Results for Third Quarter of FY2013 (Ended October 31, 2013)

December 6, 2013
SUMCO Corporation
(Code: 3436)

For All Innovation

Notes Regarding the Forecasts

This material is prepared for the purpose of continuous disclosure to general shareholders and investors and will not constitute an offer or solicitation of securities of the Company in any states or jurisdictions.

The estimate, expectation, forecast and other future information is prepared based on the information which is available for the Company as of today and on certain assumptions and qualifications and the actual financial performance or result may be substantially different from such future information contained in the material due to risk factors including domestic and global economic conditions, trend of semiconductor market and foreign exchanges.



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Market Environment

Mayuki Hashimoto
President and CEO

Market Environment (1)

FY2013 Consolidated Business Forecasts

(Billions of yen)	FY2013 Previous Forecast	FY2013 Revised Forecast			Change
		3Q Actual (9 months)	4Q Forecast (2 months)	Total (11 months)	
Net Sales	180.0	147.3	35.7	183.0	+3.0
Operating Income	15.0	15.5	1.5	17.0	+2.0
Ordinary Income	5.0	5.6	0.4	6.0	+1.0
Net Income	0.5	0.3	0.2	0.5	+0.0

Market Environment (2)

Silicon wafer market in 3Q-FY2013

(Memory)

✓ Memory market is strong in spite of a fire accident at a semiconductor manufacturer

(Logic and others)

✓ Tablet PC demand is growing

✓ Personal computer demand remains stagnant

✓ Smartphone demand shifts from high-end products to low-ends

⇒SUMCO experienced volume adjustment by foundries

Outlook

✓ Adjustment phase will continue

✓ Foundry business will recover from 2Q-2014

Silicon Wafer and Semiconductor Technology Trend

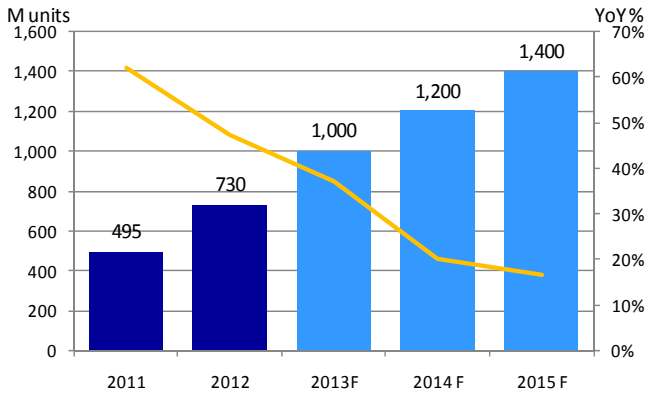
Electronic Products - Demand Forecast
（ Shift from Computing to Communication ）

■ Hardware Unit Shipment Forecast (million units)

	2011	2012	2013 F	2014 F	2015 F
Personal Computer	372	349	315	310	310
YoY%	5%	(6%)	(10%)	(2%)	0%
Tablet	72	145	225	300	350
YoY%	242%	101%	55%	33%	17%
Mobile Phone	1,715	1,740	1,800	1,835	1,900
YoY%	8%	1%	3%	2%	4%
Feature Phone	1,220	1,010	800	635	500
YoY%	(5%)	(17%)	(21%)	(21%)	(21%)
Smartphone	495	730	1,000	1,200	1,400
YoY%	62%	47%	37%	20%	17%

Source ; SUMCO estimation

Smartphone: Less Technology Boundary between High-end and Low-end



Supplier	Korea	China		
		A	B	C
CPU Core	2	2	4	4
Panel size	4″	4.5″	4.5″	4.5″
CNY	699	699	799	766
USD	114	114	131	125

2013
- Developed nations entering replacement demand cycle
- Surging growth in emerging and developing nations

2014
- Continuing demand growth in emerging and developing nations
- Trend towards consolidation of specification and competition of pricing

