

# 2009 Financial Results

## - Consolidated -

# SHOWA DENKO K.K.

February 12, 2010

Ichiro Nomura, CFO



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: 41

#### ■ Newly consolidated: 2

- Showa Denko HD Yamagata K.K.
- SD Preferred Capital Limited (Preferred securities capitals)

#### ■ Excluded from the consolidation: 1

- Showa Denko Plastic Products Co, Ltd. (Liquidation, Petrochemicals)

### ■ Equity method applied: 18

#### ■ Excluded: 2

- Mie Kasei (Sold, Petrochemicals)
- TG Showa K.K. (Sold, Chemicals)

## Selected Data

	2008		2009		Increase	
		Oct. –Dec.		Oct. –Dec.		Oct. –Dec.
■ Exchange rate: ¥/US\$	103.5	96.3	93.6	89.7	Yen strengthened by ¥9.9/\$	Yen strengthened by ¥6.6/\$
■ Domestic naphtha price: ¥/kl	68,850	52,000	36,000	42,500	-32,850	-9,500
■ Aluminum LME price: US\$/T	2,621	1,873	1,699	2,037	-922	+164

Exchange rate at December 31, 2008 ¥91.0/US\$, at December 31, 2009 ¥92.1/US\$

⇒ Yen depreciated by ¥1.1/US\$

# Summary

2008 (Jan.1 – Dec.31) v s. 2009 (Jan.1 – Dec.31)

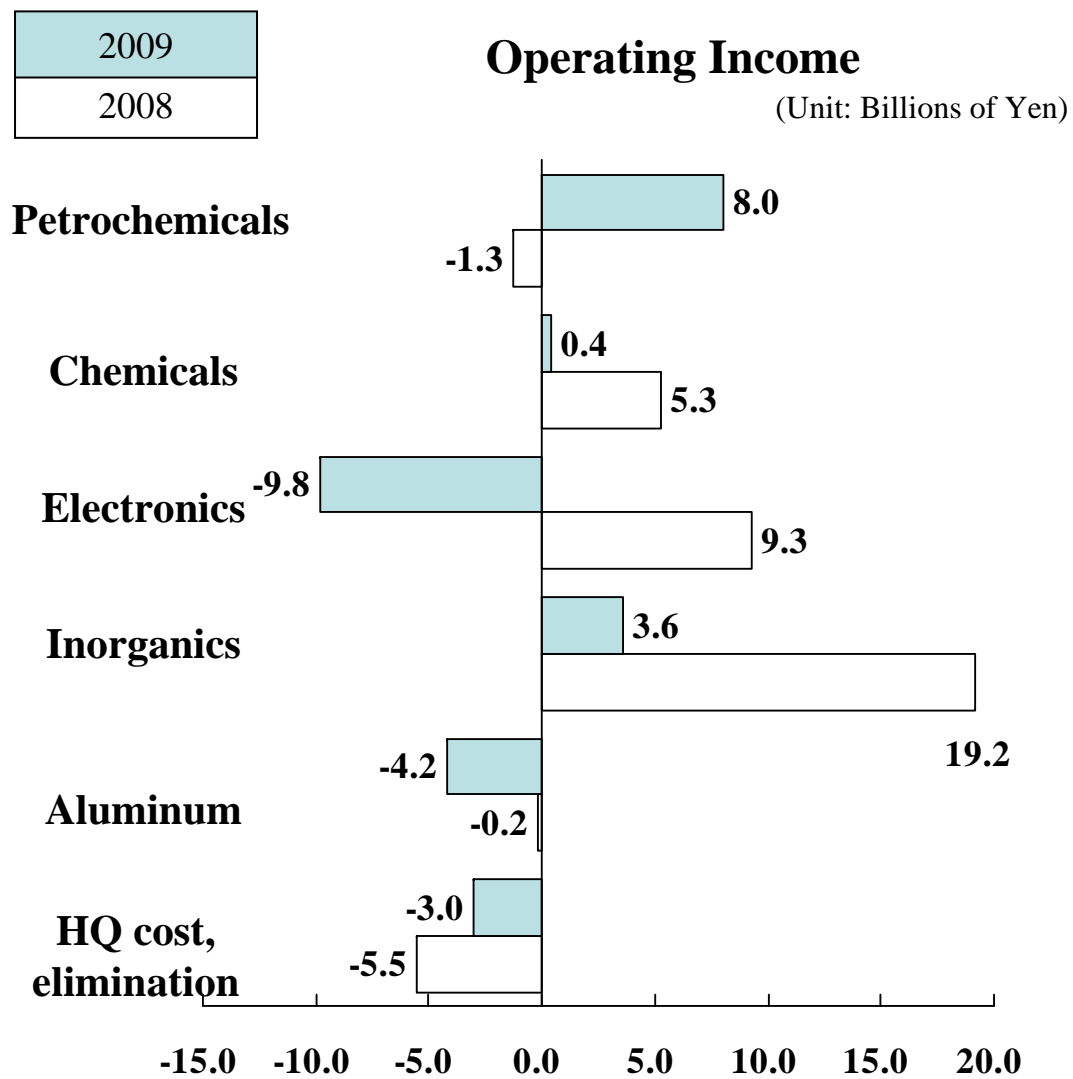
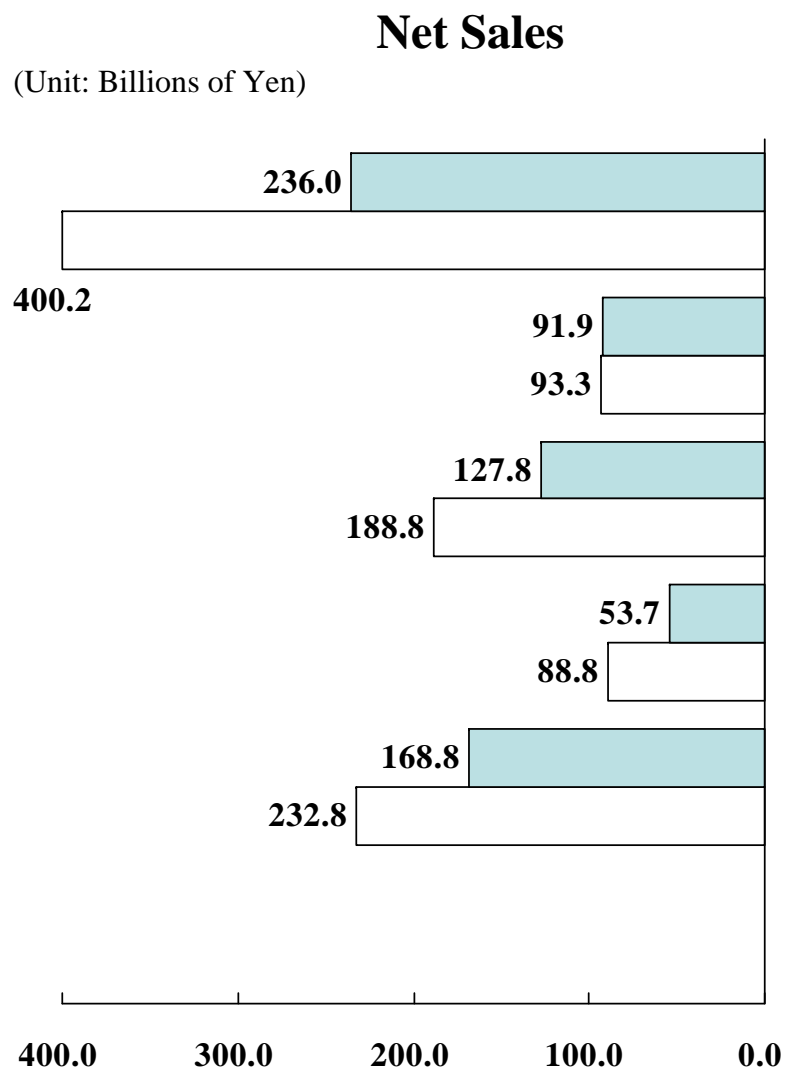
(Unit: Billions of Yen)

	2008	2009	Increase
Net Sales	1,003.9	678.2	-325.7
Operating Income	26.8	-5.0	-31.8
Non-operating income and expense	-17.0	-17.3	-0.3
Interest/Dividend income less interest expenses	-6.3	-5.6	0.6
Equity Method	0.7	-1.2	-1.9
Currency exchange gain	-5.1	-0.4	4.8
Loss on reduction in operations	-	-5.3	-5.3
Other	-6.4	-4.9	1.4
Ordinary Income	9.8	-22.3	-32.1
Extraordinary Profit	13.0	6.6	-6.3
Extraordinary Loss	-16.5	-28.4	-11.9
Net Income before taxes	6.3	-44.1	-50.4
Corporate Taxes	-2.9	7.0	9.9
Minority Interests	-0.9	-0.9	0.1
Net Income	2.5	-38.0	-40.4
Net Income per share	¥1.96	¥-29.44	¥-31.40

## Extraordinary Profit/Loss (Unit: Billions of Yen)

	2008	2009	Increase
<b>■ Extraordinary Profit</b>	<b>13.0</b>	<b>6.6</b>	<b>-6.3</b>
● Gain on the sale of fixed assets	0.7	0.2	-0.6
● Gain on the sale of investment securities	10.1	4.8	-5.3
● Other	2.1	1.7	-0.5
<b>■ Extraordinary Loss</b>	<b>-16.5</b>	<b>-28.4</b>	<b>-11.9</b>
● Loss on the disposal of fixed assets	-4.6	-2.9	1.8
● Loss on the valuation of investment securities	-2.3	-0.6	1.7
● Loss on impairment of fixed assets	-4.3	-13.2	-8.9
● Loss on the valuation of inventories	-	-5.5	-5.5
● Special severance pay	-0.1	-3.2	-3.1
● Reserve for restructuring expenses	-0.5	-0.2	0.3
● Other	-4.6	-2.8	1.8
<b>■ Extraordinary Profit/Loss, Net</b>	<b>-3.5</b>	<b>-21.8</b>	<b>-18.3</b>

# Sales and Operating Income by Segment





## Consolidated Sales by Segment

(Unit: Billions of Yen)

