Selected Data

(Average)

	2010		2011		Increase	
		Oct.-Dec.		Oct.-Dec.		Oct.-Dec.
■ Exchange rate: ¥/US\$	87.8	82.6	79.8	77.4	Yen strengthened by ¥8.0/\$	Yen strengthened by ¥5.3/\$
■ Domestic naphtha price: ¥/kl	46,300	45,100	54,500	51,700	8,200	6,600
■ Aluminum LME price: US\$/t	2,199	2,368	2,422	2,109	223	-259

Exchange rate at 2010 year-end: ¥81.5/US\$, 2011 year-end rate: ¥77.7/US\$

⇒ Yen strengthened by ¥3.8/US\$

Summary

2010 (Jan.1 – Dec.31) vs. 2011 (Jan.1 – Dec.31)

(Unit: Billions of Yen)

	2010	2011	Increase
Net Sales	797.2	854.2	57.0
Operating Income	38.7	47.4	8.6
Non-operating income and expenses	-8.3	-7.3	0.9
Interest/Dividend income less interest expenses	-4.4	-4.3	0.1
Equity in earnings or losses of affiliates	1.2	1.1	-0.2
Currency exchange gain or loss	-2.2	-0.4	1.8
Other	-2.8	-3.7	-0.9
Ordinary Income	30.5	40.0	9.5
Extraordinary Profit	4.9	2.2	-2.7
Extraordinary Loss	-15.6	-16.1	-0.5
Income before income taxes and minority interests	19.8	26.1	6.3
Income Taxes	-4.8	-6.4	-1.6
Income before minority interests	15.0	19.7	4.7
Minority Interests in income	-2.3	-2.7	-0.4
Net Income	12.7	17.0	4.3
Income before income taxes and minority interests	¥8.49	¥11.35	¥2.86
Cash dividends per Share	¥3.00	¥3.00(planned)	-

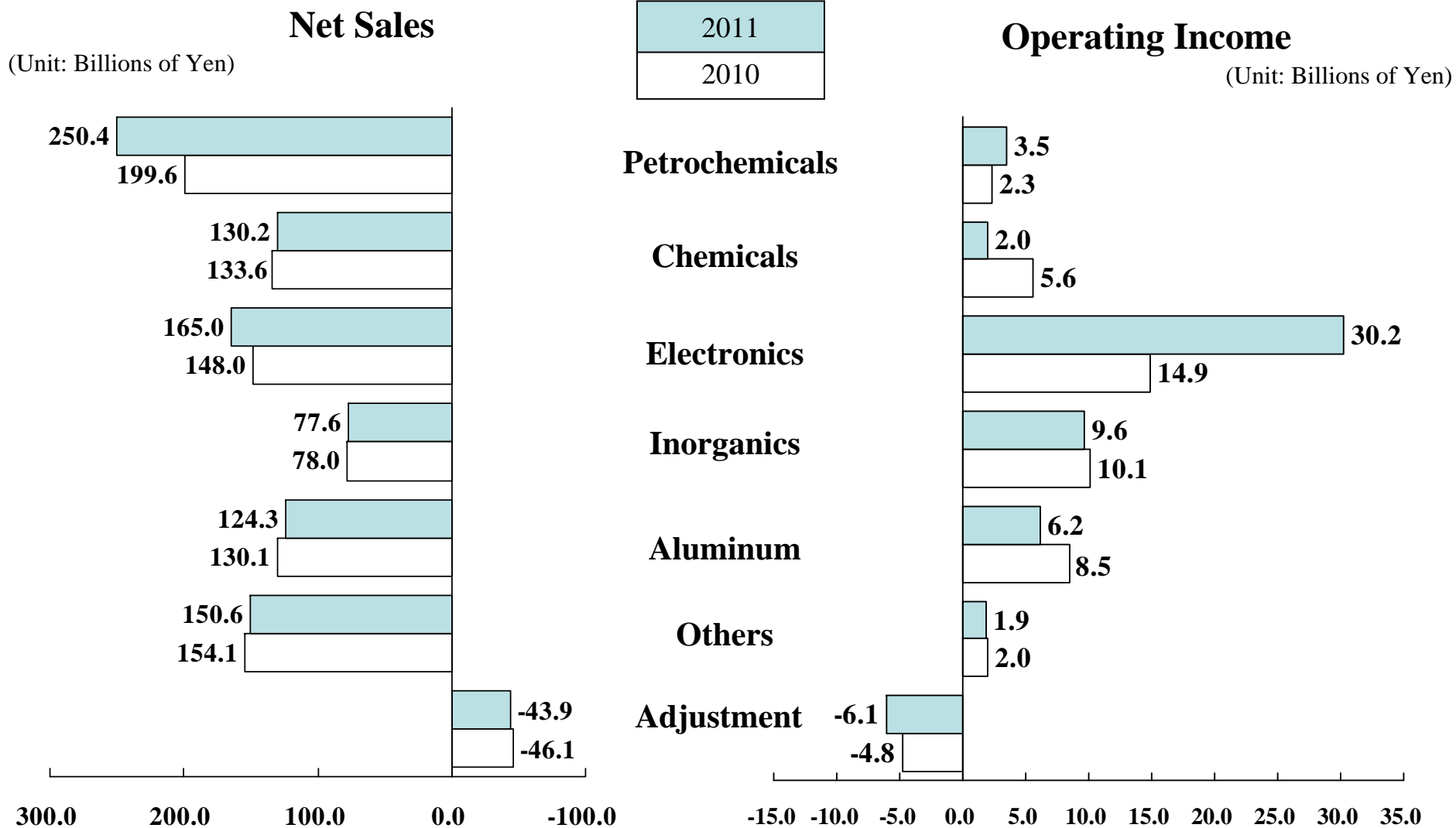
Extraordinary Profit/Loss

(Unit: Billions of Yen)

	2010	2011	Increase
■ Extraordinary Profit	4.9	2.2	-2.7
● Gain on sales of noncurrent assets	0.3	0.6	0.3
● Subsidy	3.5	-	-3.5
● Other	1.1	1.6	0.5
■ Extraordinary Loss	-15.6	-16.1	-0.5
● Loss on sales and retirement of noncurrent assets	-3.4	-2.0	1.4
● Impairment loss	-4.6	-4.6	0
● Loss on the Great East Japan Earthquake	-	-3.2	-3.2
● Compensation for cancellation of contracts	-0.8	-2.5	-1.7
● Other	-6.7	-3.8	2.9
■ Extraordinary Profit/Loss, Net	-10.7	-13.9	-3.2



Sales and Operating Income by Segment





Consolidated Sales by Segment

(Unit: Billions of Yen)

	2010	2011	Increase/ decrease	
Petrochemicals	199.6	250.4	50.8	Olefins: sales increased (shipment volumes up from the year-earlier level, when we conducted SDM*, price up) Organic chemicals: sales increased (shipment volumes of allyl alcohol up)
Chemicals	133.6	130.2	-3.4	Functional polymer materials: sales maintained at the year-earlier level Chloroprene rubber: sales increased (price up) Specialty gases: sales decreased (production adjustment of LCD, yen appreciation) AN, industrial gases: sales decreased (shipment volumes down)
Electronics	148.0	165.0	17.0	HDs: sales increased (shipment volumes up, yen appreciation) Compound semiconductors: sales decreased (price down) Rare earth: sales increased (price up, reflecting higher raw material cost)
Inorganics	78.0	77.6	-0.4	Ceramics: sales increased (sales in electronics applications) Graphite electrodes: sales decreased (shipment volumes up, yen appreciation)
Aluminum	130.1	124.3	-5.8	High-purity foils for capacitors, cylinders for LBP: sales decreased (shipment volumes down) Heat exchangers: sales decreased (shipment volumes down: auto industry cut production due to the influence of the earthquake and flood in Thailand) Shotoc: sales increased (shipment volumes up) Aluminum cans: sales maintained at the year-earlier level
Others	154.1	150.6	-3.5	LIB materials: sales increased (shipment volumes up) SHOKO Co., Ltd.: sales maintained at the year-earlier level Engineering: sales decreased (business restructured)
Adjustment	-46.1	-43.9	2.2	
Total	797.2	854.2	57.0	