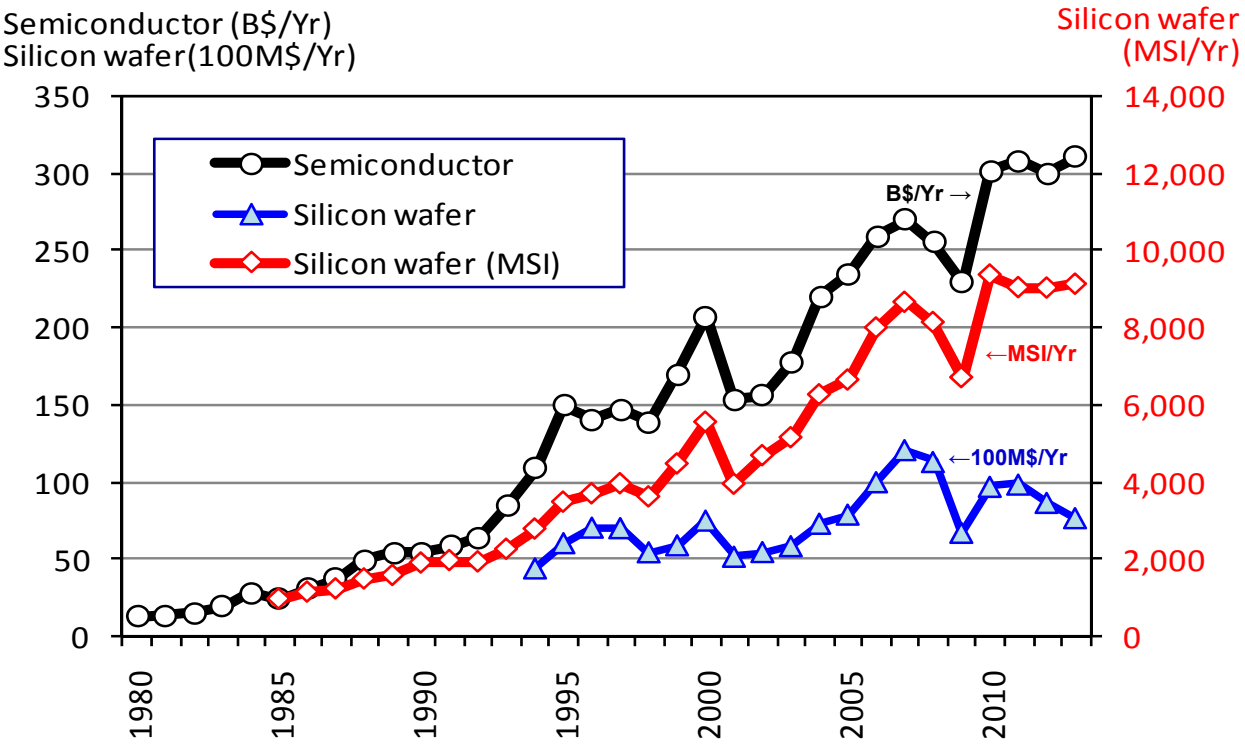
< Specification >

	High-end	Low-end
AP	4 core	2 to 4 core
NAND	16 - 32GB	4 - 8GB
DRAM	1 - 2GB	512MB - 1GB
Display	4.5-5inch	4.5-5inch

