

# Six Months Ended September 30, 2018 (FY2018) Results Briefing



November 20, 2018

GS Yuasa Corporation

## FY2018 First Half Financial Results

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# **FY2018 First Half Financial Results**

# 1. Net Sales, Profits

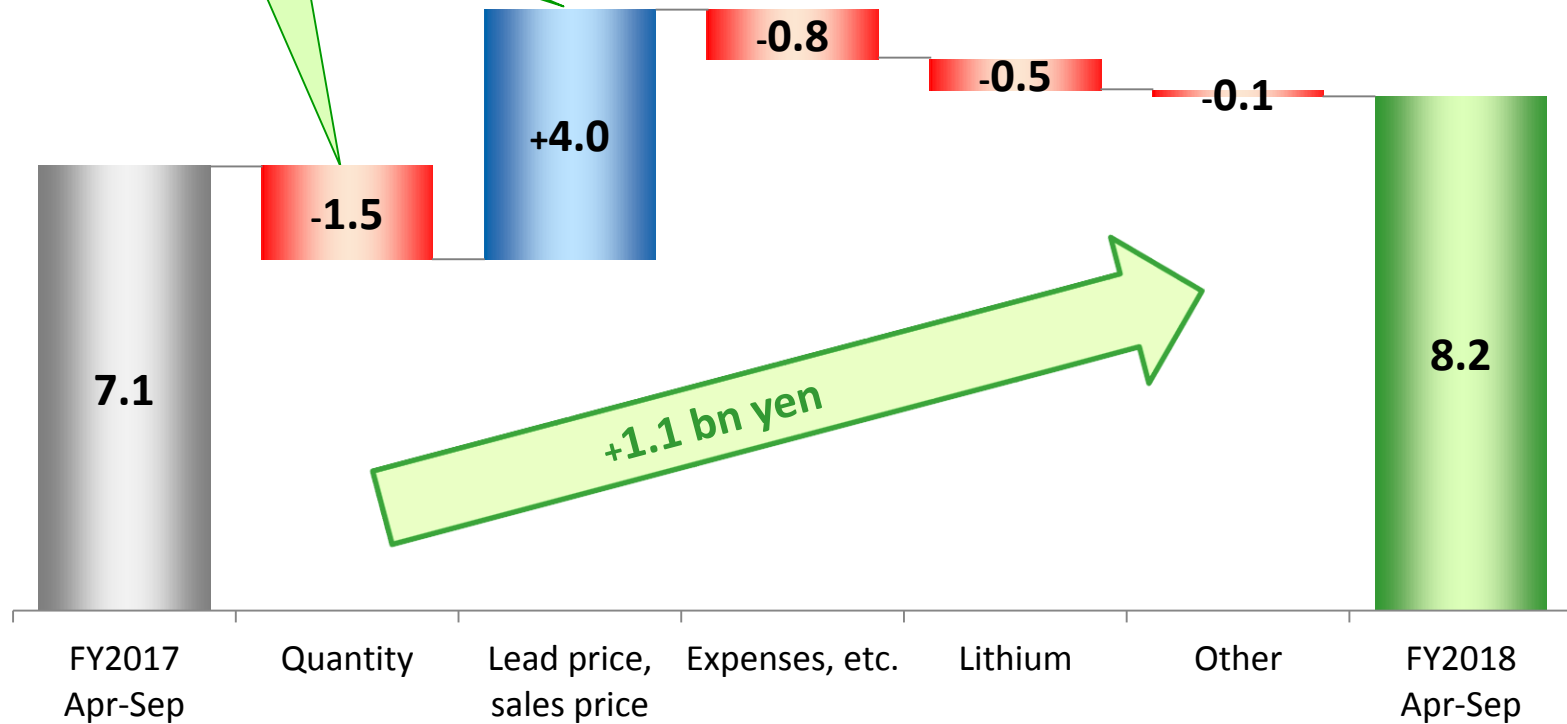
	FY2017 April-Sept	FY2018 April-Sept	Change	(Billion yen) (YoY%)
Net Sales	184.2	<span style="border: 1px solid orange; padding: 2px;">Record</span> 195.4	+11.2	(+6.1%)
Operating income (Operating income ratio)	6.0 3.2%	7.0 3.6%	+1.0 +0.4P	(+16.2%)
Operating income before amortization of goodwill (Operating income ratio before amortization of goodwill)	7.1 3.8%	8.2 4.2%	+1.1 +0.4P	
Ordinary income	6.4	7.5	+1.1	(+16.2%)
Extraordinary income	0.1	0.2	+0.1	
Extraordinary loss	0.1	0.3	+0.2	
Profit before income taxes	6.5	7.5	+1.0	
Income taxes	2.6	2.7	+0.1	
Profit attributable to non-controlling interests	1.3	1.3	-0.0	
Profit attributable to owners of parent (Net profit ratio)	2.5 1.4%	3.5 1.8%	+1.0 +0.4P	(+35.5%)
Profit attributable to owners of parent before amortization of goodwill (Net profit ratio before amortization of goodwill)	3.7 2.0%	4.8 2.4%	+1.1 +0.4P	
Interim dividend (yen/share)	3 yen	3 yen	±0.0	

# 1. Net Sales, Profits

## Factors for Operating Income Change (year-on-year comparison)

(Billion yen)

While quantity did not reach the target, primarily in ASEAN region, compared with the previous year, passing on the cost to sales price, efforts that began last year, progressed as lead price stabilizes.