	2008	2009	Increase	
Petrochemicals	400.2	236.0	-164.2	Olefins: sales decreased. (sales price down due to decreasing domestic naphtha price) Organic chemicals: sales decreased. (sales price down , shipment volumes of acetic acid decreased)
Chemicals	93.3	91.9	-1.4	Oxygen, nitrogen, hydrogen: sales increased AN, ammonia: sales decreased (shipment volumes down) Chloroprene rubber: sales decreased (shipment volumes down for automobile) Showa Tansan Co., Ltd.: sales increased (Newly consolidated in June 2008)
Electronics	188.8	127.8	-61.0	HDs: sales decreased. (sales decreased in 1H, sales increased in 2H 2009) Compound semiconductors: sales decreased (shipment volumes down) Specialty gases: sales decreased (shipment volumes down for semiconductor industry) Rare earth: sales decreased (shipment volumes down, sales price also down)
Inorganics	88.8	53.7	-35.1	Ceramics: sales decreased. (shipment volumes down) Graphite electrodes: sales decreased (shipment volumes down in Japan and U.S.)
Aluminum	232.8	168.8	-64.0	Aluminum ingot: sales decreased (shipment volumes down due to withdrawal from large-lot sales) Rolled products: sales decreased (shipment volumes down of high-purity foils for capacitors in 1H) Extrusions/ specialty products: sales decreased (shipment volumes of aluminum cylinder for LBP decreased) Heat exchangers: sales decreased (shipment volumes up in China, shipment volumes down in Japan, U.S. and Europe) <i>Shotoc</i> : sales decreased (shipment volumes for automobile down) Aluminum cans: sales increased (shipment volumes up)
Total	1,003.9	678.2	-325.7	



## Consolidated Operating Income by Segment

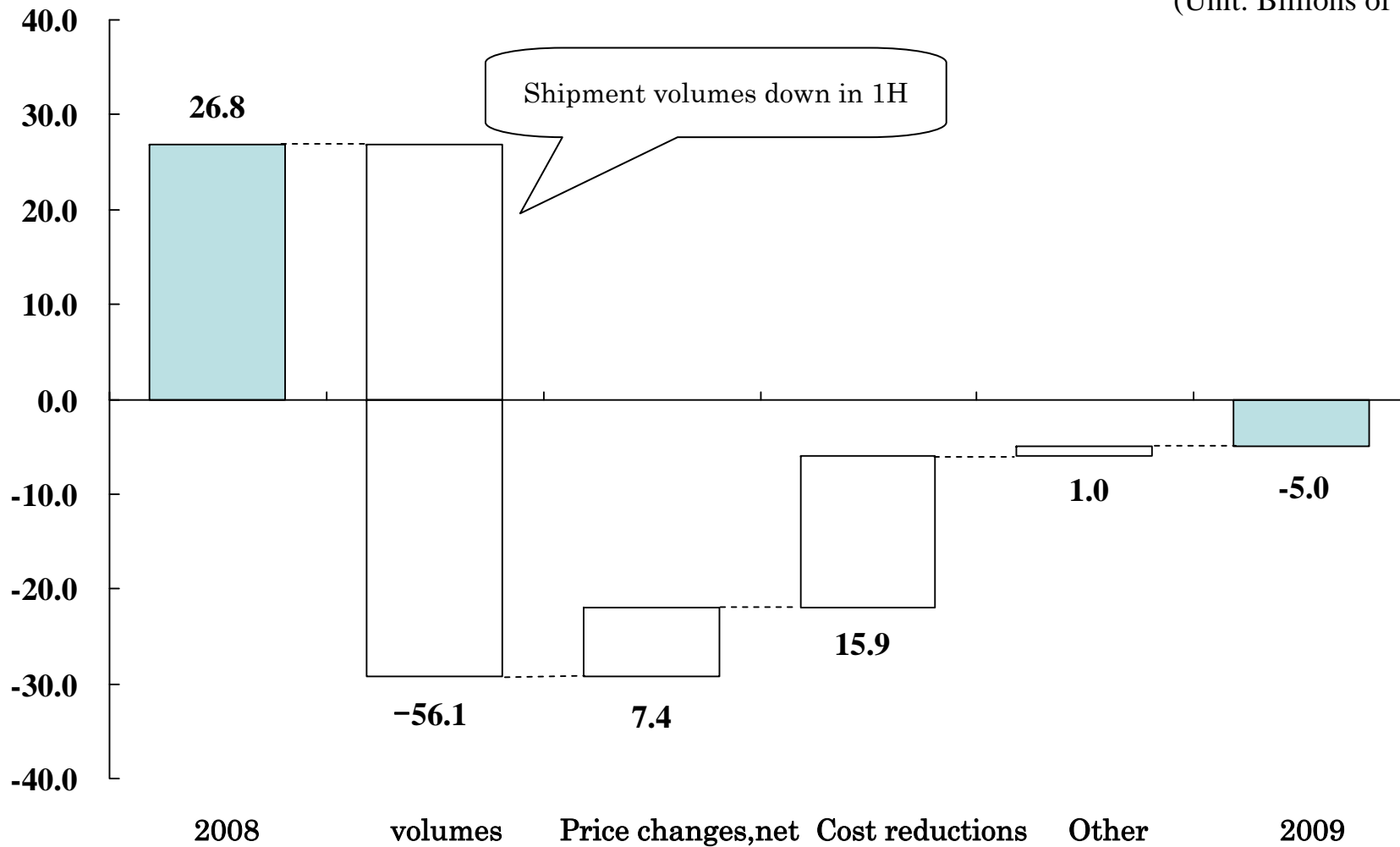
(Unit: Billions of Yen)

	2008	2009	Increase	
Petrochemicals	-1.3	8.0	9.3	Olefins: profit increased (influence of high-cost naphtha in 2008 diminished) Organic chemicals: profit increased (withdrawal from unprofitable large-lot sale of acetic acid)
Chemicals	5.3	0.4	-4.9	AN, chloroprene rubber : profit decreased (shipment volumes down in 1H)
Electronics	9.3	-9.8	-19.0	HDs: profit decreased (shipment volumes down) Compound semiconductors: profit decreased (R&D cost for ultrabright LEDs increased) Specialty gases: profit decreased (shipment volumes down for semiconductors) Rare earth: profit decreased (shipment volumes down)
Inorganics	19.2	3.6	-15.6	Ceramics, Graphite electrodes: profit decreased (shipment volumes down)
Aluminum	-0.2	-4.2	-4.0	Rolled products: profit decreased (shipment volumes of high-purity foils for capacitors down in 1H) Extrusions/ specialty products: profit decreased (shipment volumes down) Heat exchangers: profit decreased (profit increased in China, profit recovered in U.S. and Europe, profit decreased in Japan) <i>Shotic</i> : profit decreased (shipment volumes for automobile down) Aluminum cans: profit increased (shipment volumes up, cost reduction)
HQ costs, elimination	-5.5	-3.0	2.5	Cost reduction
Total	26.8	-5.0	-31.8	



# Operating Income Breakdown by Factor

(Unit: Billions of Yen)



# Summary

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

(Unit: Billions of Yen)

	CQ3, 2009	CQ4, 2009	Increase
Net Sales	185.3	206.2	20.9
Operating Income	6.7	11.2	4.5
Non-operating income and expense	-4.1	-1.8	2.3
Interest/Dividend income less interest expenses	-1.6	-1.4	0.2
Equity Method	-0.1	0.1	0.1
Currency exchange gain	-0.9	0.1	0.9
Other	-1.6	-0.6	1.0
Ordinary Income	2.6	9.4	6.9
Extraordinary Profit	0.1	4.6	4.6
Extraordinary Loss	-3.8	-8.2	-4.4
Loss on impairment of fixed assets	-2.1	-2.8	-0.7
Special severance pay	0	-2.9	-2.9
Net Income before taxes	-1.1	5.9	7.0
Corporate Taxes	1.0	3.7	2.8
Minority Interests	-0.3	-0.6	-0.4
Net Income	-0.4	9.0	9.4

## Consolidated Sales by Segment

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

(Unit: Billions of Yen)

	CQ3 2009	CQ4 2009	Increase	
Petrochemicals	67.2	72.6	5.4	Olefins: sales increased (shipment volumes up, sales price up) Organic chemicals: sales slightly increased (shipment volumes of vinyl acetate up)
Chemicals	21.8	23.3	1.4	AN, agrochemical intermediate: sales increased (shipment volumes up)
Electronics	38.6	46.2	7.6	HDs: sales increased (shipment volumes up due to surging demand) Compound semiconductors, specialty gases, rare earth : sales increased (shipment volumes up)
Inorganics	13.5	17.4	3.9	Ceramics: sales slightly increased (shipment volumes up) Graphite electrodes: sales increased (export volume up)
Aluminum	44.3	46.8	2.5	Rolled products: sales maintained at the CQ3 level Extrusions/ specialty products: sales increased (shipment volumes of aluminum cylinder for LBP up) Heat exchangers: sales increased (shipment volumes recovered in Japan, U.S. and Europe) <i>Shotic</i> : sales increased (shipment volumes up) Aluminum cans: sales decreased (shipment volumes down, seasonal)
Total	185.3	206.2	20.9	



## Consolidated Operating Income by Segment

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

(Unit: Billions of Yen)

	CQ3 2009	CQ4 2009	Increase	
Petrochemicals	3.7	2.2	-1.5	Olefins: profit decreased (naphtha price up)
Chemicals	0.7	0.9	0.2	AN, chloroprene rubber : profit increased (shipment volumes up)
Electronics	1.4	4.5	3.2	HDs: profit increased (shipment volumes increased) Compound semiconductors: profit decreased (R&D cost increased) Specialty gases, rare earth: profit slightly decreased (higher cost of raw materials)
Inorganics	0.5	2.8	2.4	Ceramics, graphite electrodes: profit increased (shipment volumes up)
Aluminum	0.8	1.7	0.9	Rolled products: profit increased (cost reduction) Extrusions/ specialty products: profit increased (shipment volumes of aluminum cylinder for LBP increased) Heat exchangers: profit increased (shipment volumes recovered in Japan, U.S. and Europe) <i>Shotic</i> : profit increased (shipment volumes up) Aluminum cans: profit decreased.(seasonal factors)
HQ costs, elimination	-0.4	-1.0	-0.6	
Total	6.7	11.2	4.5	

# Summary

CQ4 (Oct. 1 – Dec. 31), 2008 v s. CQ4 (Oct. 1 – Dec. 31), 2009

(Unit: Billions of Yen)

	CQ4, 2008	CQ4, 2009	Increase
Net Sales	211.4	206.2	-5.2
Operating Income	-8.6	11.2	19.8
Non-operating income and expense	-7.1	-1.8	5.3
Interest/Dividend income less interest expenses	-1.5	-1.4	0.1
Equity Method	0.8	0.1	-0.7
Currency exchange gain	-2.1	0.1	2.1
Other	-4.3	-0.6	3.7
Ordinary Income	-15.7	9.4	25.1
Extraordinary Profit	2.6	4.6	2.1
Extraordinary Loss	-10.1	-8.2	1.9
Net Income before taxes	-23.3	5.9	29.2
Corporate Taxes	6.9	3.7	-3.2
Minority Interests	-0.2	-0.6	-0.4
Net Income	-16.6	9.0	25.6