- Feature convergence, silicon wafer growth in proportion to unit sales

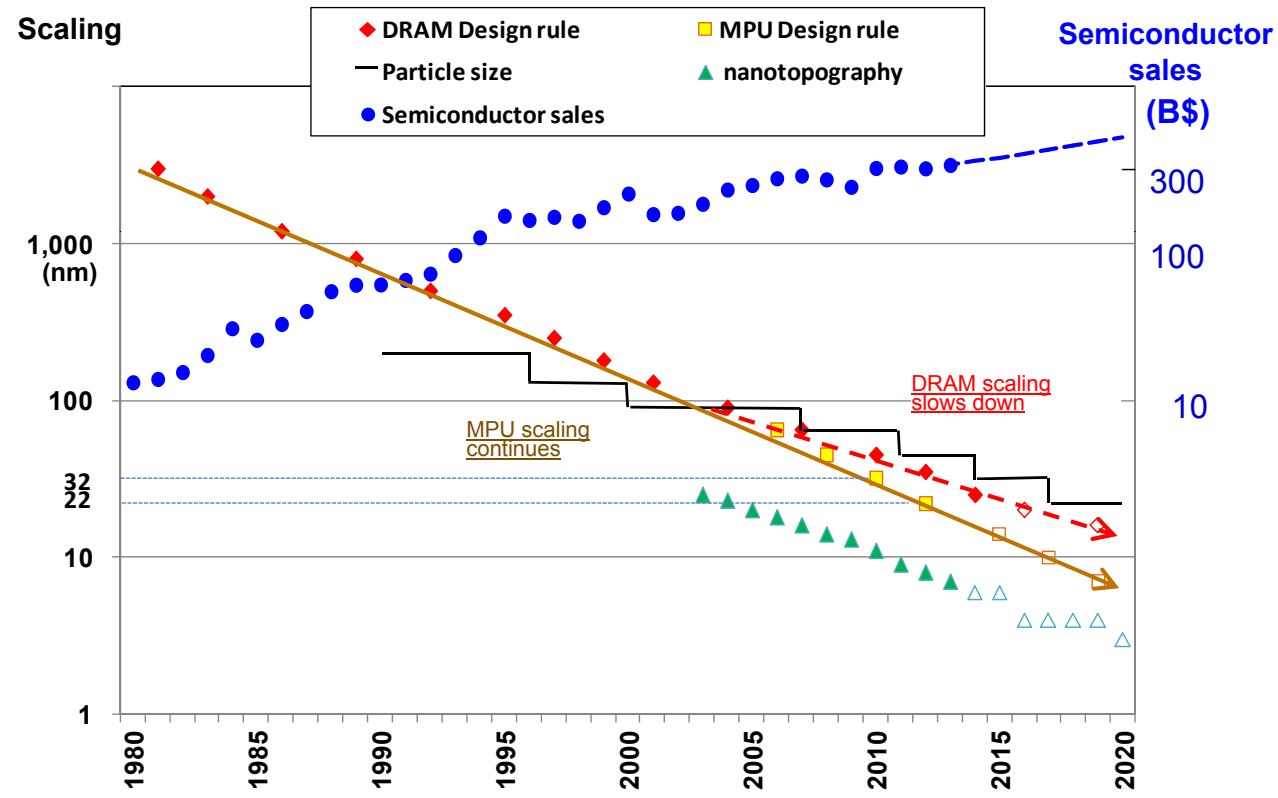
Source: SUMCO estimation

Semiconductor and Silicon Wafer Markets



Source: WSTS, SEMI-date and SUMCO estimation

Growth of Semiconductor Market driven by Scaling and Silicon Wafer Technology



Source: WSTS ITRS-data and SUMCO estimation

Scaling Technology

■ **Fine patterning formation becomes harder**

1) DRAM

- **Cell capacitor formation becomes harder and scaling will be slowdown**

2) NAND

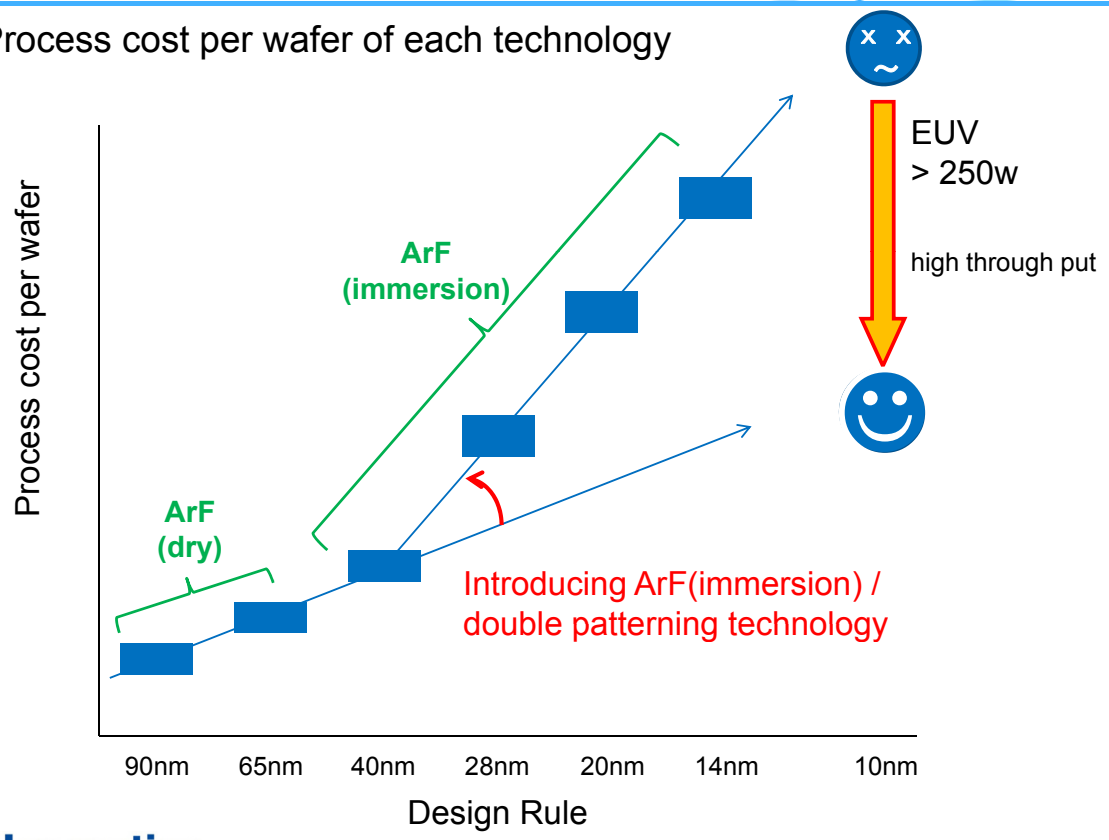
- **2D-NAND scaling will be limited around 1Y to 1Z (about 15 nm) due to electric interference**
- **Scaling by 3D-NAND is in progress**

3) MPU

- **Leak current control becomes harder at scaled device**
- **Leak current is suppressed by FinFET and scaling device is materialized**

Fine Patterning Technology
Process Cost and EUV

■ Process cost per wafer of each technology



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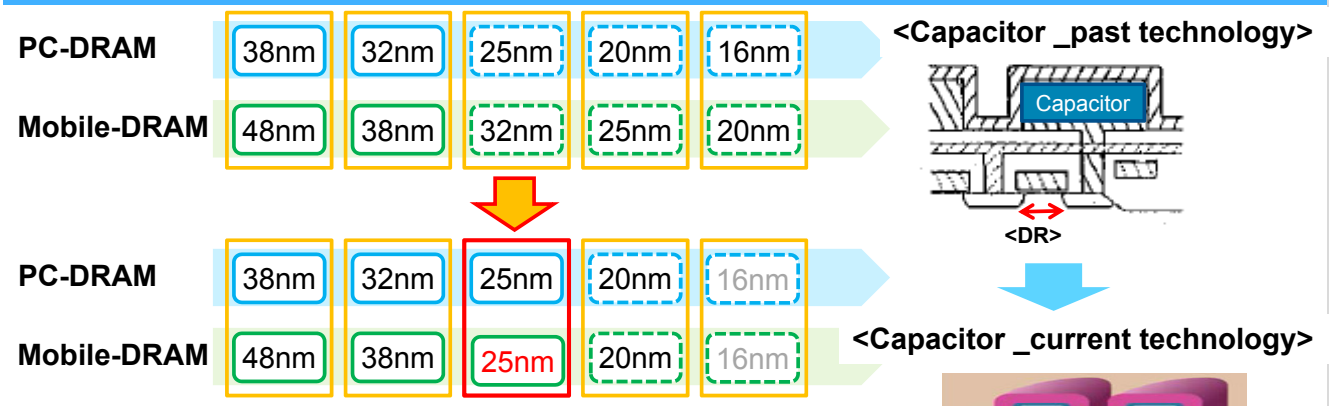
Source: SUMCO estimation