(note)SDM: shutdown maintenance

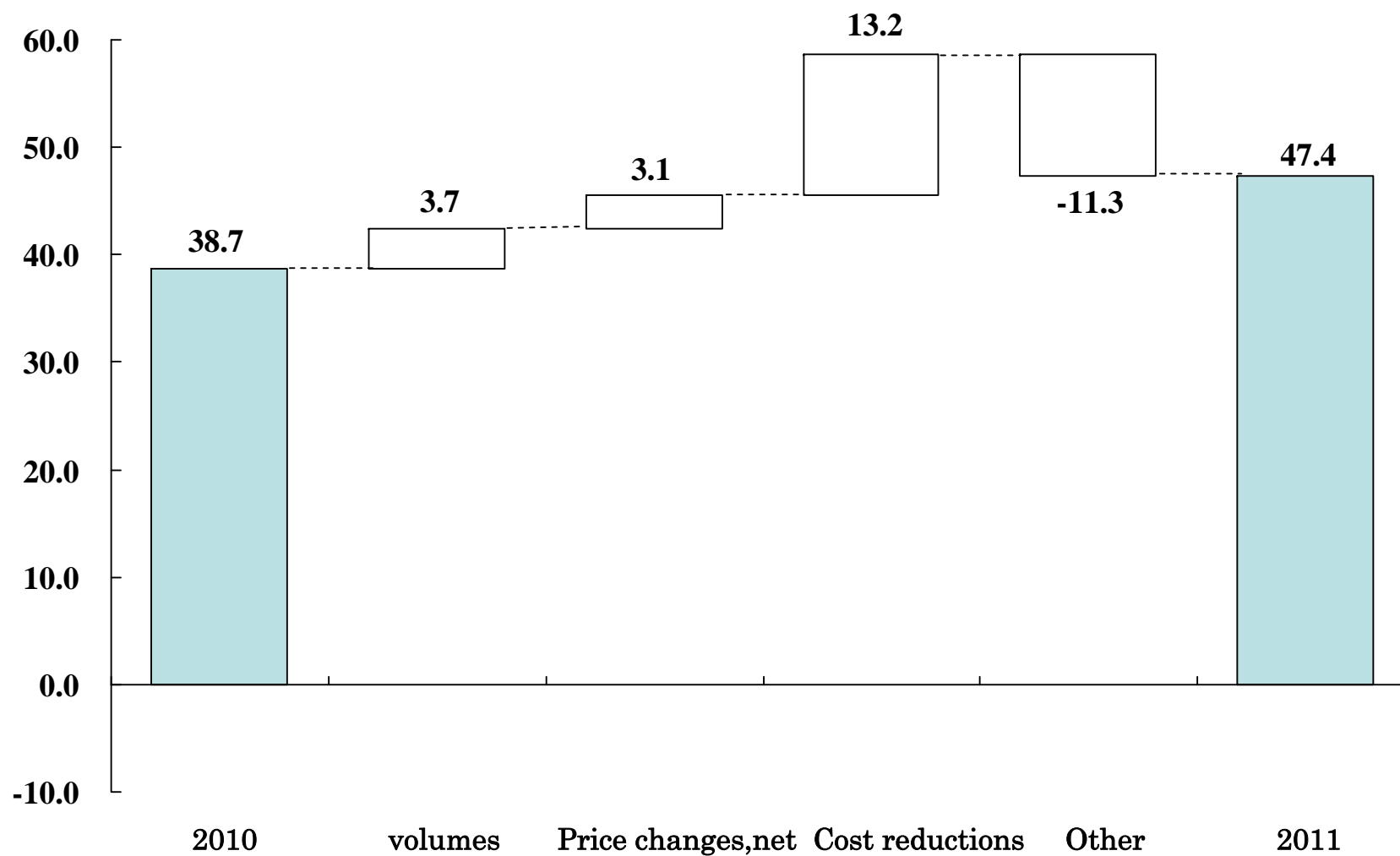
Consolidated Operating Income by Segment

(Unit: Billions of Yen)

	2010	2011	Increase/ decrease	
Petrochemicals	2.3	3.5	1.2	Olefins: profit increased (shipment volumes up from the year-earlier level, when we conducted SDM) Organic chemicals: profit increased (shipment volumes of allyl alcohol up, improvement of vinyl acetate market condition)
Chemicals	5.6	2.0	-3.6	Chloroprene rubber: profit increased (improvement of market condition) AN: profit decreased (shipment volumes down, price down) Specialty gases: profit decreased (yen appreciation) IPP: profit decreased (higher fuel cost)
Electronics	14.9	30.2	15.3	HDs: profit increased (shipment volumes up, cost reduction) Compound semiconductors: profit decreased (shipment volumes of commodity LEDs down) Rare earth: profit increased (price up due to higher raw material cost, improvement of the difference between procurement and consumption prices for raw materials)
Inorganics	10.1	9.6	-0.4	Ceramics: profit increased (electronics applications) Graphite electrodes: profit decreased (shipment volumes up, yen appreciation)
Aluminum	8.5	6.2	-2.3	High-purity foils for capacitors, cylinders for LBP: profit decreased (shipment volumes down) Heat exchangers: profit decreased (shipment volumes down: auto industry cut production due to the influence of the earthquake and flood in Thailand) Shotoc: profit slightly decreased (higher raw material cost) Aluminum cans: profit maintained at the year-earlier level
Others	2.0	1.9	-0.2	LIB materials: profit decreased (R&D expenditures increased) SHOKO Co., Ltd.: profit increased
Adjustment	-4.8	-6.1	-1.4	
Total	38.7	47.4	8.6	

Operating Income Breakdown by Factor

(Unit: Billions of Yen)





Consolidated Balance Sheet

(Unit: Billions of Yen)

Assets	Dec. 31, 2010	Dec.31, 2011	Increase/ decrease	Liabilities and Shareholders' Equity	Dec. 31, 2010	Dec.31, 2011	Increase/ decrease
Cash and deposits	43.6	55.2	11.6	Notes and accounts payable	114.2	117.2	2.9
Notes and accounts receivable	135.6	139.4	3.8	Interest-bearing debt	351.0	347.3	-3.7
Inventories	100.7	123.7	23.1	Provision for retirement benefits	26.3	24.7	-1.6
Other current assets	32.3	29.6	-2.7	Other liabilities	148.0	156.4	8.4
<u>Total Current Assets</u>	312.2	347.9	35.7	<u>Total Liabilities</u>	639.5	645.6	6.0
Buildings and structures	87.8	84.2	-3.6	Capital stock	140.6	140.6	—
Machinery and equipment	142.7	123.5	-19.2	Capital surplus	62.2	62.2	0.0
Land	255.2	254.9	-0.3	Retained earnings	36.9	48.9	11.9
Other tangible fixed assets	14.2	19.8	5.6	Treasury stock	-0.2	-0.1	0.0
<u>Tangible Fixed Assets</u>	499.8	482.4	-17.5	<u>Total Shareholders' equity</u>	239.5	251.5	12.0
Intangible Fixed Assets	12.2	11.1	-1.0	Valuation difference on available-for-sale securities	-3.7	-4.9	-1.2
Investments and other assets	100.3	99.9	-0.4	Foreign currency translation adjustment, Deferred hedge gains	-16.5	-22.9	-6.4
Incl. Investment securities	58.8	59.6	0.8	Revaluation reserve for land	22.4	28.2	5.9
				<u>Total accumulated other comprehensive income</u>	2.1	0.4	-1.7
				Minority Interests	43.3	43.8	0.5
<u>Total fixed assets</u>	612.3	593.4	-18.9	<u>Total net assets</u>	285.0	295.7	10.8
Total Assets	924.5	941.3	16.8	Total Liabilities and Net Assets	924.5	941.3	16.8

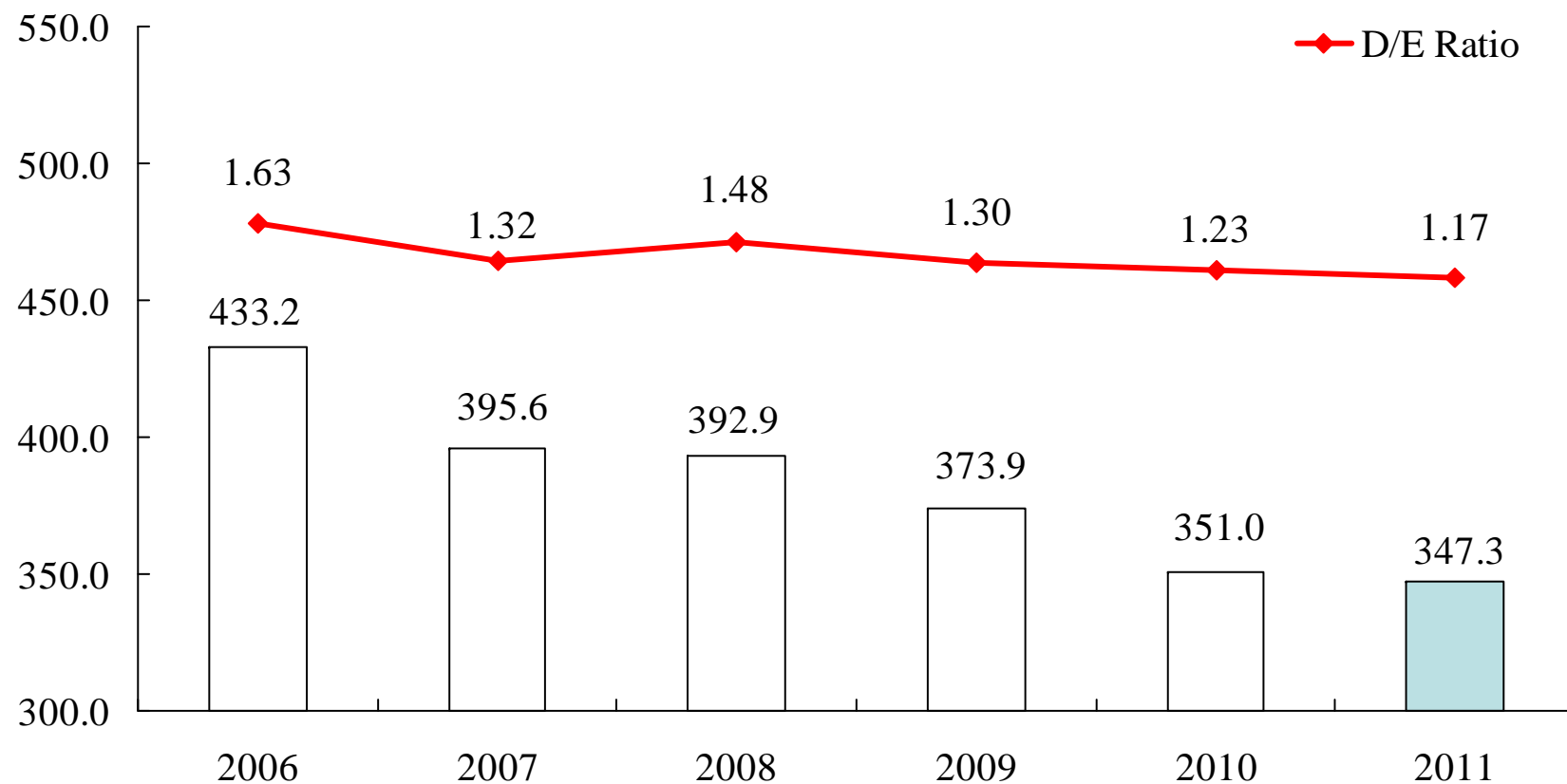
Total Assets Interest-bearing Debt and D/E ratio