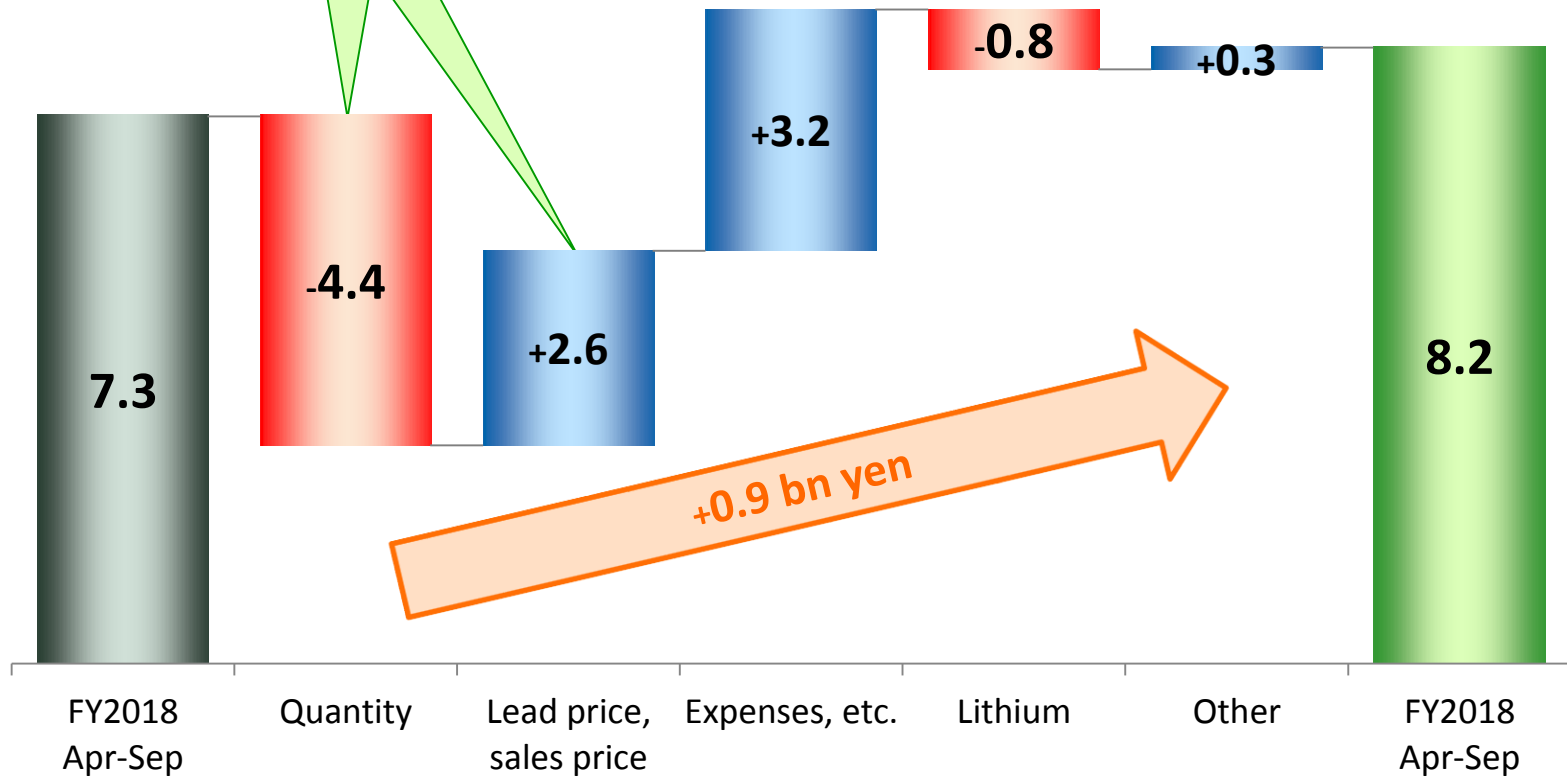
Note: Operating income is operating income before amortization of goodwill.

# 1. Net Sales, Profits

## Factors for Operating Income Change (comparison w/ plan)

(Billion yen)

On the other hand, lead price was lower than the assumption in comparison with the plan and did not reach the estimation in which the quantity was set high primarily in China.



(Initial forecast)

Note: Operating income is operating income before amortization of goodwill.

## 2. Segment Results

(Billion yen)

		FY2017 Apr-Sep		FY2018 Apr-Sep		Change	
		Net sales	Operating income (Op. income ratio: %)	Net sales	Operating income (Op. income ratio: %)	Net sales	Operating income (Op. income ratio: P)
Automotive Battery	Japan	39.3	2.0 (5.2)	41.4	2.7 (6.4)	+2.1	+0.7 (+1.2)
	Overseas	87.7	3.8 (4.3)	92.6	5.0 (5.4)	+4.9	+1.2 (+1.1)
Industrial Battery and Power Supply		30.5	1.1 (3.6)	29.3	0.6 (2.1)	-1.2	-0.5 (-1.5)
Automotive Lithium-ion Battery		19.6	0.2 (1.1)	22.0	-0.3 (-1.3)	+2.4	-0.5 (-2.4)
Others		7.1	-0.1 (-1.3)	10.1	0.3 (2.8)	+3.0	+0.4 (+4.1)
Total		184.2	7.1 (3.8)	195.4	8.2 (4.2)	+11.2	+1.1 (+0.4)

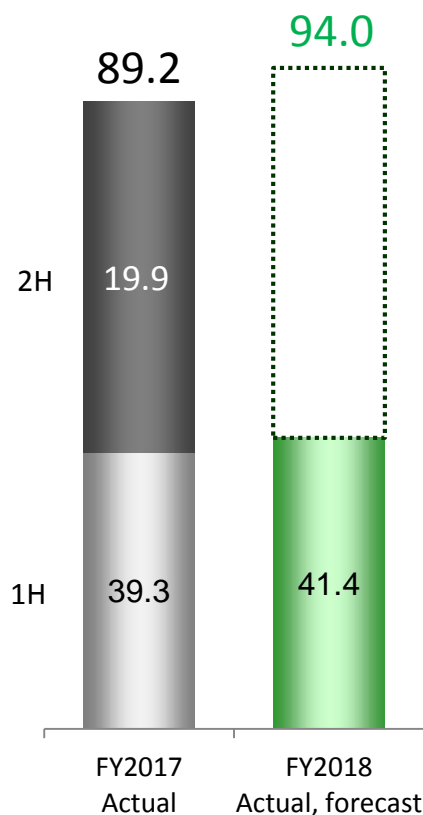
Note: Operating income is operating income before amortization of goodwill and operating income ratio is operating income ratio before amortization of goodwill.