DRAM



- **Scaling is in progress**
- **Mobile DRAM skipped 32nm and go to 25nm**
- **Scaling is close to limitation due to difficulty of formation of cell capacitor**

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Source: SUMCO estimation

2D and 3D-NAND

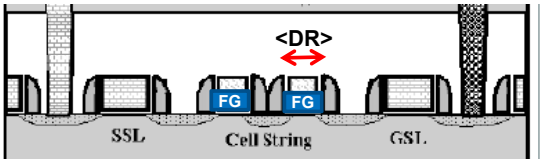
FG-NAND progress

32nm	• Slowness to realize EUV • Adoption of ArF(immersion) / double patterning technology
24nm	• Adoption of low-resistance material • Smaller area with adoption of low-voltage transistors
19nm	• Adoption of air gap structures for reduced leakage, challenging scaling limits
1Ynm	Further leakage measures Greater TLC (3 bit/cell) proportion, etc.
1Znm	• Limits to scaling by extending existing technologies • Further scaling risks major process increase and reduced yield

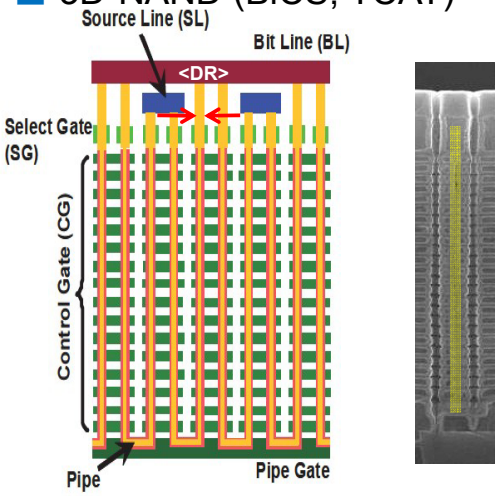
FG-NAND scaling running into limits

On to 3D

2D-NAND

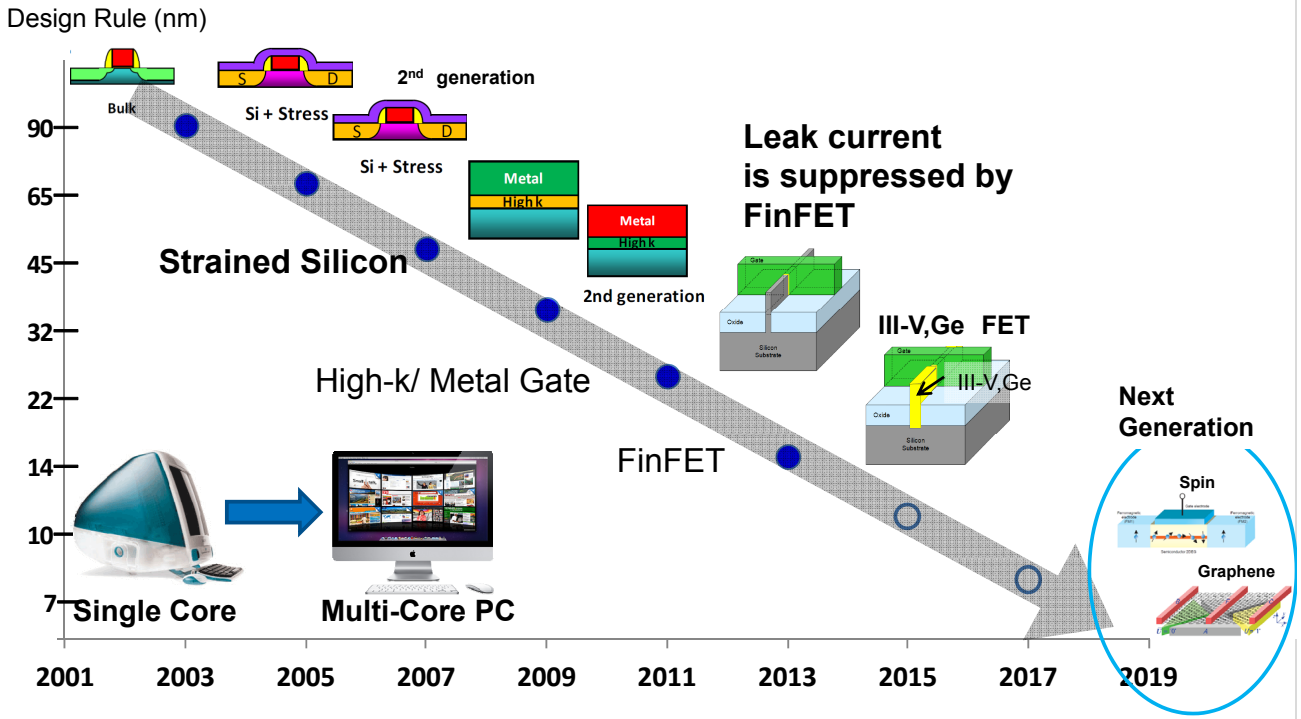


3D-NAND (BiCS, TCAT)