## Consolidated Sales by Segment

CQ4 (Oct. 1 – Dec. 31), 2008 v s. CQ4 (Oct. 1 – Dec. 31), 2009 (Unit: Billions of Yen)

	CQ4 2008	CQ4 2009	Increase/ decrease	
Petrochemicals	72.6	72.6	0.0	Olefins: sales increased (shipment volumes increased) Organic chemicals: sales decreased. (shipment volumes of acetic acid decreased)
Chemicals	26.7	23.3	-3.4	AN, chloroprene rubber: sales maintained at the CQ4,2008 level Caustic soda, ammonia: sales decreased (shipment volumes down)
Electronics	37.8	46.2	8.5	HDs: sales increased. (shipment volumes increased) Compound semiconductors: sales increased (shipment volumes up) Specialty gases:sales maintained at the CQ4,2008 level Rare earth: sales decreased (shipment volumes down)
Inorganics	23.3	17.4	-5.9	Ceramics, graphite electrodes: sales decreased (shipment volumes down)
Aluminum	51.1	46.8	-4.3	Aluminum ingot: sales decreased (shipment volumes down) Rolled products: sales decreased (sales price down) Extrusions/ specialty products: sales decreased (shipment volumes down) Heat exchangers: sales decreased (shipment volumes down in Japan, U.S., shipment volumes increased in China and Europe) <i>Shotoc</i> :sales maintained at the CQ4,2008 level Aluminum cans: sales increased (shipment volumes up)
Total	211.4	206.2	-5.2	



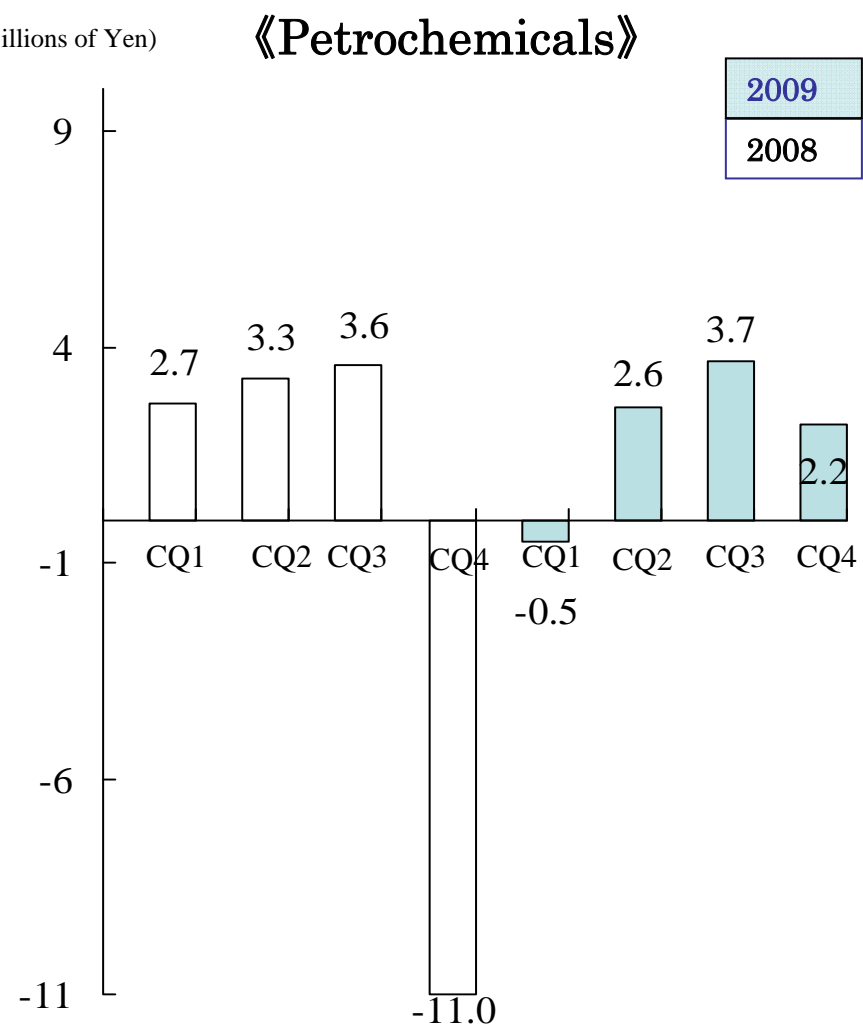
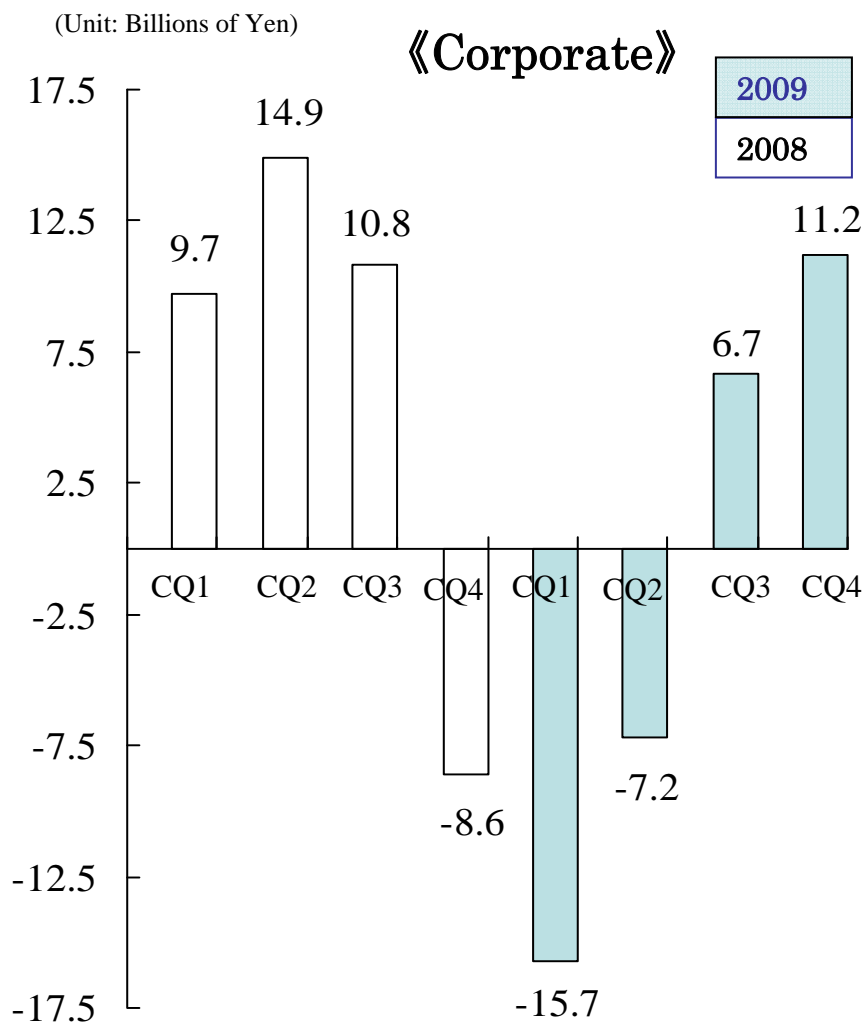
## Consolidated Operating Income by Segment

CQ4 (Oct. 1 – Dec. 31), 2008 v s. CQ4 (Oct. 1 – Dec. 31), 2009

(Unit: Billions of Yen)

	CQ4 2008	CQ4 2009	Increase/ decrease	
Petrochemicals	-11.0	2.2	13.2	Olefins, Organic chemicals: profit increased (influence of high-cost naphtha in 2008, diminished)
Chemicals	0	0.9	0.9	AN: profit increased (shipment volumes up)
Electronics	-0.7	4.5	5.2	HDs: Profit increased much (shipment volumes up) Compound semiconductors: maintained in the CQ4,2008 level Specialty gases, rare earth: profit increased (shipment volumes up)
Inorganics	5.1	2.8	-2.3	Ceramics: profit increased (cost reduction) Graphite electrode: profit decreased (shipment volumes decreased)
Aluminum	-1.1	1.7	2.8	Rolled products: profit increased (shipment volumes of high-purity foils for capacitors increased.) Extrusions/ specialty products: maintained in the CQ4,2008 level Heat exchangers: profit increased (shipment volumes up) <i>Shotoc</i> : profit increased (shipment volumes up) Aluminum cans: profit increased.(cost reduction) Power generation business as an independent power provider: profit increased (fuel price down)
HQ costs, elimination	-1.0	-1.0	0.0	
Total	-8.6	11.2	19.8	