## 2. Segment Results

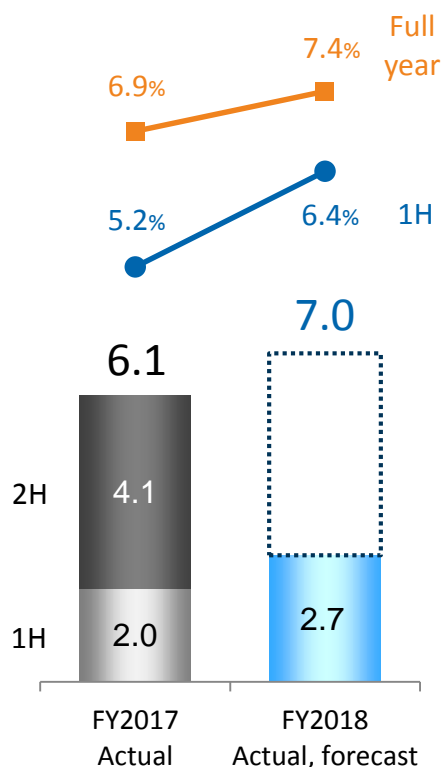
### Automotive Battery (Japan)

(Billion yen)

#### Net sales



#### Operating income/ operating income ratio



#### FY2018 1H Sales Overview

- Among products for new vehicles, sales of EN Standard compliant lead-acid batteries increased
- Among products for replacement, sales of lead-acid batteries for start & stop vehicles (S&S) increased

#### Main Profit Change Factors

Quantity	+0.2
Lead prices, sales prices	+0.8
Streamlining, expenses, etc.	-0.3

Note: Operating income is operating income before amortization of goodwill and operating income ratio is operating income ratio before amortization of goodwill.



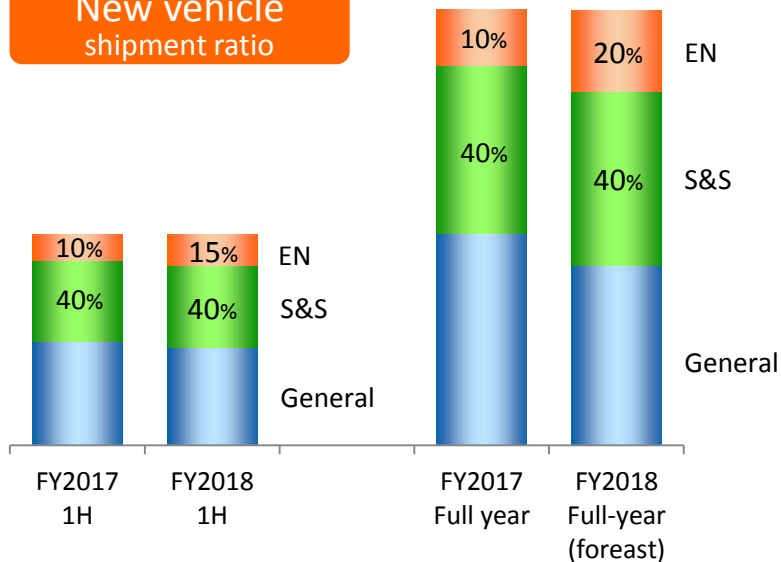
## 2. Segment Results

### Automotive Battery (Japan)

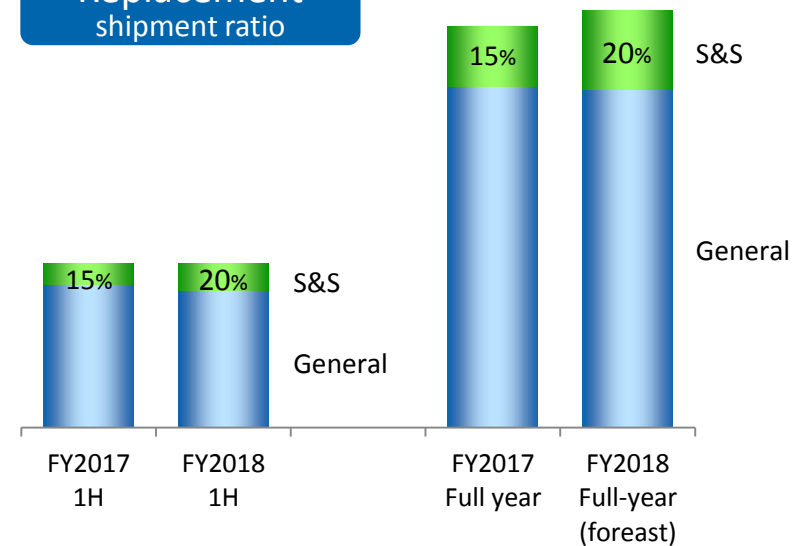
Growing demand for lead-acid batteries for S&S vehicles, EN Standard compliant batteries



New vehicle shipment ratio



Replacement shipment ratio



- Lead-acid batteries for S&S vehicles have been maintaining a high level
- Manufacturers and models adopting EN Standard compliant batteries have been expanding