Source: SUMCO estimation

MPU



Source: SUMCO estimation

Summary – Scaling Technology

- ✓ Scaling becomes harder due to delay of EUV and adoption of double patterning technology and other substitutional technology increases process cost
- ✓ High performance and bit density has progressed by scaling which enables lower bit cost - ASP
- ✓ In case scaling slows down, higher performance requires larger chip area which imply increase of wafer demand
- ✓ In either way, requirement of silicon wafer becomes more sophisticated. Higher technology capability, the ability of R&D technology together with customers, and strong bonds of trust are increasingly important

3Q-FY2013
Consolidated Business Results

Michiharu Takii,
Executive Vice President and CFO

1. Summary of Consolidated Business Results

■ Net Sales: 147.3 billion yen, Operating Income: 15.5 billion yen, Net Income: 0.3 billion yen

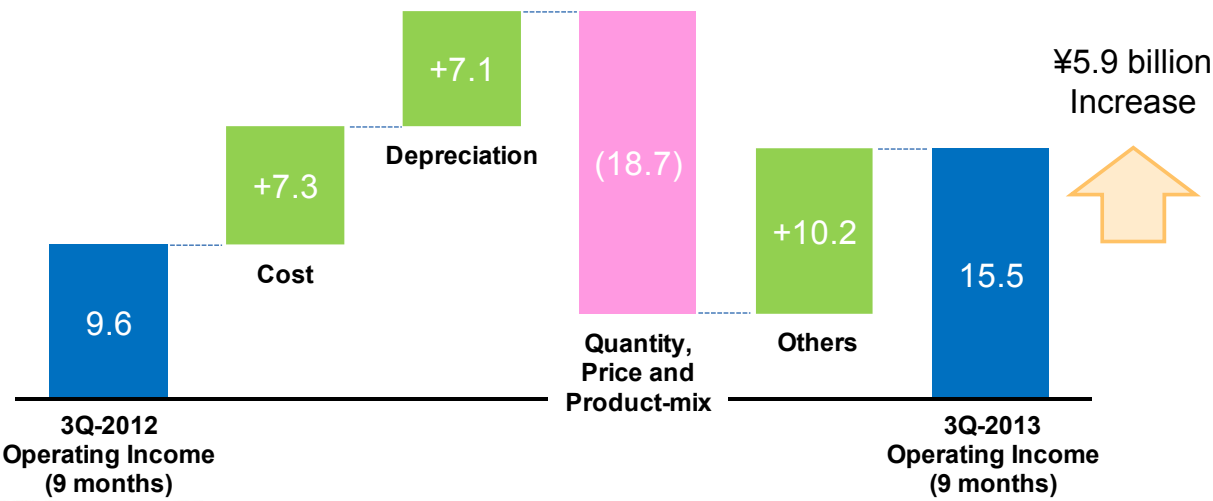
(Billions of yen)	3Q-2012 (9 months)	3Q-2013 1Q	2Q	3Q	Total	Change
Net Sales	160.2	46.6	54.0	46.7	147.3	(12.9)
Operating Income	9.6	4.1	7.7	3.7	15.5	+5.9
Non-operating Income and Expenses	(2.0)	(2.9)	(5.2)	(1.8)	(9.9)	(7.9)
Ordinary Income	7.6	1.2	2.5	1.9	5.6	(2.0)
	(Note 1)				(Note 2)	
Extraordinary Income and Expenses	(5.8)	(0.1)	(2.0)	(0.5)	(2.6)	+3.2
Income Taxes and Minority Interests	(1.7)	(0.6)	(0.9)	(1.2)	(2.7)	(1.0)
Net Income	0.1	0.5	(0.4)	0.2	0.3	+0.2
Capital Expenditure (Acceptance basis)	10.0	1.5	2.7	1.7	5.9	(4.1)
Depreciation	23.9	5.5	5.6	5.6	16.7	(7.2)
EBITDA (Note 3)	34.5	9.9	13.7	9.7	33.3	(1.2)
Exchange Rate (¥/US$)	79.4	92.7	99.2	98.2	96.5	+17.1

(Note 1) Compensation income from solar business
(Note 2) Loss incurred from business restructuring
(Note 3) EBITDA = Operating Profit + Depreciation + Amortization of Goodwill

2-1. Analysis of Changes in Operating Income (3Q-FY2012 Actual → 3Q-FY2013 Actual)