(Unit: Billions of Yen, times, %)

	Dec.31, 2010	Dec.31, 2011	Increase
● Total assets	924.5	941.3	16.8
● Interest-bearing debt	351.0	347.3	-3.7
● Debt/Equity ratio	1.23times	1.17times	-0.06p
● Stockholders' Equity ratio	26.1%	26.8%	0.7p

Interest-bearing Debt

(Unit: Billions of Yen)



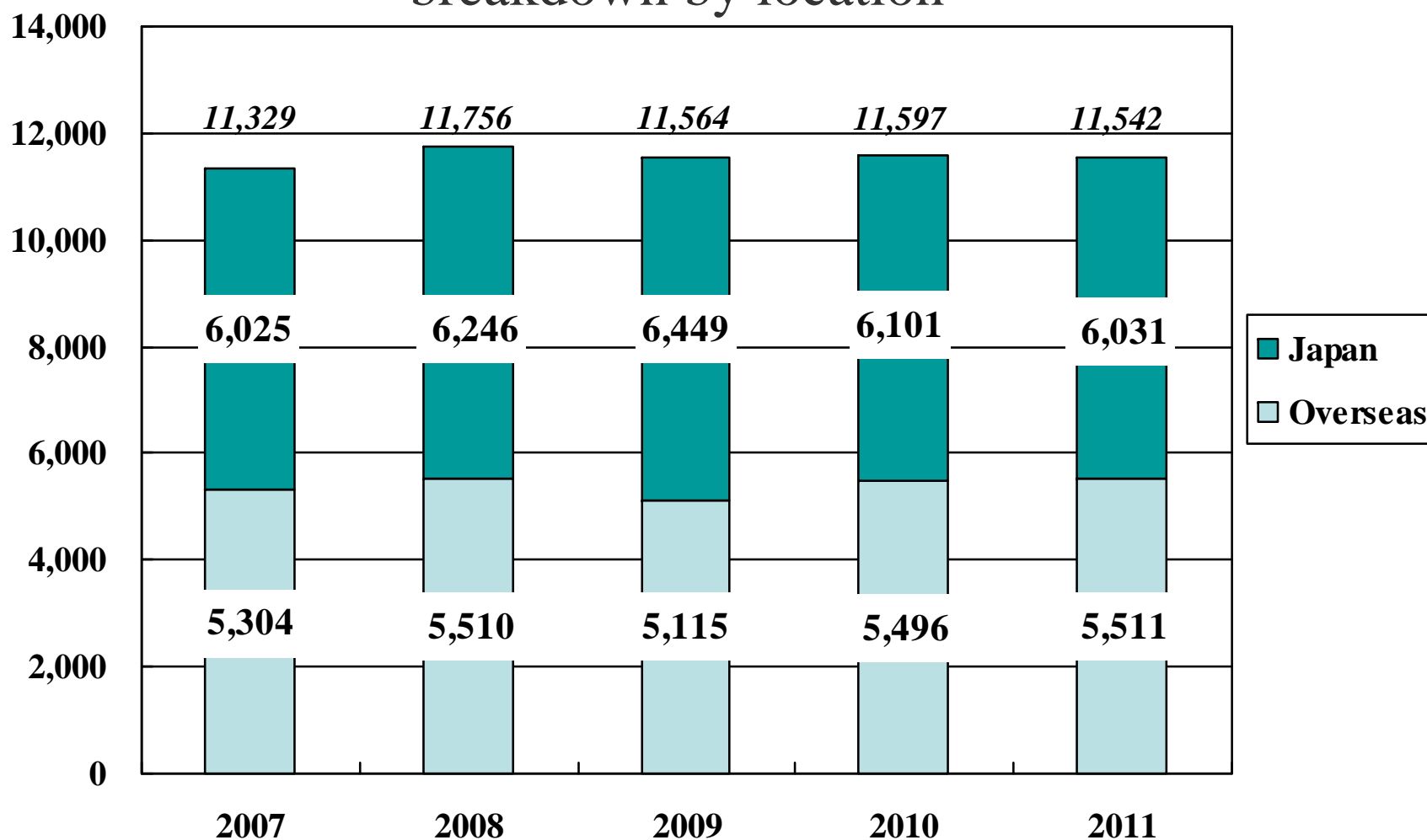
Equity ratio	22.7%	26.9%	25.0%	25.5%	26.1%	26.8%
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Consolidated Cash Flows

(Unit: Billions of Yen)

	2010	2011	2011-2010 Increase	2012 Forecast	2012-2011 Increase
● CF from Operating Activities	66.3	69.4	3.1	72.0	2.6
● CF from Investing Activities	-49.1	-38.7	10.4	-67.0	-28.3
● Free CF	17.2	30.8	13.5	5.0	-25.8
● CF from Financing Activities	-34.5	-17.3	17.2	-15.6	1.7
● Others	-1.8	-1.9	-0.2	0.0	1.9
Increase of cash and equivalents	-19.0	11.5	30.6	-10.6	-22.1

Total number of employees and breakdown by location



Japan	53.2%	53.1%	55.8%	52.6%	52.3%
Overseas	46.8%	46.9%	44.2%	47.4%	47.7%



Capital expenditures/ Depreciation by Segment

(Unit: Billions of Yen)

	2010		2011		Increase	
	Capital expenditures	Depreciation	Capital expenditures	Depreciation	Capital expenditures	Depreciation
Petrochemicals	19.6	6.4	2.6	7.1	-17.0	0.7
Chemicals	7.7	9.8	6.8	9.4	-0.9	-0.4
Electronics	19.7	21.0	13.5	19.2	-6.2	-1.8
Inorganics	3.6	3.4	5.3	3.5	1.8	0.1
Aluminum	4.4	7.3	5.4	6.9	0.9	-0.5
Others	3.0	3.0	5.1	3.4	2.1	0.4
Total	58.0	50.9	38.8	49.4	-19.2	-1.5



Capital expenditures/Depreciation by Segment 2012 Forecast

(Unit: Billions of Yen)

	2011		2012 Forecast		Increase	
	Capital expenditures	Depreciation	Capital expenditures	Depreciation	Capital expenditures	Depreciation
Petrochemicals	2.6	7.1	4.4	7.3	1.8	0.2
Chemicals	6.8	9.4	6.9	9.3	0.1	-0.1
Electronics	13.5	19.2	10.3	17.6	-3.3	-1.6
Inorganics	5.3	3.5	17.3	3.6	12.0	0.1
Aluminum	5.4	6.9	6.6	6.3	1.2	-0.6
Others	5.1	3.4	5.9	5.0	0.7	1.6
Total	38.8	49.4	51.3	49.0	12.5	-0.4

Selected Data 2011, 2012 Forecast (Consolidated)

(Unit: Billions of Yen)

	2010	2011	2011-2010 Increase	2012 Forecast	2012-2011 Increase
● Exchange rate: ¥/US\$	88	80	Yen strengthened by ¥8/\$	77	Yen will strengthen by ¥3/\$
● Domestic naphtha price: ¥/kl	46,300	54,500	8,200	50,000	-4,500
● Aluminum LME price: US\$/t	2,199	2,422	223	2,230	-192
● Interest-bearing debt	351.0	347.3	-3.7	350.0	2.7
● Interest/dividend income less interest expenses	-4.4	-4.3	0.1	-4.4	-0.1
● R&D expenditures	20.7	21.6	0.9	21.6	0.0
● Number of employees	11,597	11,542	-55	10,114	-1,428
● Total employment cost	72.2	75.3	3.1	73.8	-1.5