Expand market share for batteries for new vehicles

- Replacement of lead-acid batteries for S&S vehicles has been steadily expanding

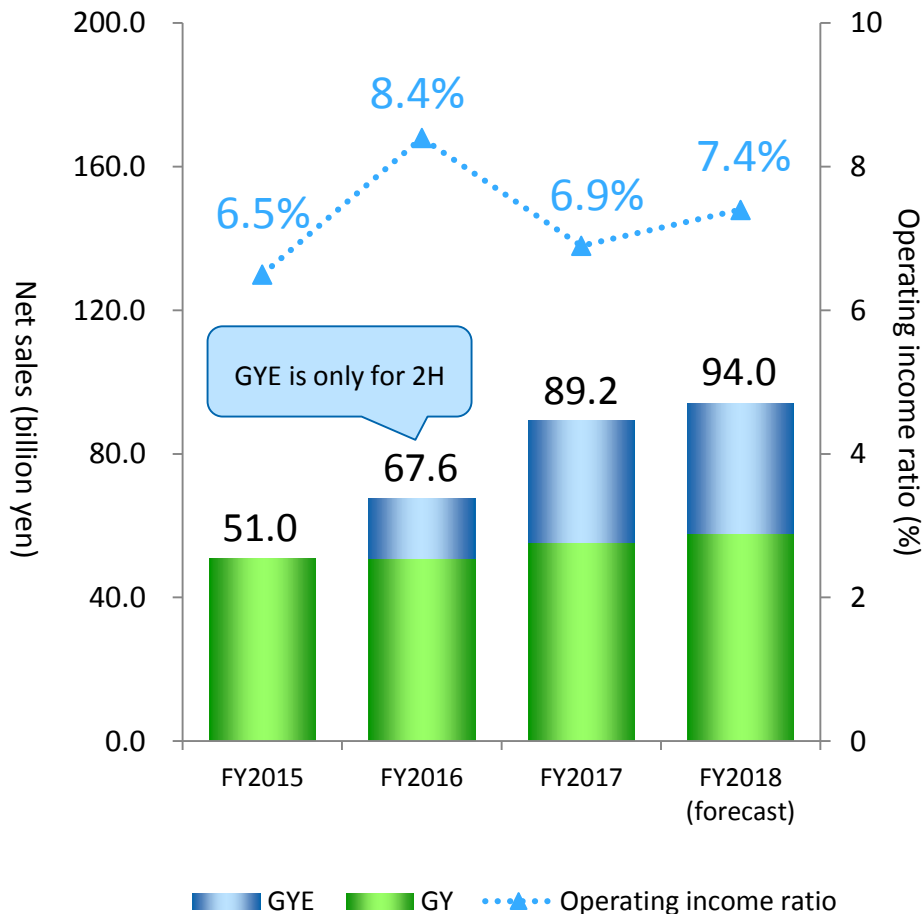


Raise profitability by improving product mix

## 2. Segment Results

### Automotive Battery (Japan)

Synergy effects from full integration of Panasonic's lead-acid battery business



### Synergies that are expected from now on

- Production: establishment of optimum production structure with 4 plants
- Procurement: reduction of costs through joint procurement
- Production technology: facility development leveraging strengths of both sides
- Technology: development of new technology through enhancement of technical strength
- Quality assurance: improvement of product quality through quality system integration



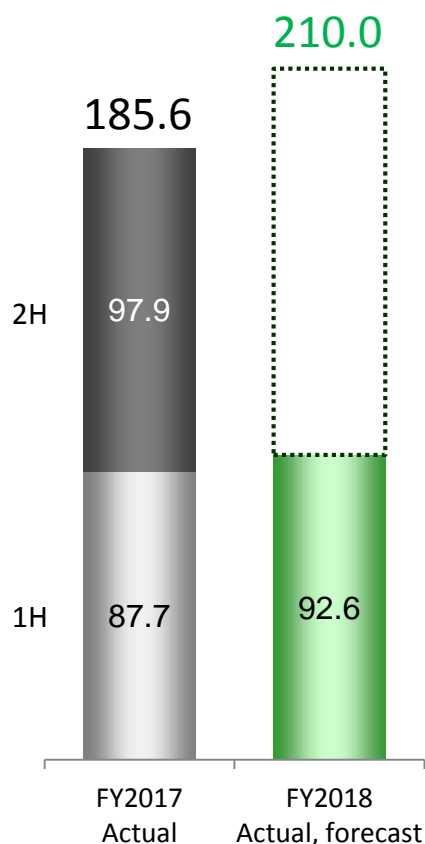
Improved operating income ratio from synergy effects

## 2. Segment Results

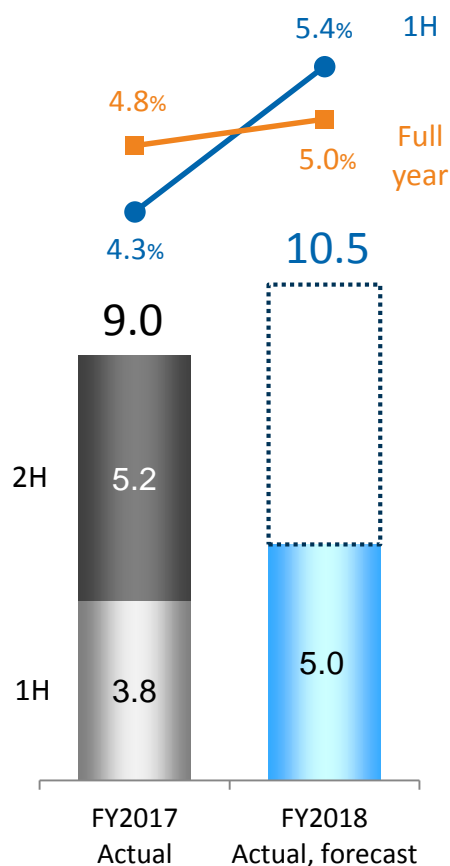
### Automotive Battery (Overseas)