(Billions of Yen)	3Q-2012 (9 months)	3Q-2013 (9 months)	Change
Net Sales	160.2	147.3	(12.9)
Operating Income	9.6	15.5	+5.9
Exchange Rate (¥/$)	79.4	96.5	+17.1

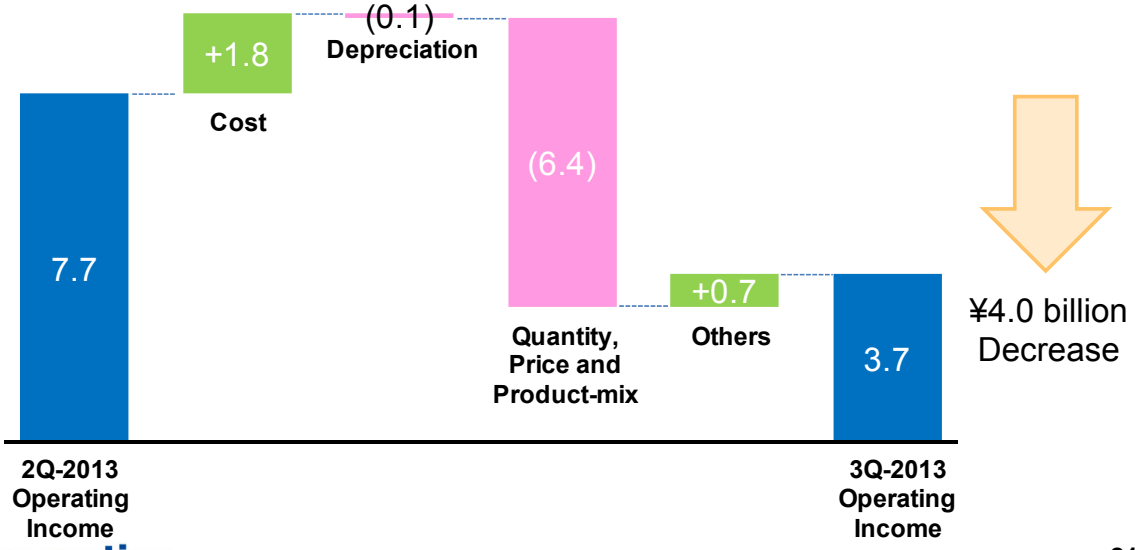
【Analysis of Changes in Operating Income】



2-2. Analysis of Changes in Operating Income (2Q-FY2013 Actual → 3Q-FY2013 Actual)

(Billions of Yen)	2Q-2013 (3 months)	3Q-2013 (3 months)	Change
Net Sales	54.0	46.7	(7.3)
Operating Income	7.7	3.7	(4.0)
Exchange Rate (¥/$)	99.2	98.2	(1.0)

【Analysis of Changes in Operating Income】



3. Consolidated Balance Sheet

■ Total Assets decreased 18.8 billion yen, Liabilities decreased 28.2 billion yen

(Billions of yen)	End of Jan-2013	End of Oct-2013	Change
Cash and time deposits	72.1	44.8	(27.3)
Inventories	113.0	136.6	+23.6
Tangible and intangible assets	197.2	189.8	(7.4)
Deferred income tax assets	6.0	5.8	(0.2)
Other assets	105.0	97.5	(7.5)
Total Assets	493.3	474.5	(18.8)
Debt and borrowings	239.9	227.5	(12.4)
Other liabilities	73.1	57.3	(15.8)
Liabilities	313.0	284.8	(28.2)
Capital stock	136.6	136.6	-
Capital surplus	15.6	15.6	-
Retained earnings	16.8	15.5	(1.3)
Others	11.3	22.0	+10.7
Equity	180.3	189.7	+9.4
Shareholder's equity ratio	32.2%	34.7%	+2.5%
Equity per share (¥)	436.9	461.9	+25.0
D/E ratio (gross)	1.5	1.4	(0.1)
D/E ratio (net)	1.1	1.1	0.0

4. Consolidated Cash-Flow

- Net cash used in operating activities: 5.6 billion yen,
  Net cash used in investing activities: 7.1 billion yen,
  Free cash-flow: (12.7) billion yen

(Billions of yen)	3Q-2013 (9 months)
Income before income taxes and minority interests	3.0
Depreciation	16.7
Subtotal	19.7
Increase in inventories	(19.2)
Change in working capital, etc.	(6.1)
Net cash used in operating activities	(5.6)
Capital expenditure (Acceptance basis)	(5.9)
Others, net	(1.2)
Net cash used in investing activities	(7.1)
Free cash-flow	(12.7)