# Operating Income (Quarterly)

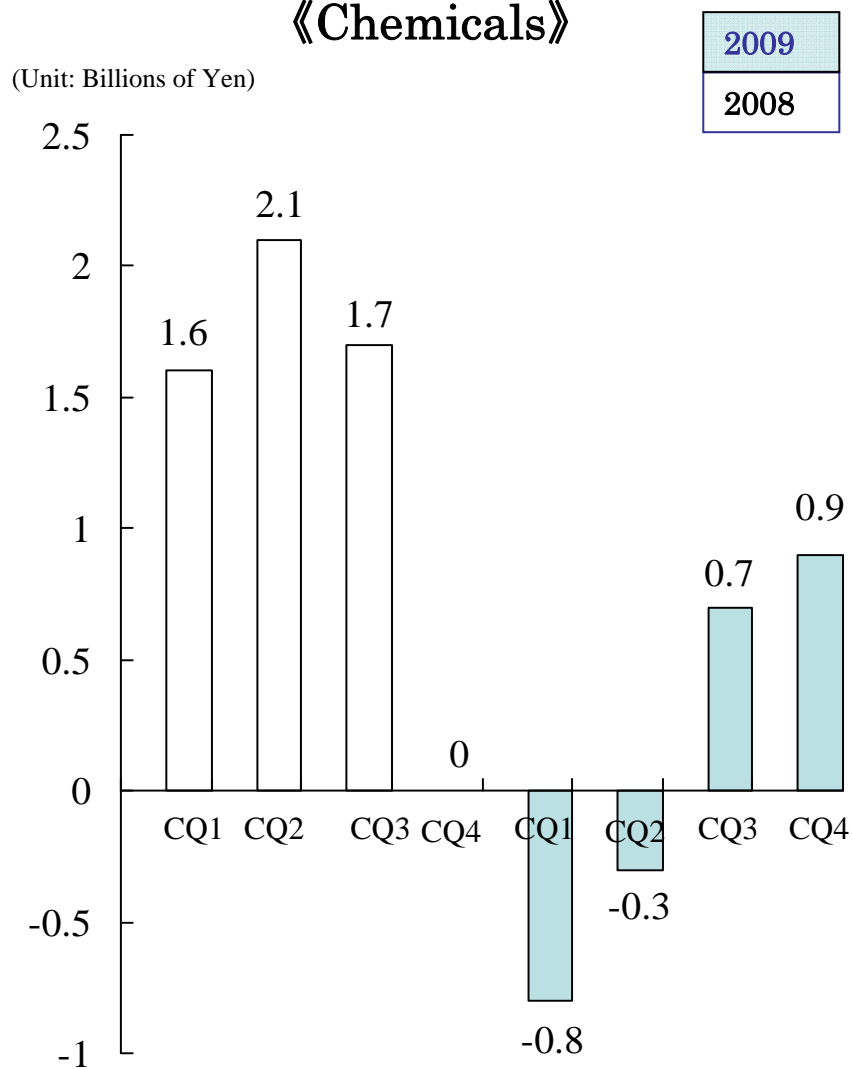




# Operating Income (Quarterly)

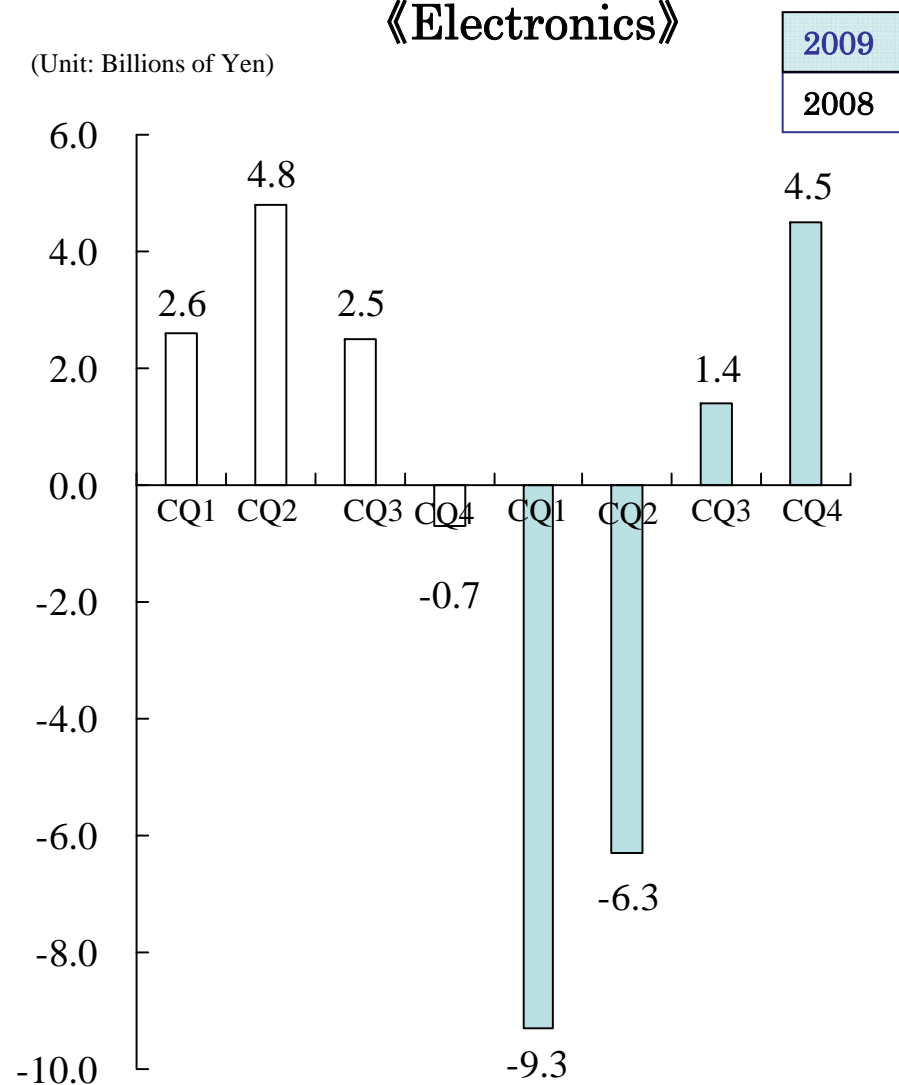
## 《Chemicals》

(Unit: Billions of Yen)

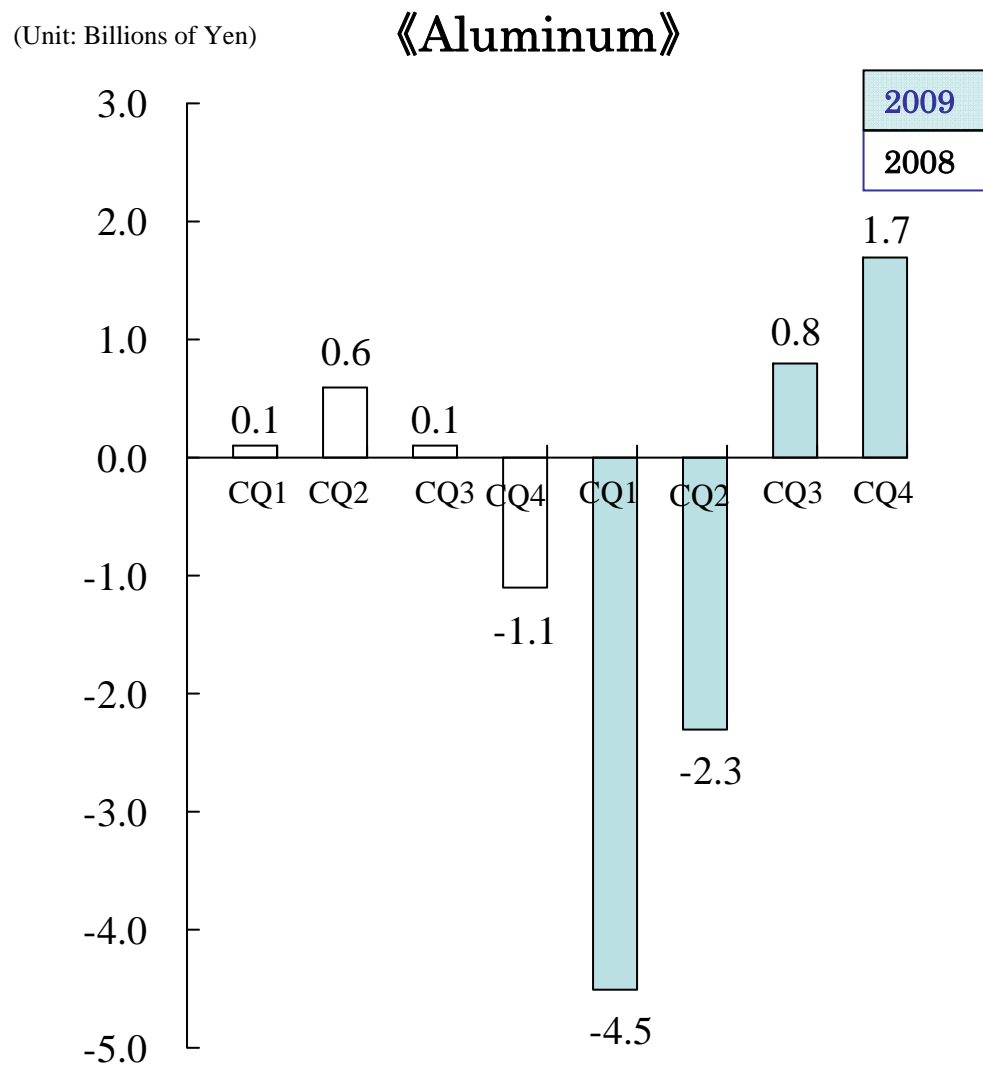
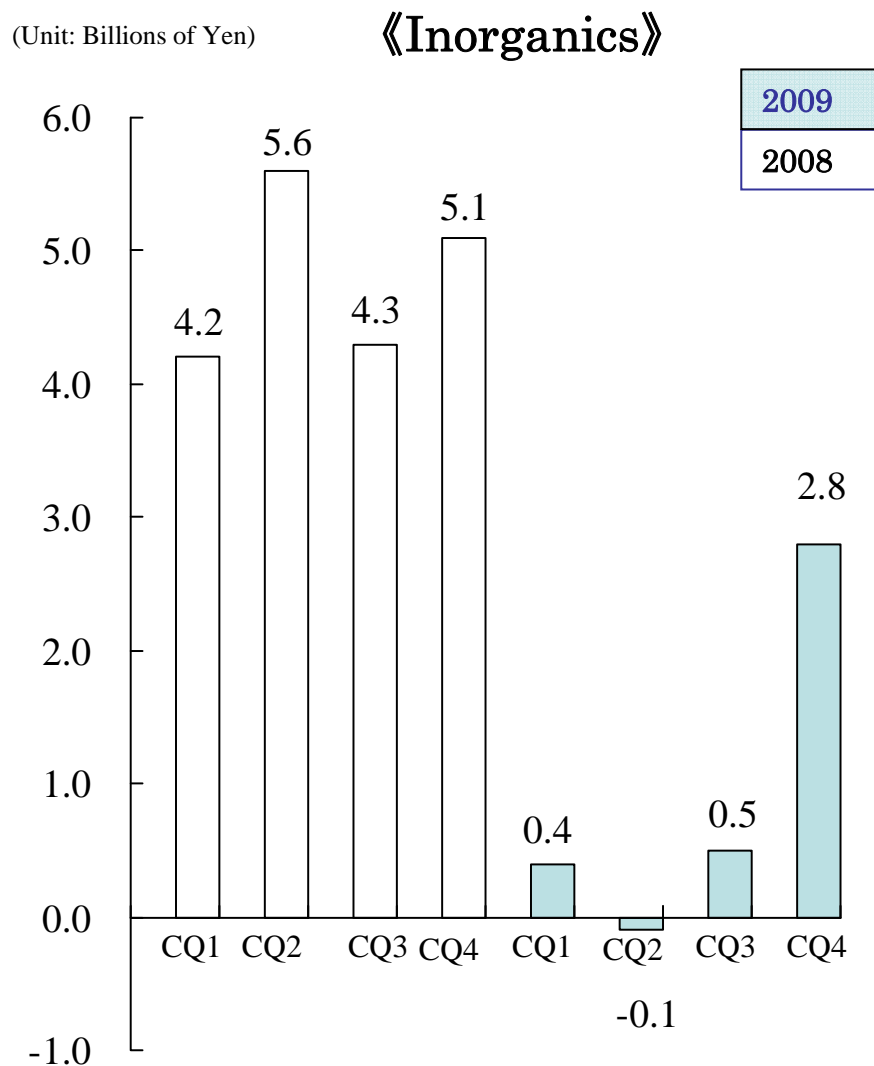


## 《Electronics》

(Unit: Billions of Yen)



# Operating Income (Quarterly)





# Consolidated Balance Sheet

(Unit: Billions of Yen)