(Billion yen)

#### Net sales



#### Operating income/ operating income ratio



#### FY2018 1H Sales Overview

- While sales of automotive lead-acid batteries increased in China, they declined mainly in ASEAN
- While sales of motorcycle lead-acid batteries increased in Thailand and Indonesia, they fell in China and Vietnam
- The new selling price after passing on the higher lead price has been progressing smoothly

#### Main Profit Change Factors

Quantity	-1.3
Lead prices, sales prices	+3.1
Streamlining, expenses, etc.	-0.2
Foreign exchange rate	-0.5

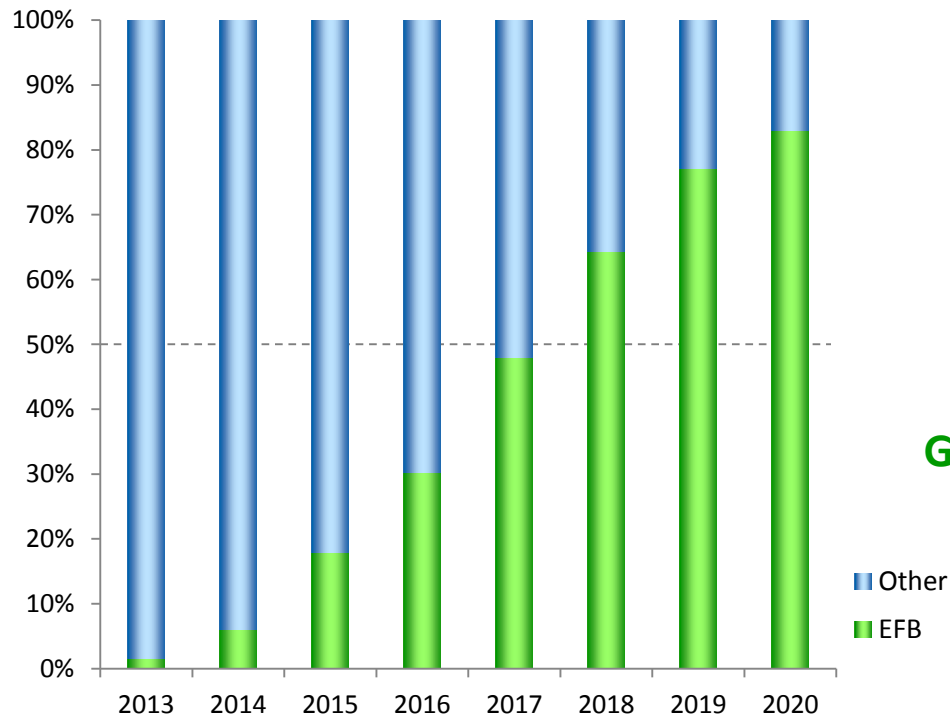
## 2. Segment Results

### Automotive Battery (Overseas)

#### Demand of lead-acid batteries for S&S vehicles (EFB) in China



Sales ratio of batteries for S&S  
(Chinese new vehicle market)



\*Figures for 2018 onwards are estimates

#### Trend in the Chinese market

- Increase in demand for S&S (EFB<sup>\*1</sup>) vehicles due to the tightening of exhaust gas regulations
- Change in needs from AGM<sup>\*2</sup> to S&S(EFB) in China, the world's largest market



**To enhance the production capacity of the Tianjin plant and the Shunde plant, Guangdong Province, and supply batteries for S&S vehicles (EFB) to the whole of China from the Northern and Southern bases on a priority basis**

\*1 EFB (enhanced flooded battery): flooded lead-acid batteries for S&S vehicles

\*2 AGM (absorbed glass mat) batteries: VRLA (valve regulated lead-acid) battery using glass mat separator

## 2. Segment Results

### Automotive Battery (Overseas)

Response to expanding demand primarily with Tianjin plant 

New Tianjin plant in China (image)



Tianjin GS Battery Co., Ltd.

Automotive lead-acid battery

**Production capacity** (annually)

At present **4** million units  **FY2021** **6** million units

#### Features of the new Tianjin plant

- In compliance with the strict environmental regulations of China with cutting-edge facilities
- The group's largest automotive lead-acid battery plant
- Improved production and overall efficiency with the introduction of cutting-edge facilities
- Improved quality with automated production