FY2013
Consolidated Business Forecasts

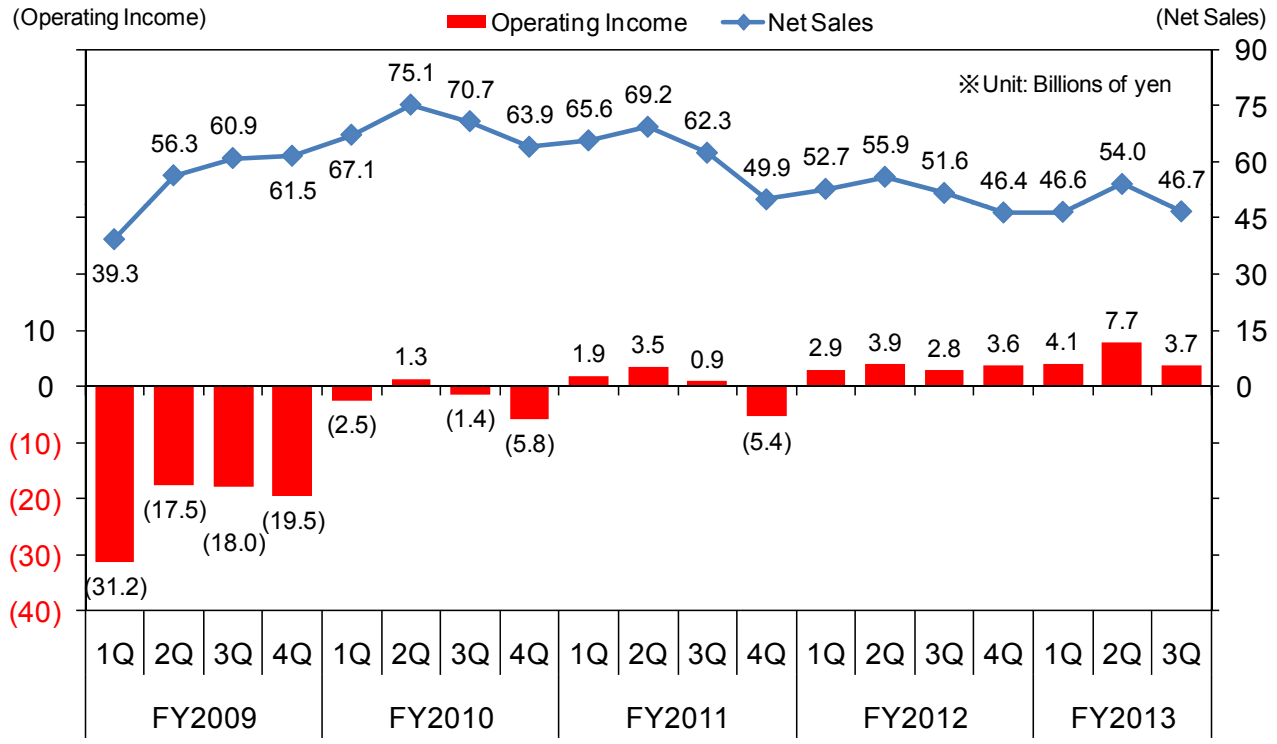
1. FY2013 Consolidated Business Forecasts

(Billions of yen)	FY2013 Previous Forecast			FY2013 Revised Forecast			Change
	1H (6 months)	2H (5 months)	Total (11 months)	1H (6 months)	2H (5 months)	Total (11 months)	
Net Sales	100.6	79.4	180.0	100.6	82.4	183.0	+3.0
Operating Income	11.8	3.2	15.0	11.8	5.2	17.0	+2.0
Non-operating Income and Expenses	(8.1)	(1.9)	(10.0)	(8.1)	(2.9)	(11.0)	(1.0)
Ordinary Income	3.7	1.3	5.0	3.7	2.3	6.0	+1.0
Extraordinary Income and Expenses (Note 1)	(2.1)	(0.6)	(2.7)	(2.1)	(0.6)	(2.7)	+0.0
Income Taxes and Minority Interests	(1.5)	(0.3)	(1.8)	(1.5)	(1.3)	(2.8)	(1.0)
Net Income	0.1	0.4	0.5	0.1	0.4	0.5	+0.0
Capital Expenditure (Acceptance basis)	4.2	4.3	8.5	4.2	4.3	8.5	+0.0
Depreciation	11.1	9.9	21.0	11.1	9.9	21.0	+0.0
EBITDA (Note 2)	23.6	13.9	37.5	23.6	15.9	39.5	+2.0
Exchange Rate (¥/US$)	95.9	95.0	95.5	95.9	98.3	97.0	+1.5