2012 Forecast (Consolidated)

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

	2011	2012 Forecast	Increase
Net Sales	854.2	880.0	25.8
Operating Income	47.4	48.0	0.6
Interest/dividend income less interest expenses	-7.3	-6.0	1.3
Ordinary Income	40.0	42.0	2.0
Extraordinary Profit	2.2	0.0	-2.2
Extraordinary Loss	-16.1	-9.0	7.1
Net Income	17.0	23.0	6.0
Net Income per Share	¥11.35	¥15.37	¥4.02
Cash dividends per Share	¥3.00(planned)	¥3.00	-



Net Sales by Segment 2012 Forecast (Consolidated)

(Unit: Billions of Yen)

	2011	2012 Forecast	Increase	Comments
Petrochemicals	250.4	240.0	-10.4	Sales price down due to napha price down, low level operation expected in 1Q
Chemicals	130.2	140.0	9.8	AN: improvement of market condition Specialty gases, chloroprene rubber: shipment volumes up
Electronics	165.0	190.0	25.0	HDs: shipment volumes up (capacity expansion) Compound semiconductors: shipment volumes up Rare earth: sales increase expected
Inorganics	77.6	85.0	7.4	Ceramics: sales decrease expected (electronics applications) Graphite electrodes: improvement of market condition
Aluminum	124.3	105.0	-19.3	Heat Exchangers for Automotive Air Conditioners: sales decrease due to business transfer
Others	150.6	160.0	9.4	LIB materials: shipment volumes up (effect of capacity expansion)
Adjustment	-43.9	-40.0	3.9	
Total	854.2	880.0	25.8	

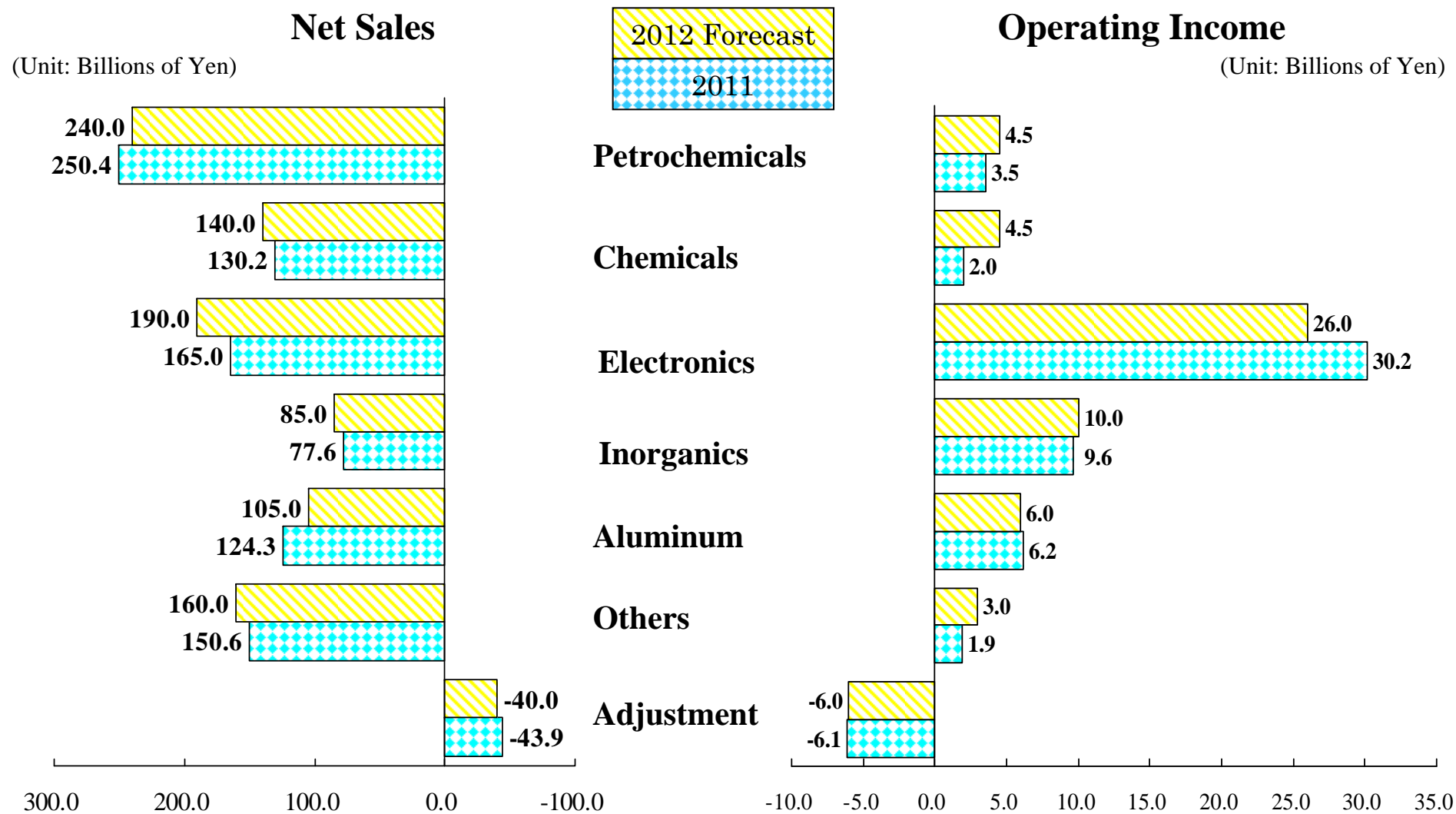
Operating Income 2012 Forecast (Consolidated)

(Unit: Billions of Yen)

	2011	2012 Forecast	Increase	Comments
Petrochemicals	3.5	4.5	1.0	Improvement of operation and market condition expected in and after 2Q
Chemicals	2.0	4.5	2.5	AN: improvement of market condition Specialty gases: shipment volumes up Industrial gases: cost reduction
Electronics	30.2	26.0	-4.2	HDs: shipment volumes up (capacity expansion) Compound semiconductors: shipment volumes up, cost reduction Rare earth: profit decrease (market condition and worsening of the difference between procurement and consumption prices for raw materials)
Inorganics	9.6	10.0	0.4	Ceramics: profit decrease (electronics applications) Graphite electrodes: improvement of market condition
Aluminum	6.2	6.0	-0.2	Heat Exchangers for Automotive Air Conditioners: profit decrease due to business transfer
Others	1.9	3.0	1.1	LIB materials: shipment volumes up (effect of capacity expansion)
Adjustment	-6.1	-6.0	0.1	
Total	47.4	48.0	0.6	



Sales and Operating Income Forecast for 2012



CQ4 Summary (Reference)

CQ4 (Oct.1 – Dec.31), 2010 vs. CQ4 (Oct.1 – Dec.31), 2011

(Unit: Billions of Yen)

	CQ4, 2010	CQ4, 2011	Increase
Net Sales	212.8	212.5	-0.3
Operating Income	11.2	8.5	-2.7
Non-operating income and expense	-2.3	-1.3	1.0
Interest/Dividend income less expenses	-1.0	-1.0	0.0
Equity in earnings of affiliates	0.2	0.5	0.3
Foreign exchange gain or loss	-0.8	0.3	1.2
Ordinary Income	8.9	7.2	-1.7
Extraordinary Income	1.9	0.7	-1.2
Extraordinary Loss	-5.7	-5.9	-0.2
Income before income taxes and minority interests	5.1	2.0	-3.1
Income Taxes	-1.4	-2.0	-0.6
Income before minority interests	3.7	0.0	-3.8
Minority Interests in income	-0.4	-0.5	-0.1
Net Income	3.3	-0.5	-3.8



(Reference) Consolidated Sales by Segment

CQ4 (Oct.1 – Dec.31), 2010 vs. CQ4 (Oct.1 – Dec.31), 2011

(Unit: Billions of Yen)

	CQ4 2010	CQ4 2011	Increase/ decrease	
Petrochemicals	55.5	59.3	3.8	Olefins: sales increased (price up) Organic chemicals: sales decreased (shipment volumes down)
Chemicals	35.5	32.3	-3.2	AN, specialty gases: sales decreased (shipment volumes down, price down) Chloroprene rubber:sales decreased (shipment volumes down) Functional polymer materials, ammonia: sales maintained at CQ4, 2010 level
Electronics	42.2	44.4	2.1	HDs: sales decreased (shipment volumes down: HDD industry cut production due to the influence of flood in Thailand) Compound semiconductors : sales maintained at CQ4, 2010 level Rare earth: sales increased (price up due to higher raw material cost)
Inorganics	19.0	18.7	-0.4	Ceramics: sales decreased (shipment volumes down) Graphite electrodes: sales increased (shipment volumes up)
Aluminum	31.3	29.9	-1.4	High-purity foils for capacitors, cylinders for LBP: sales decreased (shipment volumes down) Heat exchangers: sales decreased (shipment volumes down: auto industry cut production due to the influence of the flood in Thailand) <i>Shotic</i> , aluminum cans: sales increased (shipment volumes up)
Others	39.5	37.4	-2.2	LIB materials: sales decreased SHOKO Co., Ltd.: sales decreased Engineering: sales decreased
Adjustment	-10.3	-9.4	0.9	
Total	212.8	212.5	-0.3	