**To meet the demand from S&S (EFB) vehicles and fuel-efficient cars**

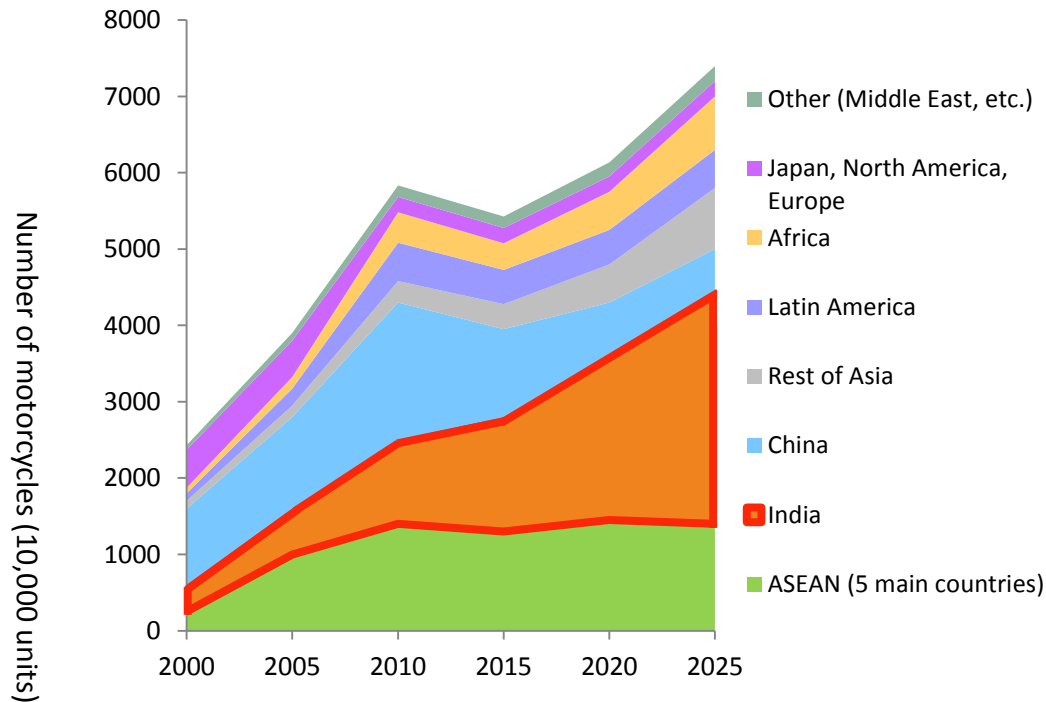
## 2. Segment Results

### Automotive Battery (Overseas)

Response to the expansion of the market for motorcycle lead-acid batteries in India



#### Changes in the size of the motorcycle market



Reference: FOURIN (global: changes in the size of the motorcycle market)



Tata AutoComp GY Batteries Private Limited

Motorcycle lead-acid batteries

**Production capacity** (annual)

At present

**2.4 million units**



**FY2021**

**7 million units**



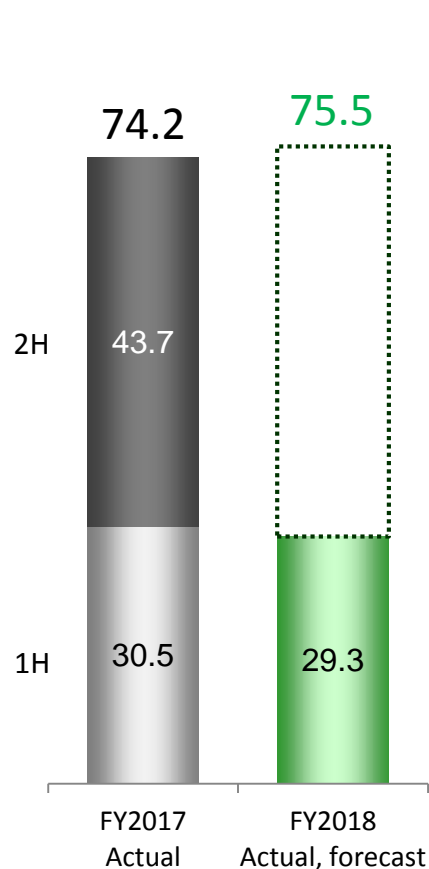
To enhance production structure at an early date to respond to the expansion of the Indian market

## 2. Segment Results

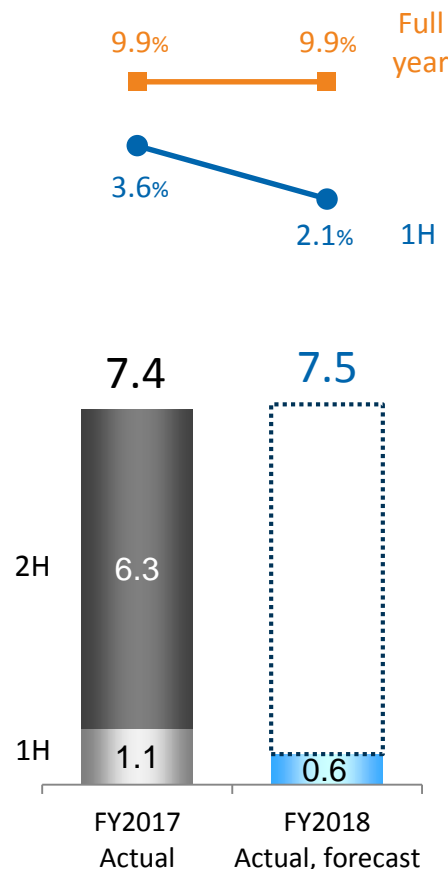
### Industrial Battery and Power Supply

(Billion yen)

#### Net sale



#### Operating income/ operating income ratio



#### FY2018 1H Sales Overview

- Sales of lead-acid batteries for battery-operated forklifts remained strong
- Sales of backup lead-acid batteries decreased
- Transferred the specialized equipment business