Assets	Dec. 31, 2008	Dec. 31, 2009	Increase	Liabilities and Stockholders' Equity	Dec. 31, 2008	Dec. 31, 2009	Increase
Cash and deposits	41.0	62.5	21.6	Accounts payable	140.4	116.6	-23.9
Accounts receivable	117.2	147.6	30.4	Interest-bearing debt	392.9	373.9	-19.0
Inventories	117.7	92.3	-25.4	Deferred tax liabilities due to land revaluation	46.0	45.9	-0.1
Deferred tax assets	5.9	4.6	-1.2	Accrued pension and severance costs	28.7	27.1	-1.6
Other current assets	39.9	25.6	-14.3	Other liabilities	88.6	108.1	19.6
<u>Current Assets</u>	<u>321.7</u>	<u>332.7</u>	<u>11.0</u>	<u>Total Liabilities</u>	<u>696.6</u>	<u>671.6</u>	<u>-25.0</u>
Buildings and structures	95.0	91.1	-3.9	Common stock	121.9	140.6	18.7
Machinery and equipment	152.5	134.8	-17.7	Capital surplus	37.9	62.2	24.3
Land	256.0	255.8	-0.3	Retained earnings	73.1	29.3	-43.8
Other tangible fixed assets	28.1	22.6	-5.5	Treasury stock	-0.2	-0.2	-0.0
<u>Tangible Fixed Assets</u>	<u>531.6</u>	<u>504.3</u>	<u>-27.4</u>	<u>Total Stockholders' equity</u>	<u>232.8</u>	<u>231.9</u>	<u>-0.9</u>
Intangible Fixed Assets	13.0	13.6	0.5	Securities valuation surplus	5.0	2.6	-2.4
Investments and other assets	95.7	107.8	12.1	Foreign currency translation adjustment	-19.1	-12.2	6.9
Incl. Investment securities	65.6	65.1	-0.5	Deferred hedge gains			
Deferred tax assets	17.6	27.7	10.0	Revaluation surplus –Land	21.9	21.8	-0.1
				<u>Total valuations and adjustments</u>	<u>7.8</u>	<u>12.2</u>	<u>4.4</u>
				Minority Interest	24.8	42.6	17.8
<u>Total fixed assets</u>	<u>640.4</u>	<u>625.7</u>	<u>-14.7</u>	Total equity	<u>265.5</u>	<u>286.7</u>	<u>21.3</u>
<b>Total Assets</b>	<b>962.0</b>	<b>958.3</b>	<b>-3.7</b>	<b>Total liabilities and equity</b>	<b>962.0</b>	<b>958.3</b>	<b>-3.7</b>

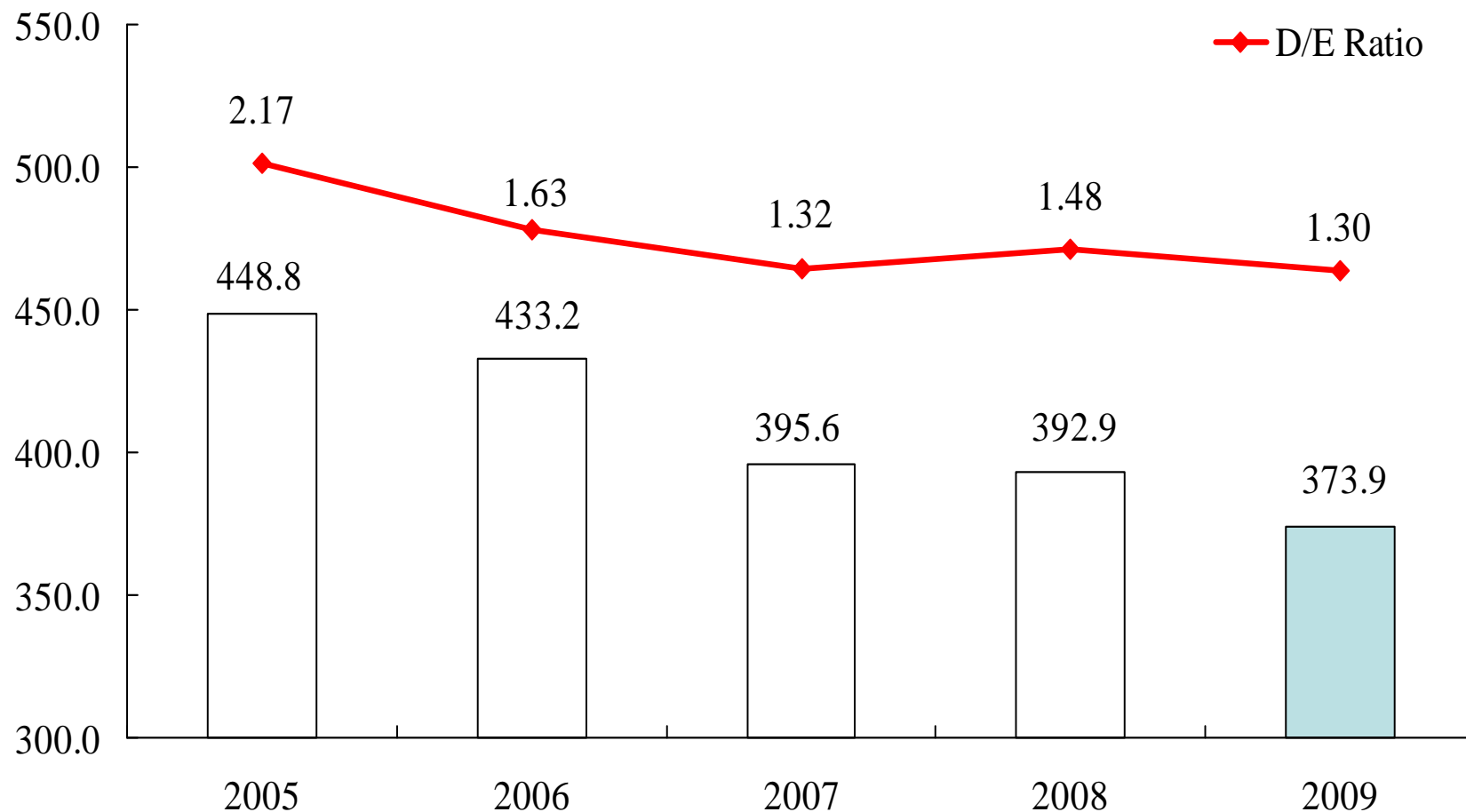
## Total Assets Interest-bearing Debt and D/E ratio

(Unit: Billions of Yen, times, %)

	Dec.31, 2008	Dec.31, 2009	Increase
● <b>Total assets</b>	962.0	958.3	-3.7
● <b>Interest-bearing debt</b>	392.9	373.9	-19.0
● <b>Debt/Equity ratio</b>	1.48times	1.30times	-0.18p
● <b>Stockholders' Equity ratio</b>	25.0%	25.5%	0.5p

## Interest-bearing Debt

(Unit: Billions of Yen)



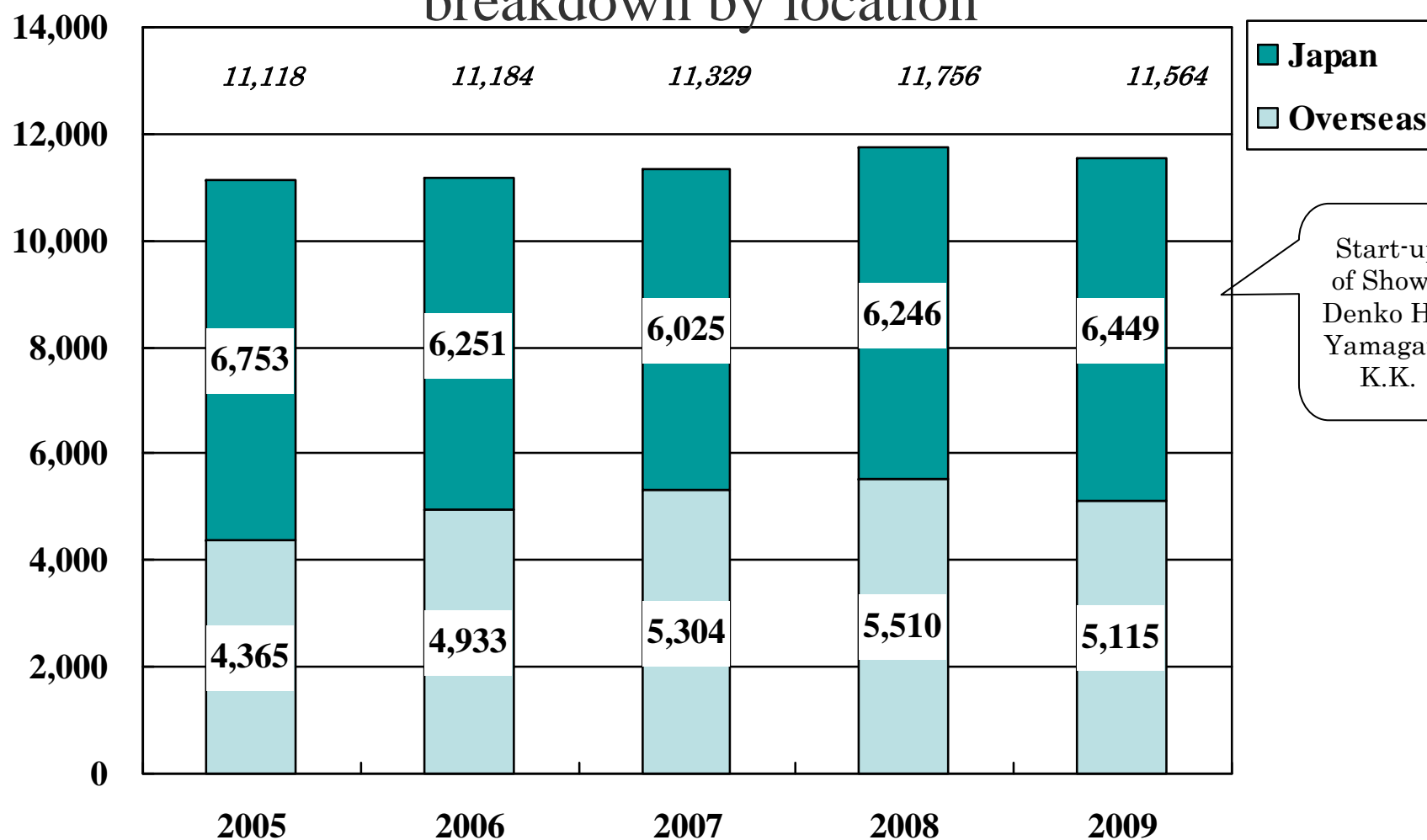
Equity ratio	21.0%	22.7%	26.9%	25.0%	25.5%
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## Consolidated Cash Flows

(Unit: Billions of Yen)