(Reference) Consolidated Operating Income by Segment

CQ4 (Oct.1 – Dec.31), 2010 vs. CQ4 (Oct.1 – Dec.31), 2011

(Unit: Billions of Yen)

	CQ4 2010	CQ4 2011	Increase/ decrease	
Petrochemicals	1.5	-1.6	-3.1	Olefins, organic chemicals: profit decreased (shipment volumes down)
Chemicals	1.7	-0.3	-1.9	AN, specialty gases: profit decreased (shipment volumes down, price down) Ammonia: profit decreased (higher cost of raw materials) Chloroprene rubber: profit maintained at CQ4, 2010 level
Electronics	4.4	10.2	5.8	HDs: profit increased (cost reduction) Compound semiconductors: profit decreased (lower of cost or market method) Rare earth: profit increased (price up, improvement of the difference between procurement and consumption prices for raw materials)
Inorganics	2.8	1.5	-1.3	Ceramics: profit slightly decreased (shipment volumes down) Graphite electrodes: profit decreased (yen appreciation, price down)
Aluminum	1.6	0.2	-1.4	High-purity foils for capacitors, cylinders for LBP: profit decreased (shipment volumes down) Heat exchangers: profit decreased (shipment volumes down: auto industry cut production level due to the influence of the flood in Thailand) <i>Shotic</i> : profit slightly increased (shipment volumes up) Aluminum cans: profit maintained at CQ4, 2010 level
Others	0.7	0.1	-0.6	LIB materials: profit decreased SHOKO Co., Ltd.: profit decreased
Adjustment	-1.5	-1.6	-0.1	
Total	11.2	8.5	-2.7	

Summary

CQ3 (Jul.1 – Sept.30) vs.CQ4 (Oct.1 – Dec.31)

(Unit: Billions of Yen)

	CQ3, 2011	CQ4, 2011	Increase
Net Sales	225.1	212.5	-12.6
Operating Income	16.8	8.5	-8.2
Non-operating income and expense	-2.0	-1.3	0.7
Interest/Dividend income less expenses	-1.2	-1.0	0.1
Equity in earnings of affiliates	0.1	0.5	0.4
Foreign exchange gain or loss	-0.2	0.3	0.5
Ordinary Income	14.7	7.2	-7.5
Extraordinary Income	0.2	0.7	0.5
Extraordinary Loss	-1.8	-5.9	-4.1
Income before income taxes and minority interests	13.1	2.0	-11.1
Income Taxes	-2.9	-2.0	0.9
Income before minority interests	10.2	0.0	-10.2
Minority Interests in income	-0.6	-0.5	0.1
Net Income	9.6	-0.5	-10.1



(Reference) Consolidated Sales by Segment

CQ3 (Jul.1 – Sept.30) vs.CQ4 (Oct.1 – Dec.31)

(Unit: Billions of Yen)

	CQ3 2011	CQ4 2011	Increase	
Petrochemicals	64.0	59.3	-4.7	Olefins, organic chemicals: sales decreased (shipment volumes down)
Chemicals	31.6	32.3	0.7	Functional polymer materials, ammonia :sales increased (shipment volumes up) AN: sales decreased (price down) Chloroprene rubber: sales decreased (shipment volumes down)
Electronics	52.1	44.4	-7.7	HDs: sales decreased (shipment volumes down: HDD industry cut production due to the influence of flood in Thailand) Compound semiconductors: sales decreased (price down) Rare earth: sales maintained at the CQ3 level
Inorganics	18.8	18.7	-0.2	Ceramics: sales decreased (shipment volumes down) Graphite electrodes: sales increased (shipment volumes up)
Aluminum	32.7	29.9	-2.8	High-purity foils for capacitors, cylinders for LBP: sales decreased (shipment volumes down) Heat exchangers: sales decreased (shipment volumes down: auto industry cut production due to the influence of the flood in Thailand) <i>Shotoc</i> : sales slightly increased (shipment volumes up) Aluminum cans: sales decreased (shipment volumes down, seasonal)
Others	36.7	37.4	0.7	SHOKO Co., Ltd.: sales increased
Adjustment	-10.7	-9.4	1.3	
Total	225.1	212.5	-12.6	



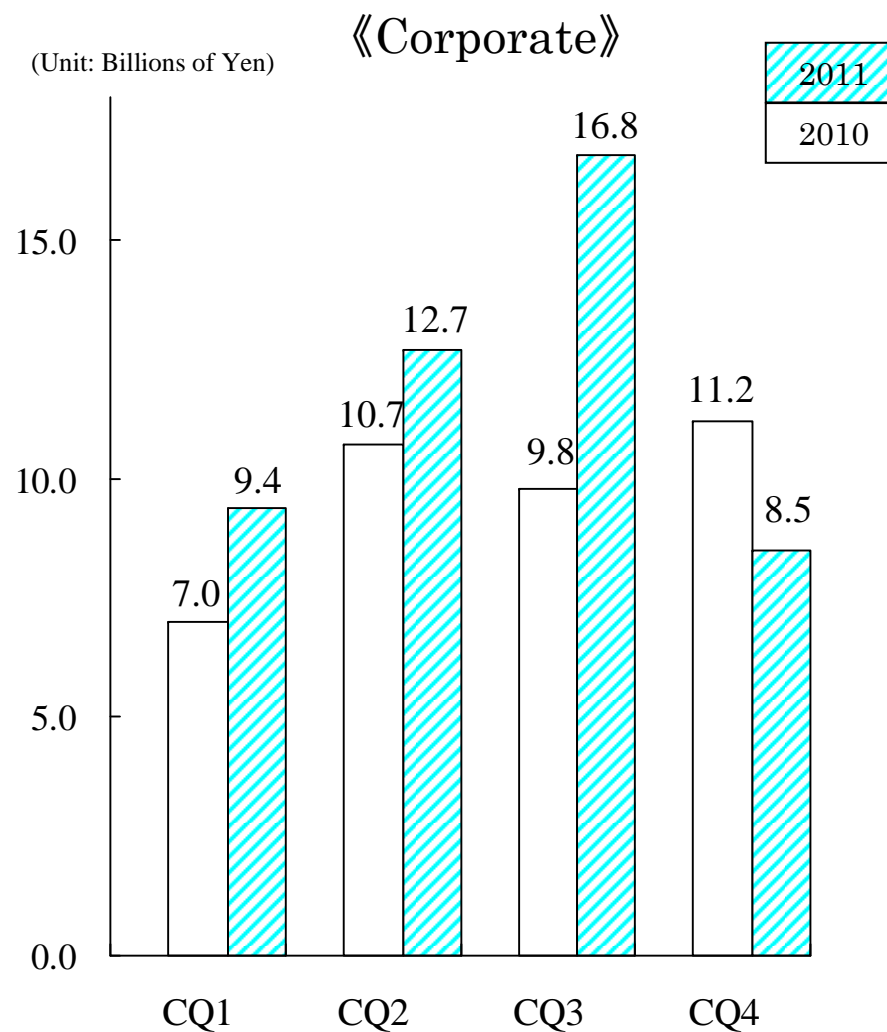
(Reference) Consolidated Operating Income by Segment

CQ3 (Jul.1 – Sept.30) vs.CQ4 (Oct.1 – Dec.31)

(Unit: Billions of Yen)

	CQ3 2011	CQ4 2011	Increase	
Petrochemicals	1.0	-1.6	-2.6	Olefins, organic chemicals: profit decreased (shipment volumes down)
Chemicals	-0.5	-0.3	0.2	AN: profit decreased (price down) Functional polymer materials: profit increased (shipment volumes up) Chloroprene rubber : profit maintained at the CQ3 level
Electronics	12.5	10.2	-2.3	HDs: profit decreased (shipment volumes down: customer industry cut production level due to the influence of flood in Thailand) Compound semiconductors: profit decreased (price down, lower of cost or market method) Rare earth: profit maintained at the CQ3 level
Inorganics	2.5	1.5	-0.9	Ceramics: profit decreased (shipment volumes for electronics application down, lower of cost or market method) Graphite electrodes: profit decreased (shipment volumes up, yen appreciation)
Aluminum	2.4	0.2	-2.2	High-purity foils for capacitors, cylinders for LBP: profit decreased (shipment volumes down) Heat exchangers: profit decreased (shipment volumes down: auto industry cut production level due to the influence of the flood in Thailand) Aluminum cans: profit decreased (shipment volumes down, seasonal)
Others	0.3	0.1	-0.2	
Adjustment	-1.4	-1.6	-0.2	
Total	16.8	8.5	-8.2	