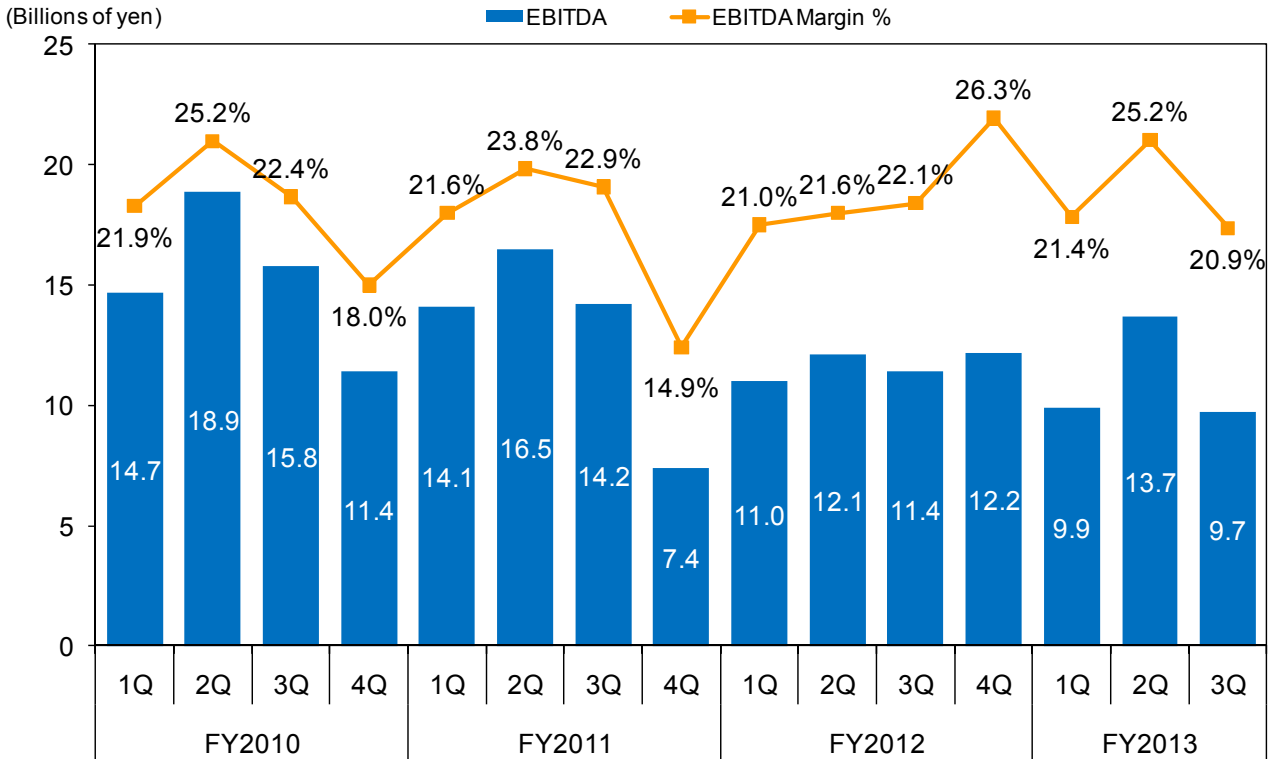
(Note 1) Loss incurred from business restructuring
(Note 2) EBITDA = Operating Profit + Depreciation + Amortization of Goodwill

Reference Materials

Reference Materials: Quarterly Results



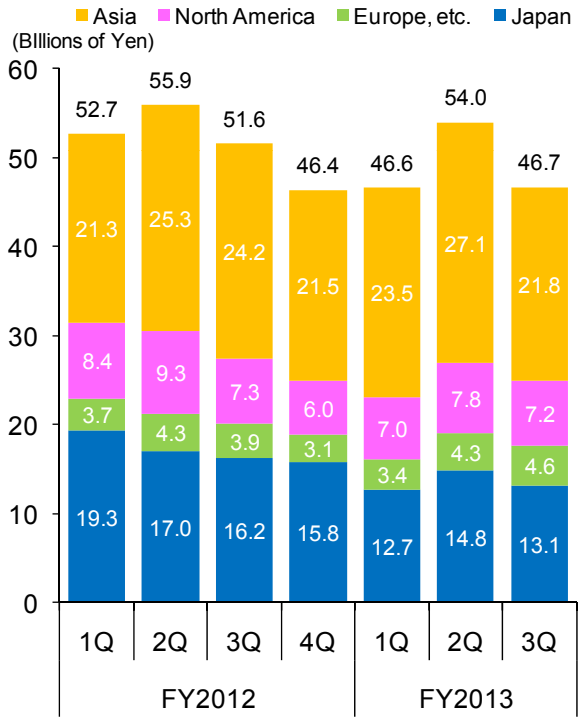
Reference Materials: EBITDA



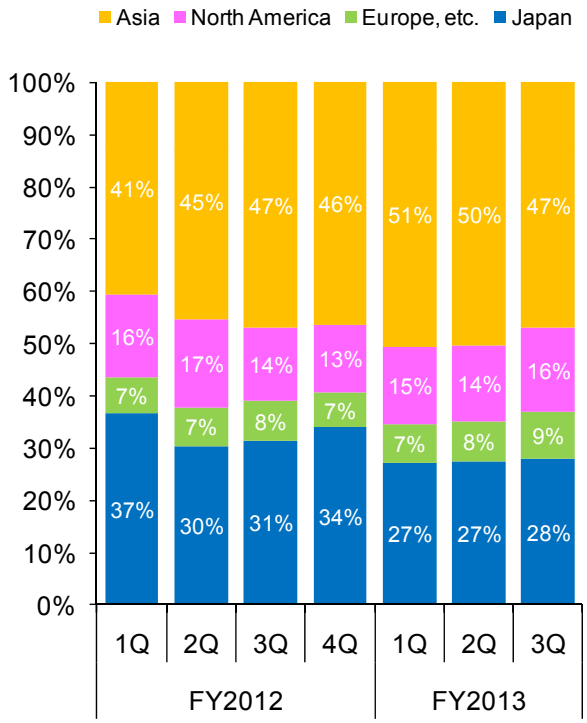
（Note）EBITDA = Operating Profit + Depreciation + Amortization of goodwill

Reference Materials: Sales Results

Changes of Sales



Sales by Region



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