#### Main Profit Change Factors

Quantity	-0.4
Lead prices, sales prices	+0.2
Streamlining, expenses, etc.	-0.3

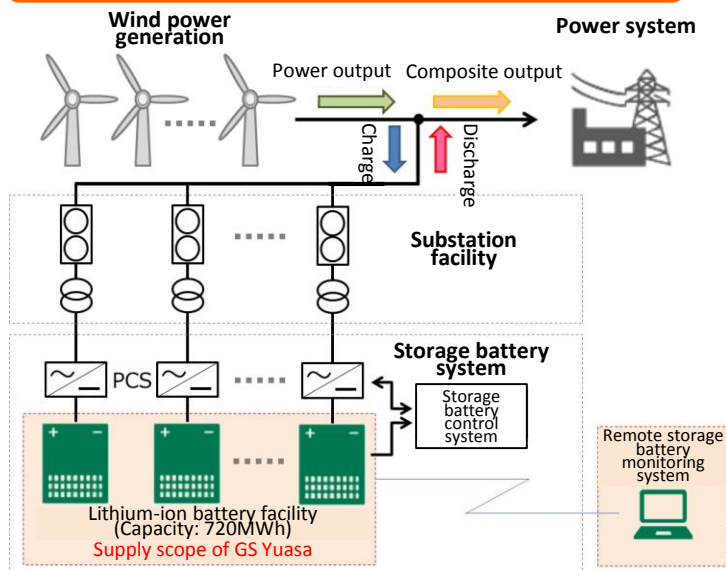
## 2. Segment Results

### Industrial Battery and Power Supply

We won the order for one of the world's largest storage battery facility to be installed in Hokkaido (Toyotomi-cho)



#### Storage battery system in wind power generation



- Expansion of global energy demand
- Effective utilization of renewable energy
- Need for storage battery system that stabilizes power output fluctuation

Introduction of the world's largest storage battery (output: 240MW, capacity: 720MWh)



=

LiB sufficient for 45,000 vehicles

This project contributes to SDGs\* through introduction of the storage battery system to stabilize output fluctuation to effectively utilize renewable energy. Through such initiatives, GS Yuasa Group will also realize **sustainable growth**.

\*SDGs is abbreviation of Sustainable Development Goals adopted by the United Nations in September 2015.





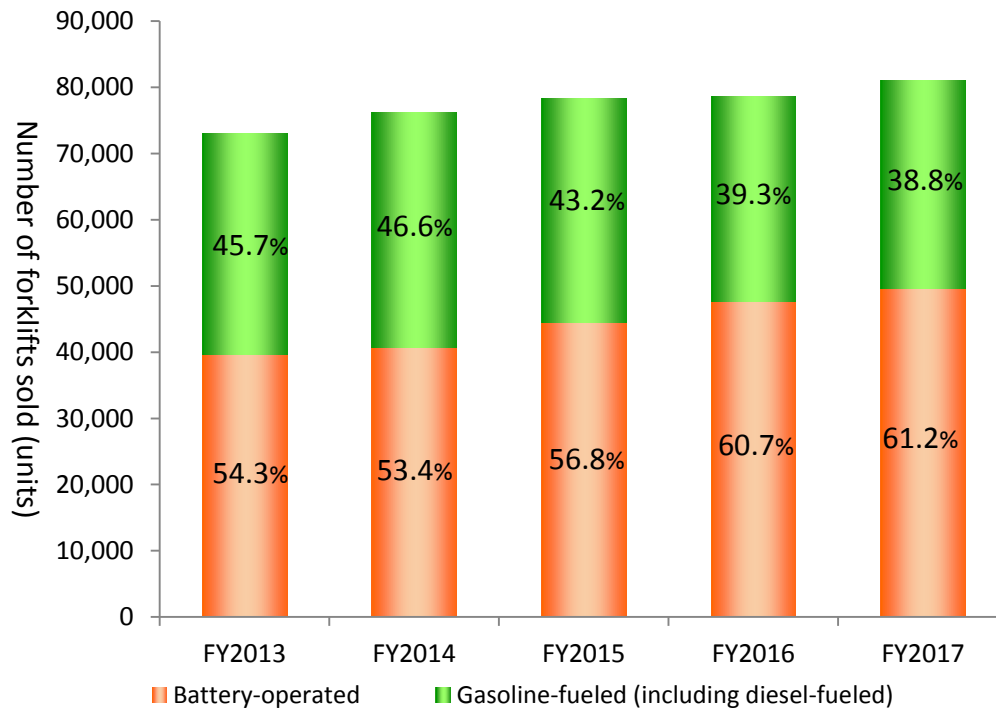
## 2. Segment Results

### Industrial Battery and Power Supply

Increase in demand for lead-acid batteries for forklifts



Number of domestic sales of forklifts



#### Market trend

- In the Japanese market, exhaust gas restrictions have been strengthened for special vehicles that do not travel on public roads since 2006. (Act on Regulation, Etc. of Emissions from Non-road Special Motor Vehicles)
- In the European market, about 80% of forklifts are battery-operated due to the exhaust gas restrictions



Increase in demand for storage batteries for battery-operated forklifts

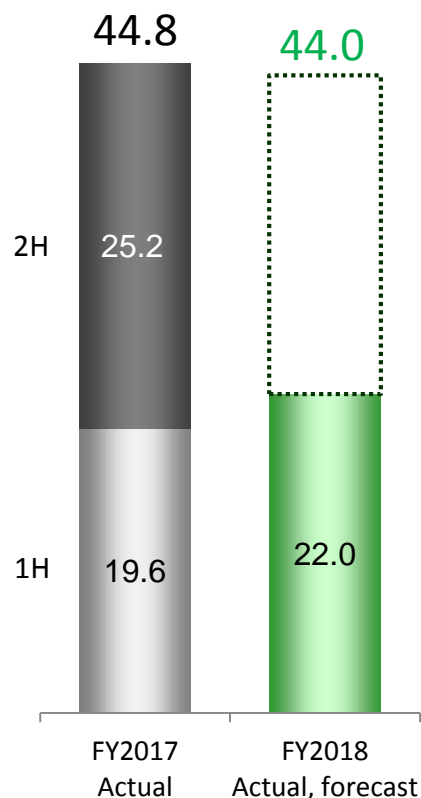
Reference: JIVA (forklift production, domestic sales and exports)