(Reference) Quarterly Operating Income

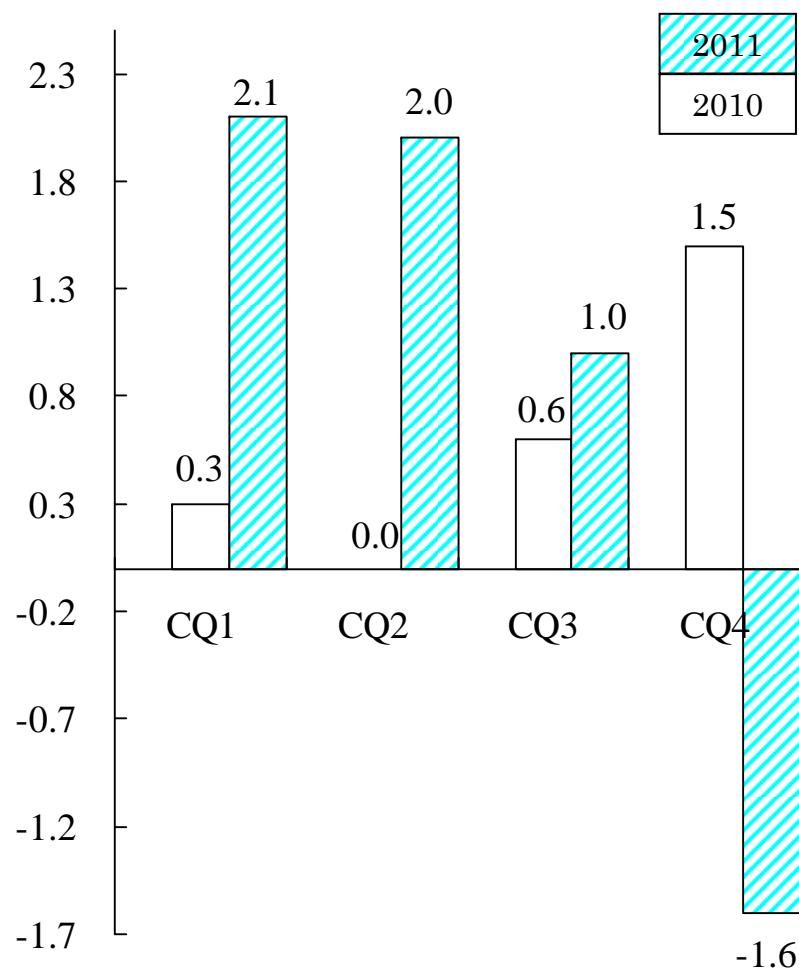


* As from the first quarter 2011, Showa Denko K.K. has changed the segment classification and the number of segments has increased from five to six. Segment figures for 2010 are reclassified in accordance with the new segmentation, for the reference purpose only.

(Reference) Quarterly Operating Income

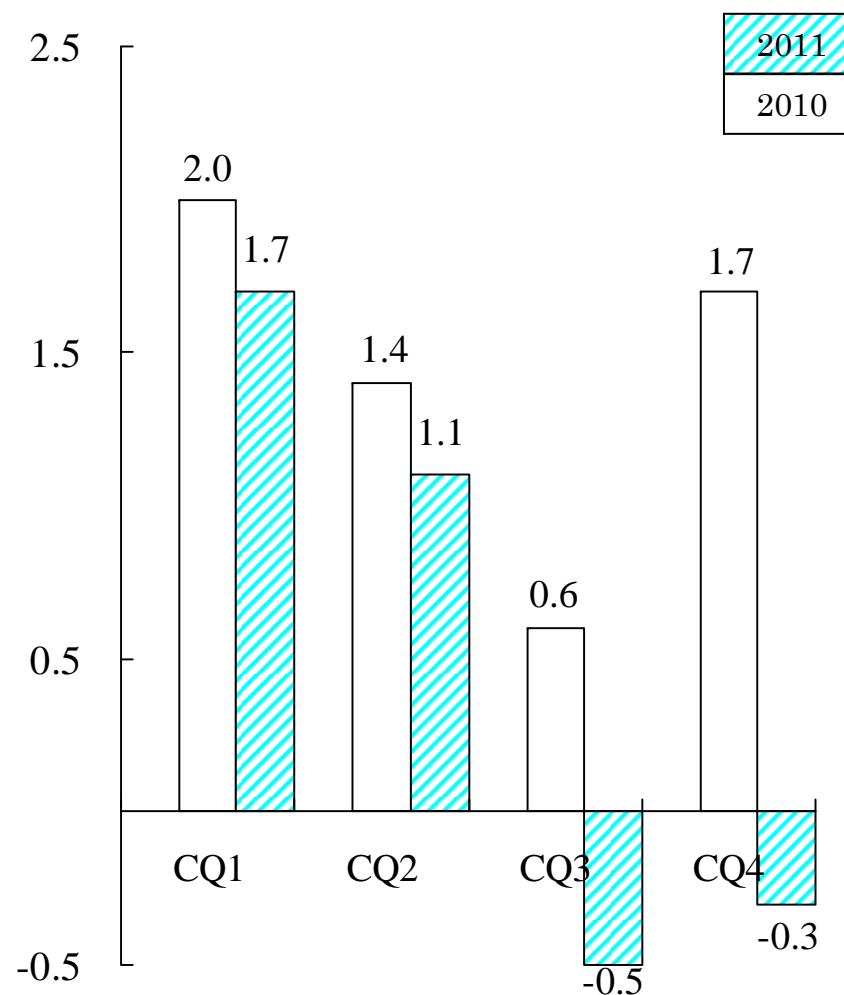
《Petrochemicals》

(Unit: Billions of Yen)



《Chemicals》

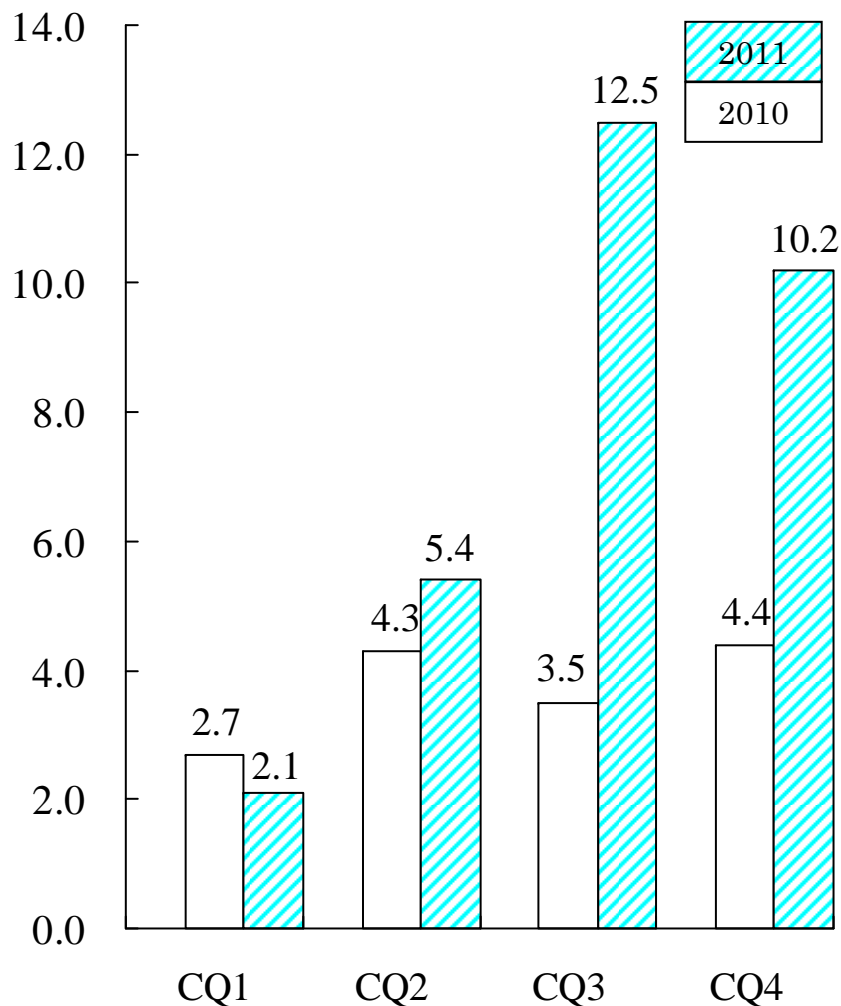
(Unit: Billions of Yen)