	2008	2009	09-08 Increase	2010 Forecast	10 - 09 Increase
● CF from Operating Activities	61.1	19.8	-41.3	60.0	+40.2
● CF from Investing Activities	-44.0	-26.6	+17.4	-59.0	-32.4
● Free CF	17.1	-6.7	-23.8	1.0	+7.7
● CF from Financing Activities	-3.8	28.4	+32.2	-17.5	-45.9
● Others	-4.2	-0.1	4.2	0	0.1
Increase of cash and equivalents	9.1	21.6	+12.5	-16.5	-38.1

## Total number of employees and breakdown by location



	2005	2006	2007	2008	2009
Japan	60.7%	55.9%	53.2%	53.1%	55.8%
Overseas	39.3%	44.1%	46.8%	46.9%	44.2%

(Note) The number of 2009 Japan included 313 retired employees due to structural reform in Aluminum segment. 23

## Capital expenditures/ Depreciation by Segment 2010 Forecast

(Unit: Billions of Yen)

	2008		2009		2009-2008 Increase		2010 Forecast		2010-2009 Increase	
	Capital expenditures	Depreciation	Capital expenditures	Depreciation	Capital expenditures	Depreciation	Capital expenditures	Depreciation	Capital expenditures	Depreciation
Petrochemicals	8.1	6.7	4.5	7.0	-3.6	0.3	19.9	8.1	15.4	1.2
Chemicals	7.7	6.7	6.7	8.2	-1.0	1.4	9.4	9.2	2.6	1.0
Electronics	29.0	33.8	14.6	25.7	-14.3	-8.0	19.4	25.1	4.8	-0.6
Inorganics	4.2	3.5	3.4	3.7	-0.8	0.2	3.5	3.4	0.2	-0.2
Aluminum	5.9	9.8	9.5	9.8	3.6	0.0	5.7	8.4	-3.8	-1.5
Total	54.8	60.4	38.7	54.4	-16.1	-6.1	57.9	54.2	19.2	-0.1



## Selected Data 2009, 2010 Forecast (Consolidated)

(Unit: Billions of Yen)

	2008	2009	2009-2008 Increase	2010 forecast	2010-2009 Increase
● Exchange rate: ¥/US\$	104	94	Yen strengthened by ¥10/\$	90	Yen strengthened by ¥4/\$
● Domestic naphtha price: ¥/kl	68,850	36,000	-32,850	44,200	+8,200
● Aluminum LME price: US\$/T	2,621	1,699	-922	1,900	+201
● Interest-bearing debt	392.9	373.9	-19.0	370.0	-3.9
● Interest/dividend income less interest expenses	-6.3	-5.6	+0.6	-5.7	-0.1
● R&D expenditures	20.1	20.7	+0.6	21.9	+1.2
● Number of employees	11,756	11,564	-192	11,024	-540
● Total employment cost	76.3	72.7	-3.6	72.4	-0.3

## 2010 Forecast (Consolidated)

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

	2009	2010 (Forecast)	Increase
Net Sales	678.2	790.0	+111.8
Operating Income	-5.0	30.0	+35.0
Interest/dividend income less interest expenses	-17.3	-9.0	+8.3
Ordinary Income	-22.3	21.0	+43.3
Extraordinary Profit/Loss, net	-21.8	-4.0	+17.8
Net Income	-38.0	11.0	+49.0
Cash dividends per Share	¥3.00	¥3.00	-
Net Income per Share	¥-29.44	¥7.35	¥36.79

## Net Sales by Segment 2010 Forecast (Consolidated)

(Unit: Billions of Yen)

	2009	2010 Forecast	Increase	Comments
Petrochemicals	236.0	270.0	34.0	Sales price up reflecting the increase of naphtha price
Chemicals	91.9	100.0	8.1	AN, chloroprene rubber: shipment volume increase
Electronics	127.8	195.0	67.2	HDs: shipment volumes increase
Inorganics	53.7	65.0	11.3	Graphite electrodes, ceramics: shipment volumes increase
Aluminum	168.8	160.0	-8.8	Ingots: shipment volumes decrease Extrusions: withdrawal from commodity extrusions for construction materials Shipment volumes increase for automotive parts
Total	678.2	790.0	111.8	

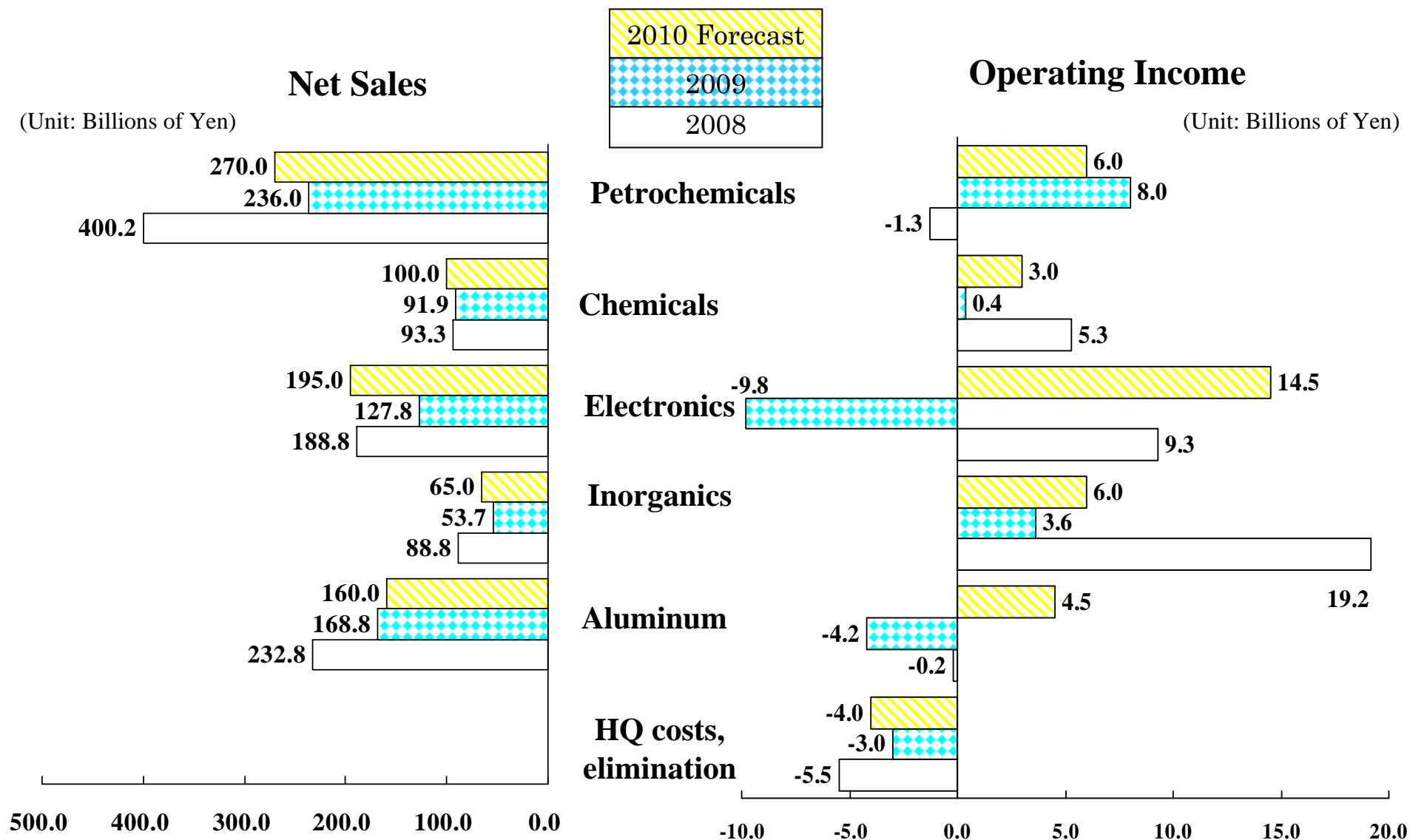
## Operating Income 2010 Forecast (Consolidated)

(Unit: Billions of Yen)

	2009	2010 Forecast	Increase	Comments
Petrochemicals	8.0	6.0	-2.0	Shipment volumes decrease due to scheduled shutdown maintenance in 1H
Chemicals	0.4	3.0	2.6	AN, chloroprene rubber: shipment volume recovery
Electronics	-9.8	14.5	24.3	HDs: shipment volumes increase Ultrabright LEDs: shipment volumes increase
Inorganics	3.6	6.0	2.4	Graphite electrodes, ceramics: shipment volumes increase
Aluminum	-4.2	4.5	8.7	Sales volume increase (automotive parts, high-purity foils for capacitors, etc.) Cost reduction
HQ cost, elimination	-3.0	-4.0	-1.0	
Total	-5.0	30.0	35.0	