(Reference) Quarterly Operating Income

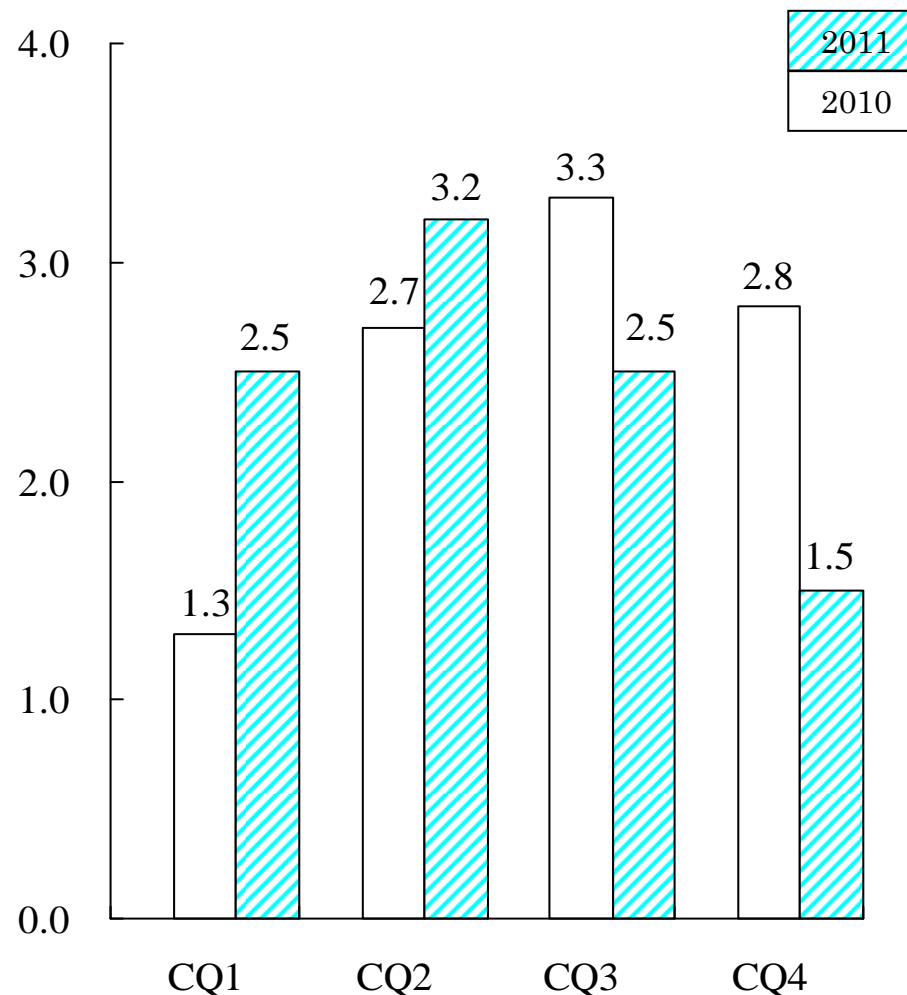
《Electronics》

(Unit: Billions of Yen)



《Inorganics》

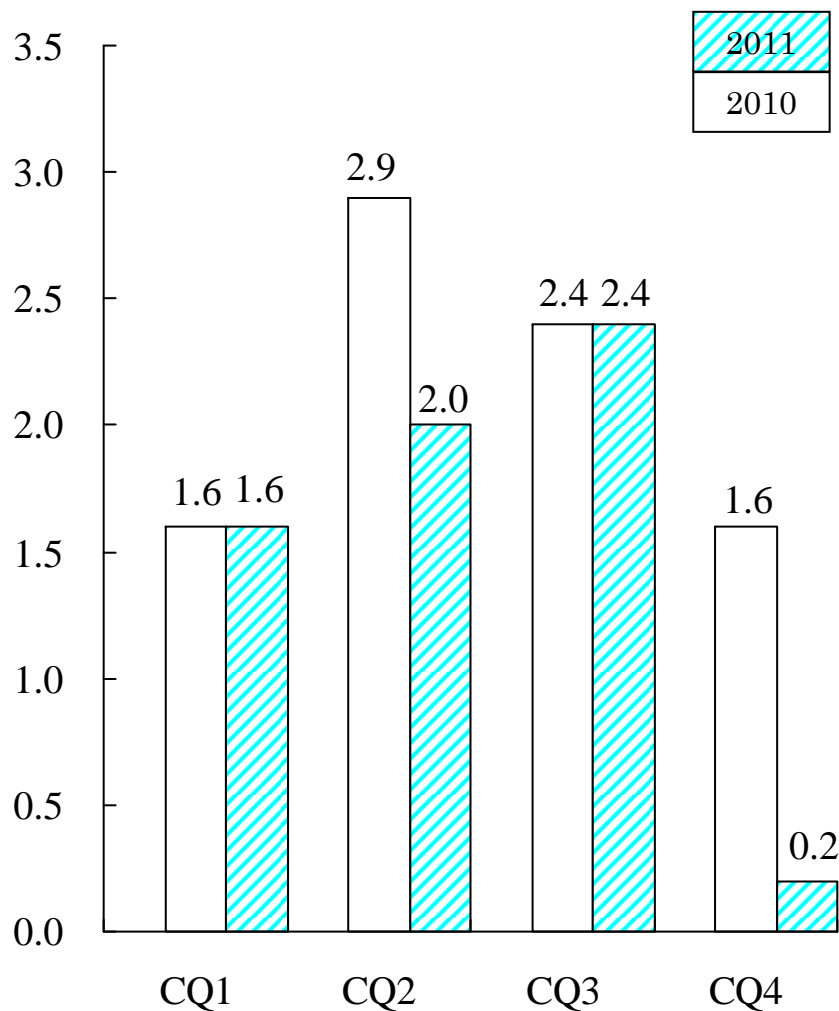
(Unit: Billions of Yen)



(Reference) Quarterly Operating Income

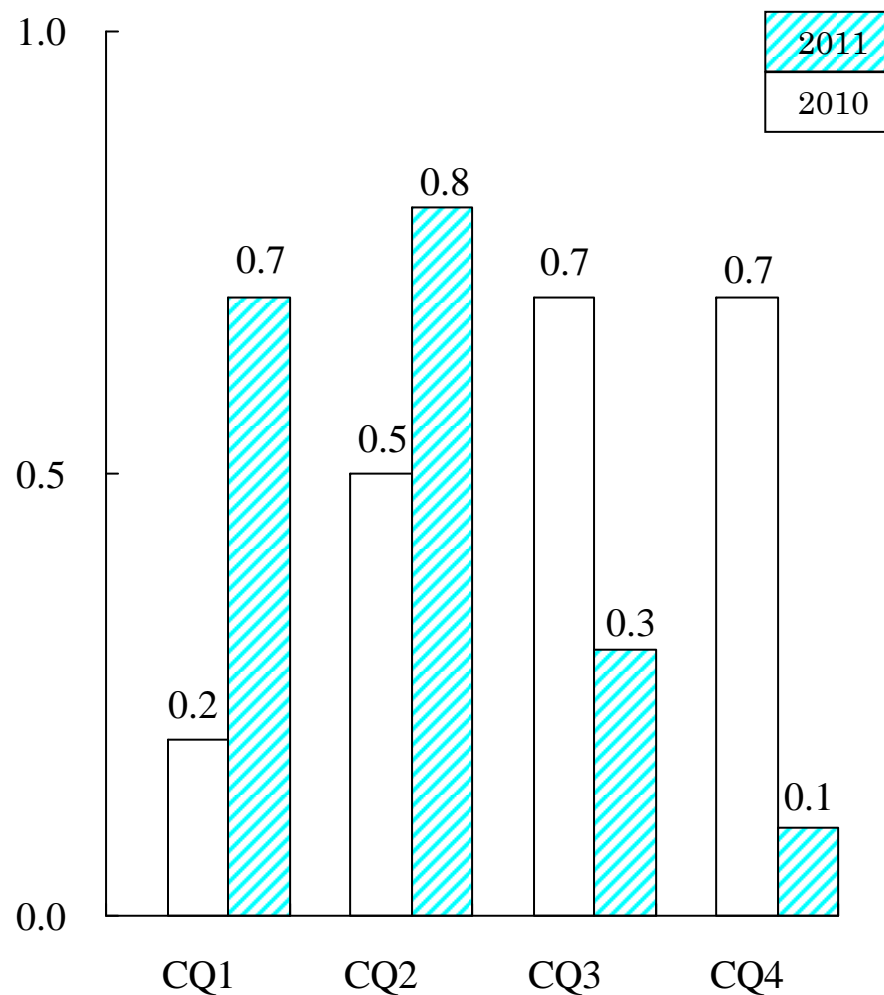
《Aluminum》

(Unit: Billions of Yen)



《Others》

(Unit: Billions of Yen)



■ Corporate

● Establishment of Group's slogan and statement

- ◆ The Showa Denko Group established a new slogan and a statement to declare its policy to “contribute toward creating a society where affluence and sustainability are harmonized,” providing components, materials and solutions as an evolving chemical company with individualized products. The Group started using the slogan and the statement as a means to communicate the policy to its stakeholders, and to make a commitment to carry out the policy. SDK believes the Showa Denko Group's mission is to bring the dreams of humankind into reality through innovation in chemical technology. This belief is summarized into the simple and strong words of “Shaping Ideas.” SDK is using the image of “Pencil” as the symbol of “Shaping Ideas.”