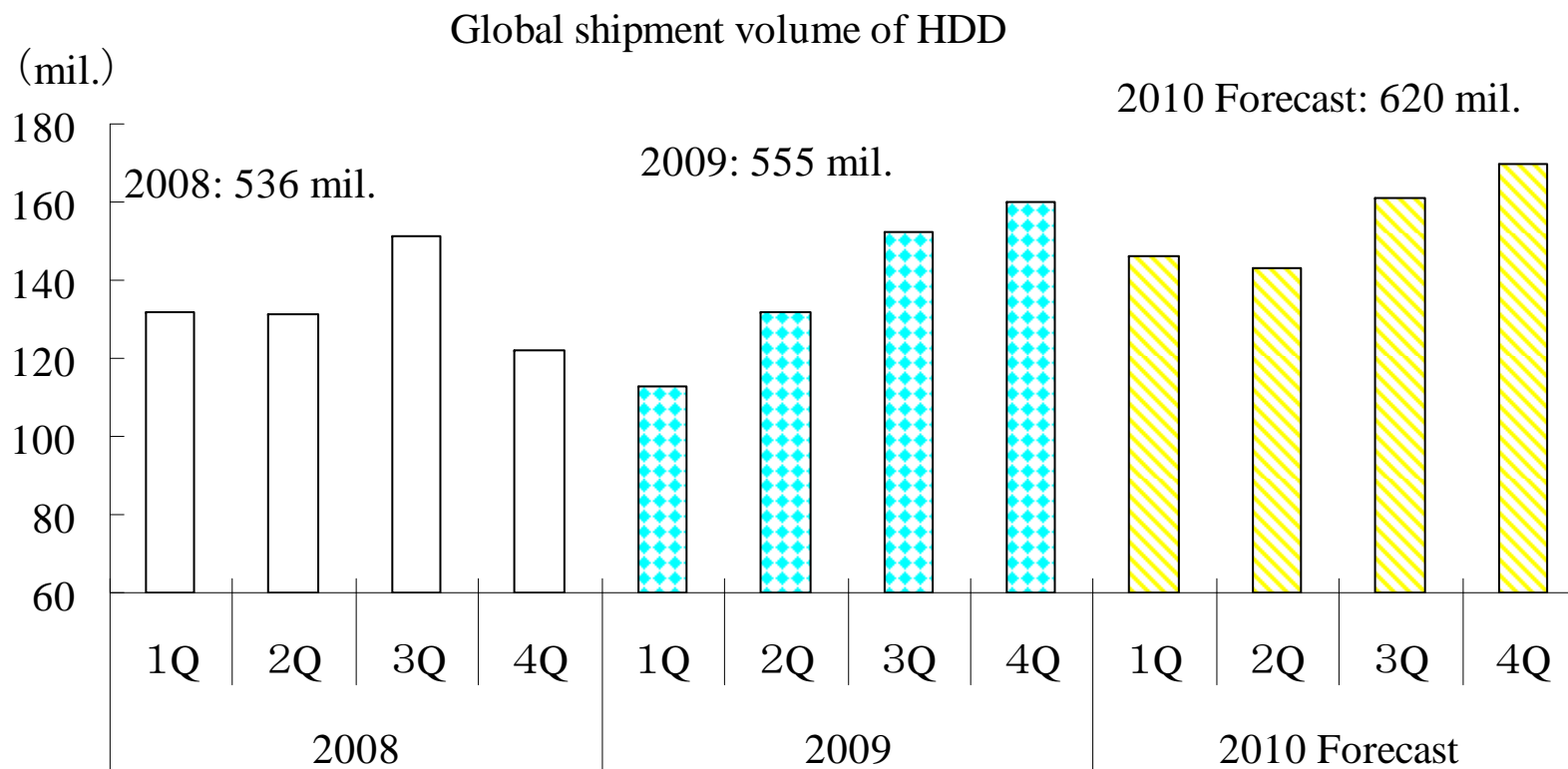


# Sales and Operating Income Forecast for 2010



# HD business update (1)

- Rapid recovery of HD demand in and after 2Q, 2009
- Due to strong demand for PCs, global shipment volumes of HDD in 4Q,2009 achieved all-time high record of 160 mil./Q
- Returning to a growth track in 2010
- The shipment of our HD media in 4Q, 2009: 23 mil. /month, all-time high record

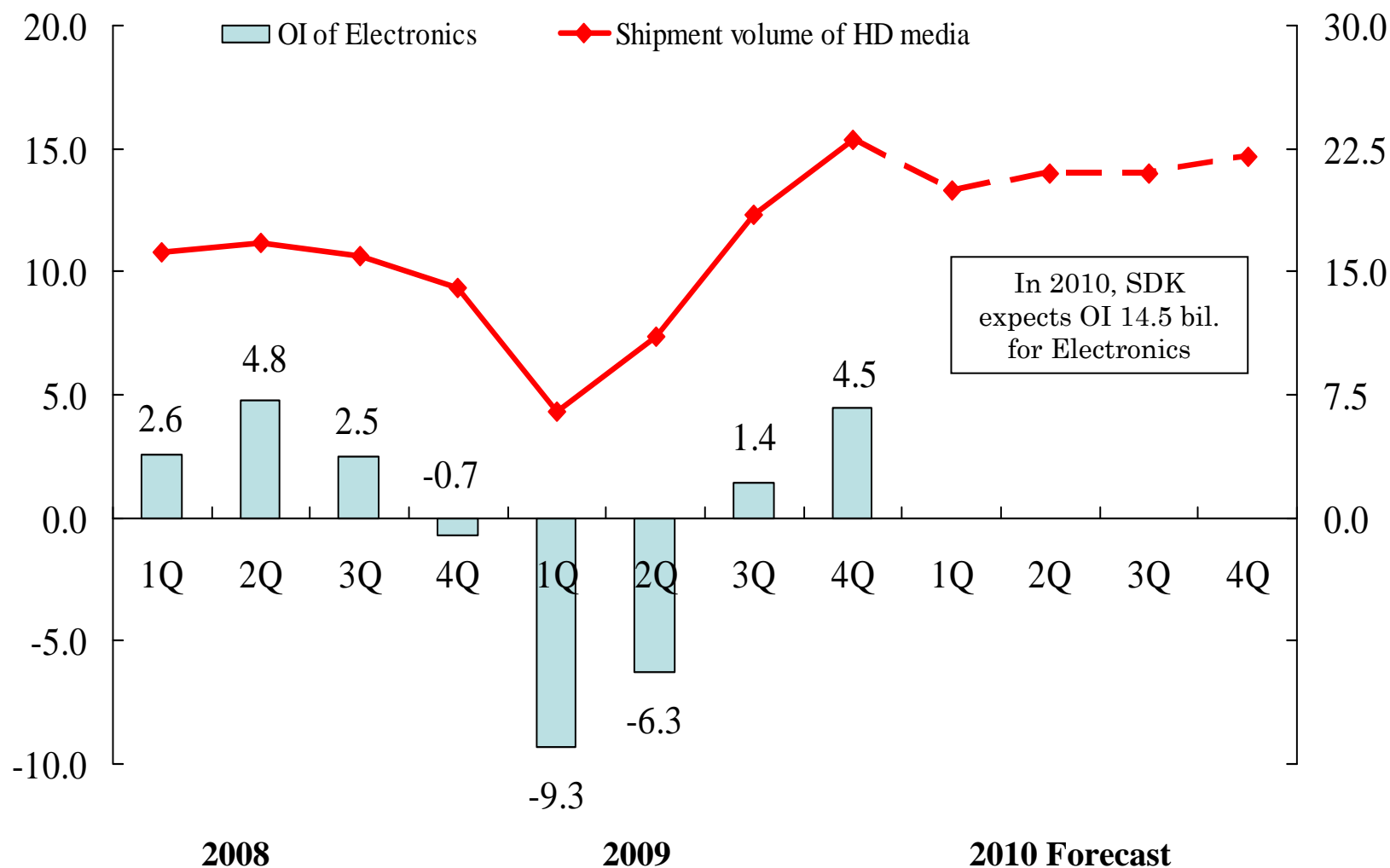


# HD business update (2)

## Trend of Shipment volumes of SDK's HD media, Operating Income of Electronics

(Unit: Billions of Yen)

(Unit: mil. per month)



# Topics

## ■ Corporate

### ● **Structural reform in 2009/2010 and strategic concepts for 2011 and after** (Announced on July 30)

#### ◆ Passion Extension 2009/2010

In 2009 and 2010, SDK is laying the groundwork for growth in preparation for the new medium-term consolidated business plan for 2011 and after. At the same time, SDK is carrying out structural reform by drastically reviewing various operations and optimizing our production setup.

#### ◆ Strategic concepts for 2011 and after

In view of the global warming issue and limitations of crude oil and other resources, SDK expects increased social demand for environmental protection and energy conservation technologies. Under the new consolidated business plan, which is now being prepared, SDK will strengthen its position as a “unique chemical company with individualized products,” developing various components, materials and solutions. SDK will contribute to the sound growth of society by meeting the needs for energy conservation, health and safety, and higher efficiency. SDK will efficiently allocate resources to these growth areas so as to accelerate the development of high-performance products.



## ■ Corporate

# Topics

- **Issuance of new shares and sale of shares; issuance by third-party allotment of Euro-Yen convertible bonds with warrants due 2014 (with subordination clause); and issuance by an overseas special-purpose subsidiary of Euro-Yen permanent preferred securities with the right of conversion into common stock (Announced on September 29)**
  - ◆ In preparation for the launch of a new consolidated business plan for 2011 and after, SDK increased our capital by public offering to expand growth businesses and strengthen base businesses. Proceeds from the public offering will be used mainly for capital investment in the growing Electronics segment and in base businesses such as Petrochemicals. The remainder will be used for repayment of interest-bearing debt. To restrict dilution of our common stock as much as possible, SDK used hybrid finance in combination. Specifically, SDK issued Euro-Yen convertible bonds with warrants due 2014 (with subordination clause) by third-party allotment and Euro-Yen permanent preferred securities, with the right of conversion into common stock, through its overseas subsidiary. This hybrid finance represents in-between of capital and debt.
  - ◆ Thus, in addition to restricting dilution, SDK has improved our financial strength through virtual capital increase. Proceeds from the hybrid finance have been used for repayment of interest-bearing debt. Total proceeds from the financing scheme amounted to ¥61,319 million, comprising ¥37,319 million from public offering and ¥24,000 million from hybrid finance.

## ■ Corporate

- **Changes in the Board of Directors and business execution setup (Announced on November 30)**
  - ◆ SDK has made organizational changes to further strengthen the Board of Directors' supervision of business execution. Under the new system, the Company appoints directors from the viewpoint of strengthening corporate governance. Corporate officers whose duties are primarily business execution will not concurrently serve as directors, in principle. Part of decision-making authority pertaining to business execution will be transferred from the Board of Directors to the Management Committee. The Board of Directors will put greater emphasis on supervision functions, while decisions regarding business execution will be made more quickly.
  
- **Establishment of China Office (Announced on November 30)**
  - ◆ SDK has established a China Office as a unit responsible for overall business strategy and operations in China. With the new organization, SDK will expand operations in the quickly growing Chinese market and strengthen the management of Showa Denko Group companies in China.

# Topics

## ■ Corporate

### ● **Merger with Showa Highpolymer (Announced on December 15)**

- ◆ It has been decided that Showa Denko K.K. and its consolidated subsidiary Showa Highpolymer Co., Ltd. (SHP) will merge as a means to accelerate the growth of SHP's functional polymers business through integration of the two companies' resources, such as human resources, technologies, organizations and funds for investment. The merger will take effect on July 1, 2010.

## ■ Petrochemicals

### ● **Expansion of production capacity for high-value-added polypropylene (Announced on March 13)**

- ◆ Sun Allomer Ltd., an affiliate of ours to which the equity method is applied, will modify its plant in Oita to start producing high-value-added polypropylene with high rigidity and impact resistance. At the same time, the capacity of the plant will be increased by approximately 60,000 tons a year to make up for the resultant capacity shortage for existing product mix. Furthermore, the company will modify the plant to conserve energy and improve the efficiency of equipment management. Construction work will be completed in the first half of 2010.

# Topics

## ■ Petrochemicals

- **Commercialization of allyl ester resin for spectacle lenses  
(Announced on November 9)**
  - ◆ SDK decided to start commercial production of allyl ester resin (trade name: SR-21) in early 2010 for use in medium-refraction-type spectacle lenses, whose demand is expected to grow on a global scale. In China and other Asian countries, Eastern Europe, and Latin America, demand is shifting, with the rise in income, to medium-refraction-type spectacle lenses. In the Japanese market, where high-refraction-type spectacle lenses have been the mainstream, demand for medium-refraction-type spectacle lenses is growing due to the good balance between price and product quality. World demand for this type of lenses is expected to grow at the rate of 20% a year.

## ■ Chemicals

- **Making Showa Tansan a wholly owned subsidiary  
(Announced on September 29)**
  - ◆ Showa Tansan Co., Ltd., a consolidated subsidiary, became our wholly owned subsidiary effective December 24, 2009. To strengthen the Showa Denko Group's industrial gas operations, the two companies consolidated their operations at Kawasaki (the site of the Group's industrial gas production) as a means to ensure speedy and efficient use of resources, strengthen competitiveness, and accelerate expansions in the Asian market.

## ■ Electronics

### ● Expansion of the C4F6 etching gas business

(Announced on January 8, 2009)

- ◆ SDK has started producing high-purity C4F6 etching gas in Kawasaki in cooperation with Air Products and Chemicals, Inc., of the United States. Demand for C4F6 is expected to grow due to its improved processability and selectivity as well as very low environmental impact.

### ● Commercialization of VGCF<sup>TM</sup>-X, a new grade of carbon nanotube

(Announced on January 19, 2009)

- ◆ SDK decided to build a 400-ton-a-year plant at Oita Complex to produce VGCF<sup>TM</sup>-X, a new grade of carbon nanotube with an optimized design for resin composite applications. Commercial shipments will begin in the first half of 2010. A small added amount of VGCF<sup>TM</sup>-X can give stable electric conductivity to resins. Thus, it will find applications in static-free plastic cases for the carriage of semiconductor/HD media parts in a clean room. SDK concluded a patent cross-license agreement with Hyperion Catalysis International, Inc., of the United States, which owns many key patents pertaining to materials and applications in the area of carbon nanotubes, including for resin composites.

# Topics

## ■ Electronics

- **Development of AlGaInP red LED chips optimized for plant growth  
(Announced on April 2)**

- ◆ In April, SDK started commercial production of AlGaInP LED chips that emit red light with the wavelength of 660 nm: the optimum light for accelerating the growth of plants. To the best of our knowledge, the product had the world's highest output as of April 2009 as LED chips that emit red light with the wavelength of 660 nm. SDK will develop applications for these red LED chips, mainly for use at facilities that grow lettuce and other vegetables in an environment of controlled lighting.

- **Launch of graphite anode material for lithium ion batteries in electric vehicles  
(Announced on April 22)**

- ◆ SDK started selling a new grade of SCMG<sup>TM</sup> (shape-controlled micro graphite) for use as anode material in large lithium ion batteries (LIBs) for electric vehicles produced in Japan and abroad. SCMG<sup>TM</sup> enables the use of heavy current and extends the life of LIBs. SDK decided to increase our SCMG<sup>TM</sup> production capacity at Omachi from 1,000 tons a year at present to 3,000 tons a year in 2012, investing approximately ¥2 billion.

- **Transfer of the conductive polymer aluminum capacitors business  
(Announced on June 22)**

- ◆ SDK transferred its solid conductive polymer aluminum capacitors business to Murata Manufacturing Co., Ltd. at the end of 2009. SDK will continue speedily concentrating our operations on strategically selected areas.

# Topics

## ■ Electronics

### ● **Launch of Showa Denko HD Yamagata (Announced on July 1)**

◆ In July, SDK started up Showa Denko HD Yamagata K.K. by acquiring Fujitsu Limited's HD media production subsidiary. The company is SDK's fourth HD media production site in the world, following the existing sites in Chiba Prefecture (Japan), Taiwan and Singapore. As the world's largest independent HD media supplier, SDK will continue developing and supplying large-capacity HD media to meet customer needs.

### ● **Development of organic EL devices with light output of 40% (Announced on July 28)**

◆ SDK has developed a new structure for our organic electroluminescent (organic EL) devices, achieving approximately 40% in light output, which represents the highest level in the world. As a result, SDK has achieved a 30 lm/W emissive efficiency for our coated phosphorescent-polymer-based organic EL devices. (Emissive efficiency refers to the quantity of light emitted from light source, divided by electric power consumed.) The 30 lm/W emissive efficiency represents the highest level among coated-type organic EL devices that have been announced in the world. SDK is planning to commercialize its organic EL devices for use in general lighting.

# Topics

## ■ Electronics

### ● **Launch of 2.5-inch 334 GB HD media (Announced on September 8)**

◆ In August, SDK began commercial shipments of 2.5-inch HD media with storage capacity of 334 gigabytes per disk, using the fifth-generation perpendicular magnetic recording (PMR) technology. To the best of our knowledge, this product had the world's highest storage capacity for this size available on the market as of September 8, 2009. SDK is already providing 1.89-, 2.5-, and 3.5-inch large-capacity HD media using the fourth-generation PMR technology. Demand for high-capacity HD media is growing for such applications as PCs that can record and edit moving pictures as well as high-definition HDD recorders that can record digital high-definition TV programs. SDK will continue meeting the requirements of customers both in terms of quality and quantity as the world's largest independent HD media supplier.

### ● **Establishment of Advanced Battery Materials Dept. (Announced on September 15)**

◆ SDK has established an Advanced Battery Materials Department for R&D, production and sale of LIB components, including VGCF<sup>TM</sup> (additive in cathodes/anodes of high-performance LIBs) and SCMG<sup>TM</sup> (graphite anode material already adopted in LIBs for electric vehicles). With the establishment of the new department, SDK will accelerate the development of innovative technologies for battery components, speedily fulfilling customers' requirements.



# Topics

## ■ Electronics

### ● **Development of new liquid electrolytes for automotive LIBs** (Announced on November 19)

- ◆ SDK is developing new liquid electrolytes for large LIBs for automobiles using a new and stable electrolyte salt. SDK will utilize electrolyte salt technologies owned by Air Products and Chemicals, Inc. (APD), of the United States, in combination with our proprietary liquid electrolyte technology, thereby developing the next-generation liquid electrolytes best suited for automotive LIBs and quickly establishing their commercial production technology. Compared with conventional electrolyte salts, APD's electrolyte salt is anticipated to be advantageous in that it minimizes reaction with water (a cause of deterioration of batteries); does not generate cathode-corroding acids with the lapse of time; and is capable of operating at 400° C. Our new liquid electrolytes will increase battery capacity\* compared with conventional liquid electrolytes.

Note: Battery capacity refers to the total amount of electric current, in terms of ampere-hour (Ah), produced from the beginning to the end of the use of a battery, without charges during the course.

### ● **Commercialization of SiC epitaxial wafers with very smooth surface** (Announced on December 8)

- ◆ SDK has succeeded in commercial production of four-inch silicon carbide (SiC) epitaxial wafers having very high smoothness all over the surface. The product's surface smoothness has improved by about six times compared with conventional products, achieving the world's highest level. Surface smoothness is important because oxide film, formed on the surface of epitaxial wafers, is used in device operation. When compared with the mainstream silicon-based semiconductors, SiC power devices can operate at high temperatures and under high-voltage heavy current. Thus, these SiC power devices will enable the production of light-weight, small-sized power control parts for automobiles, railcars, and industrial/home electric appliances. The devices will also reduce energy loss in the process of power control to about one-tenth of silicon-based semiconductors, helping conserve energy.

# Topics

## ■ Electronics

- **Conclusion of license agreement with UDC concerning organic EL technology for white lighting applications (Announced on December 18)**

- ◆ SDK concluded a license agreement with Universal Display Corporation (UDC), of the United States, concerning organic EL technologies for white lighting applications. By combining our own material & device-structure technologies and UDC's phosphorescent organic EL technologies, SDK will improve the efficiency of coating with phosphorescent materials and accelerate the development of organic EL devices with longer life. SDK aims to achieve emissive efficiency of 150 lm/W and white-luminance half-life of 50,000 hours by 2015, and commercialize white organic EL lighting that surpasses the performance of fluorescent lamps.

## ■ Inorganics

- **Reduction of CO<sub>2</sub> emissions from graphite electrode production (Announced on May 21)**

- ◆ SDK completed our shift in fuel from heavy oil to liquefied natural gas (LNG) in the baking process for graphite electrode production at the Omachi Plant. This helps the Plant to reduce CO<sub>2</sub> emissions by 10,000 tons a year. To facilitate the fuel shift, SDK builds a 270-kl LNG storage facility within the premises of the Plant. LNG is gasified at the facility and supplied to the baking process. Surplus waste heat collected at the Plant is used as heat source for the gasification of LNG.

# Topics

## ■ Aluminum and other

- **Withdrawal from commodity aluminum extrusions business and rationalization by personnel reduction (Announced on August 26)**
  - ◆ SDK is working to reform and strengthen our aluminum business in response to drastic changes in the economic conditions. As part of these efforts, SDK withdrew from the business in commodity aluminum extrusions, centering on building materials, and reduced personnel in the Aluminum segment. SDK aims to continue improving profitability of the aluminum business.
  
- **Consolidation of engineering functions in the Group (Announced on September 24)**
  - ◆ SDK decided to absorb the engineering business of our consolidated subsidiary Showa Engineering Co., Ltd. Showa Denko K.K. (SDK) will take unified control of plant design and construction operations for its Group companies, cutting down the lead time from product development to commercialization. SDK will also provide engineering support to the Group companies' environmental protection efforts, accelerating the reductions in greenhouse gas emissions.

# Topics

## ■ Aluminum and other

### ● **Launch of aluminum-based lighting equipment using LEDs** (Announced on November 26)

- ◆ Showa Denko Aluminum Trading K.K., a consolidated subsidiary of ours, has developed aluminum-based lighting equipment using LEDs in cooperation with Tamagawa University's College of Agriculture. This equipment is characterized by high efficiency of heat dissipation due to the use of aluminum and relevant electronic device technology. With this equipment, it becomes possible to prevent the heat from LED chips from gradually lowering emissive efficiency.

## ■ Technology Headquarters

### ● **Development of platinum-substitute PEFC catalysts with high efficiency** (Announced on July 16)

- ◆ SDK has developed new platinum-substitute catalysts for polymer electrolyte fuel cells (PEFCs) under a project sponsored by the New Energy and Industrial Technology Development Organization (NEDO). These new catalysts comprise a niobium-oxide-based catalyst and a titanium-oxide-based catalyst, each containing carbon and nitrogen atoms. They will enable substantial cost reductions and longer life of PEFCs. These technical developments have been supported by NEDO.

### ● **Development of bipolar-type carbon separators for PEFCs** (Announced on July 23)

- ◆ SDK has developed new technologies to produce low-cost carbon separators that will increase output density of PEFCs. Specifically, SDK has established new technologies to produce carbon separators with lower cost and lighter weight by making substantial changes in the process and raw materials. At the same time, SDK has achieved an increase of around 30% in output density compared with PEFCs SDK made earlier on a trial basis. These technical developments have been supported by NEDO.