● Tie-up with U.S. firm in development, manufacture and sale of conductive inks

- ◆ In April 2011, SDK reached agreement with NovaCentrix, of the United States, to cooperate in the promising area of printed electronics. SDK will manufacture and sell conductive inks developed by NovaCentrix through a licensing agreement, and jointly develop conductive inks to be used with NovaCentrix's Photonic Curing™ process technology. The term “printed electronics” refers to the technology to manufacture electronic devices through printing. Compared with conventional methods of separately forming layers of semiconductors, metals, and insulating materials, the printed electronics technology enables substantial simplification of manufacturing processes. Conductive inks are already used in part of smart phones and solar cell components. The technology is expected to find wide-ranging applications, including displays, solar cells, and organic EL lighting.

■ Corporate

● Establishment of a management company in Shanghai

- ◆ In September 2011, SDK established a management company in Shanghai, China. The management company, Showa Denko (Shanghai) Co., Ltd., will serve as SDK's regional headquarters in accordance with Shanghai Municipality's rules introduced in 2002 for foreign multinational corporations. With the help of the new management company, SDK's subsidiaries in China will be able to increase the level of management and strengthen governance. Furthermore, the Showa Denko Group will be able to work out an effective marketing strategy for new businesses, thereby strengthening its presence in the growing Chinese market.

■ Petrochemicals

● Establishment of a joint venture for aromatics business

- ◆ In August 2011, SDK and Nippon Steel Chemical Co., Ltd. (NSC) jointly established NS Styrene Monomer Co., Ltd., based on NSC Oita Works' operations in the field of aromatic chemicals, such as styrene monomer, benzene, toluene, and xylene. SDK and NSC aim to strengthen the business by achieving a vertical integration covering all stages from raw materials to products, and improving facilities.

● Completion of a pilot plant for heat-resistant transparent film SHORAYAL™

- ◆ In July 2011, SDK started up a pilot plant for its new heat-resistant transparent film "SHORAYAL™" within the premises of its Oita Complex. SDK developed SHORAYAL™ based on its proprietary resin technology for glass lens applications. The film has high transparency necessary for optical films, and high heat resistance required at the time of production of displays, including touch screens.

■ Chemicals

- Expansion of production capacity for high-purity ammonia for electronics
 - ◆ SDK has increased production capacity for high-purity ammonia to meet growing demand from the electronics industry. Specifically, production capacities at three sites—Japan, Taiwan, and China—have been increased from 1,000 t/y, 1,500 t/y and 500 t/y; to 1,500 t/y, 2,500 t/y and 1,000 t/y, respectively. The capacity increase was carried out through expansions of filling/storage facilities and improvement in production efficiency. As a result, the Showa Denko Group's total high-purity ammonia production capacity has increased from 3,000 t/y to 5,000 t/y. High-purity ammonia is used as a material gas in the production of LCD panels, gallium-nitride LEDs, and solar cells based on polycrystalline silicon. SDK will continue to ensure stable supply of high-purity ammonia, anticipating further growth for electronics applications.

- Transfer of industrial gas business to subsidiary
 - ◆ In January 2012, SDK split and transferred its industrial gas business to its wholly owned subsidiary Showa Tansan Co., Ltd. (STK), which is closer to customers. On the occasion of the business integration, STK changed its name to Showa Denko Gas Products Co., Ltd.

Note: The Showa Denko Group's industrial gas operations cover air separation gases (oxygen, nitrogen, argon, etc.), compressed hydrogen, carbon dioxide and dry ice, etc.

■ Electronics

- Launch of 2.5-inch 500 GB HD media
 - ◆ In July 2011, SDK started commercial shipments of 2.5-inch HD media with storage capacity of 500 gigabytes per disk, using the sixth-generation perpendicular magnetic recording (PMR) technology. The product was launched in response to a growing demand for high-capacity media, reflecting the increase in the global information traffic. To the best of SDK's knowledge, the new 2.5-inch HD media had the world's highest storage capacity for this size available on the market as of August 3, 2011.

- Expansion of HD media production capacity
 - ◆ SDK's total HD media production capacity has increased, to 27 million units a month, as from July 2011, following the completion of capacity expansion at its subsidiary Showa Denko HD Singapore Pte. Ltd. Demand for hard disk drives will expand in the coming years for use in servers, in addition to PCs.

- Expansion of rare earth magnetic alloy production capacity in China
 - ◆ In July 2011, SDK increased rare earth magnetic alloy production capacity at its subsidiary Ganzhou Zhaori Rare Earth New Materials Co., Ltd., in Ganzhou, Jiangxi Province, China, from 2,000 t/y to 3,000 t/y. Together with another subsidiary in Baotou, Inner Mongolia, SDK's rare earth magnetic alloy production capacity in China now amounts to 4,000 t/y. The two subsidiaries in China are producing neodymium-based alloys for high-performance magnets, which are used in motors for hybrid cars and voice coil motors of hard disk drives.

■ Inorganics

- Decision to expand graphite electrode production capacity
 - ◆ Based on the forecast of steady growth in global demand for electric steel, SDK decided to expand its graphite electrode production capacity at Showa Denko Carbon, Inc. (SDKC), a consolidated subsidiary in the United States, from 45,000 t/y at present to 75,000 t/y by the end of 2013. The expanded facilities will ensure increased production of large-diameter (30- and 32-inch) graphite electrodes, which are areas of SDK's strengths. Together with the 60,000 t/y plant in Omachi, Japan, the Showa Denko Group's total graphite electrode production capacity will reach 135,000 t/y. With the scheduled expansion at SDKC, the Group will establish a flexible supply chain on a global scale, serving the rapidly growing markets in Asia and Latin America in addition to Japan, the United States, and Europe.

- Start of construction of a chemical alumina plant in Indonesia
 - ◆ In April 2011, SDK held a ground-breaking ceremony in West Kalimantan, Indonesia, for a chemical alumina plant for its manufacturing/marketing joint venture with Antam, of Indonesia. The joint venture, PT Indonesia Chemical Alumina, is owned 20% by SDK. The plant, with capacity to produce 300,000 t/y of chemical alumina for use in electronics and water purification, will start up in 2014. SDK will meet an increasing demand for chemical alumina in the growing markets in the ASEAN region and East Asia by ensuring stable supply of the product based on its accumulated technologies.

■ Inorganics

- Expansion of nanoparticle TiO₂ production capacity
 - ◆ In August 2011, SDK expanded the nanoparticle titanium-oxide production capacity at its subsidiary Showa Titanium Co., Ltd., to 240 tons a month, and started operations. The nanoparticle titanium-oxide product, sold under the trade name of Super-Titania™, is used in the production of multilayer ceramic capacitors (MLCCs). MLCCs are used mainly in light-weight electronic devices and in such energy-saving electric appliances as flat-panel TVs. Reflecting higher demand for these products, the MLCC market is continuing to grow.

■ Aluminum

- Decision to strengthen the high-purity aluminum foils business
 - ◆ In August 2011, SDK decided to expand its capacity to produce high-purity aluminum foils for electrolytic capacitors at Sakai Plant, and establish a final processing site in China. As a result of the expansion, the Showa Denko Group's ability to provide high-purity aluminum foils will increase from 2,000 tons a month at present to 3,000 tons a month by the end of 2013. Aluminum electrolytic capacitors are now used widely in electric appliances, energy-saving devices for inverters, and IT equipment. Furthermore, demand will grow for such new applications as parts for electric vehicles and plug-in hybrid cars; and in the area of renewable energies, including wind energy and photovoltaic power generation. The expansion work will enable the Group to better meet the need for high-voltage aluminum electrolytic capacitors used in these new areas.

■ Aluminum

- Transfer of business in heat exchangers for car air conditioners
 - ◆ In January 2012, SDK completed the transfer of its automotive air-conditioner heat exchanger business to Keihin Corporation (Keihin) by transferring 60% of shares in Thermal Technology Corporation. SDK has produced aluminum-based heat exchangers, including condensers and evaporators, in Japan, the United States, Thailand, Czech, and China. SDK will transfer the remaining shares of 40% to Keihin in 2014.

■ Others

- Strengthening the LIB materials business
 - ◆ SDK decided to expand its production capacity for materials used in lithium-ion rechargeable batteries (LIBs): artificial-graphite-based anode material (SCMGTM), additive in anodes and cathodes (VGCFTM), and aluminum laminated films for LIB packaging (at Showa Denko Packaging Co., Ltd.). This is in response to the growing demand for large-sized LIBs for use in cars and storage batteries as well as for small-sized LIBs for use in smart phones and tablet-type devices. In December 2011, the production capacity was increased from 100 t/y to 200 t/y for VGCFTM; and by 50% for aluminum laminated films. As for SCMGTM, the production capacity will be increased from 1,000 t/y to 3,000 t/y by the middle of 2012.
- Volume production of carbon-coated aluminum foils for LIBs
 - ◆ In January 2011, SDK started volume production of carbon-coated aluminum foils (SDXTM). When used as collectors at cathodes, SDXTM reduces electrical resistance and substantially improves the quick charge/discharge performance required for collectors in heavy-current automotive LIBs. In addition, adhesion of collectors to active materials of cathodes increases, to 1.5 times the conventional level. Thus, SDXTM will contribute toward improving battery performance.