## 2. Segment Results

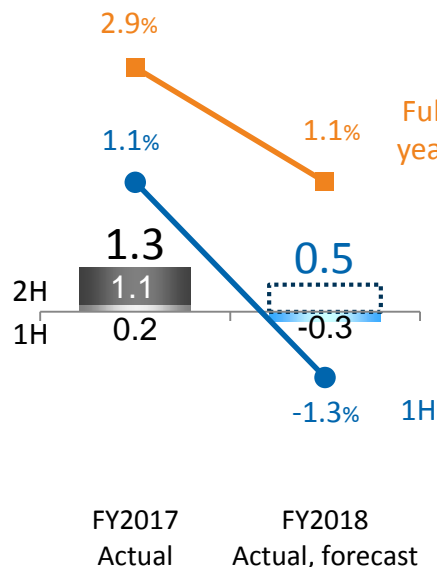
### Automotive Lithium-ion Battery

(Billion yen)

#### Net sales



#### Operating income/ operating income ratio



#### FY2018 1H Sales Overview

- Lithium Energy Japan  
Sales of lithium-ion batteries for plug-in hybrid electric vehicles increased, as sales of plug-in models rose
- Blue Energy  
Sales of lithium-ion batteries for hybrid vehicles declined

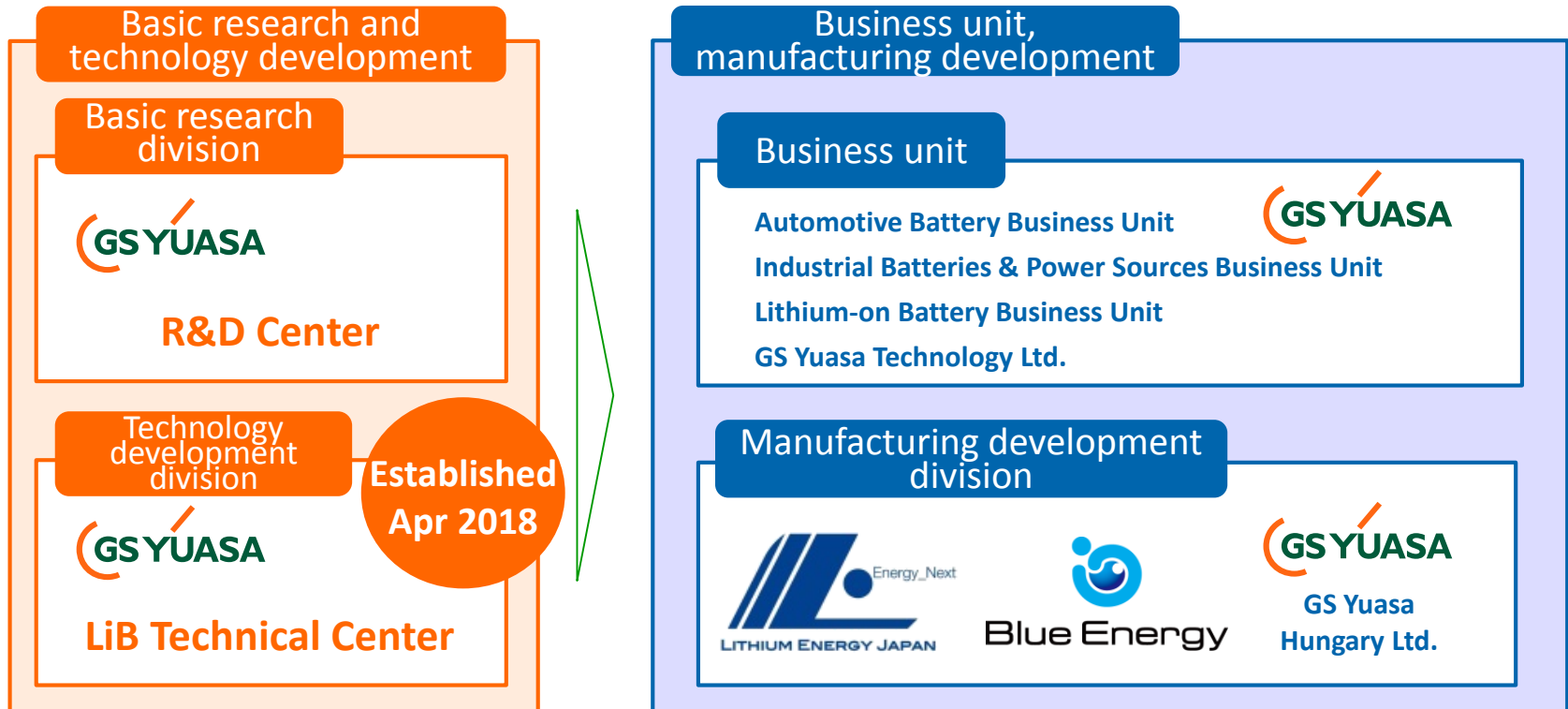
#### Main Profit Change Factors

- Rising raw material prices
- Increase in development expenses

## 2. Segment Results

### Automotive Lithium-ion Battery

#### Strengthening of LiB technology development capability



We established the LiB Technical Center in April 2018 to further enhance the LiB technology development, and have been accelerating the development of products that customers feel satisfied about.

### Automotive Lithium-ion Battery

Implementation status of efforts for supplying 12V lithium-ion batteries for starting vehicles



Hungarian plant



To start operations in 2019 (expected)

GS Yuasa Hungary Ltd.  
(The building completed in Sep 2018)

**Production capacity (initially)**

**500,000** units/year

\*Lithium Energy Japan will produce and export lithium-ion battery cells

Trend in the European market

- Europe has high awareness regarding reducing environmental burdens, as RoHS and ELV directives suggest



Start supplying European luxury automobile manufacturers (from second half of 2019)

Currently responding to inquiries from multiple automobile manufacturers

Point

Our supply of lead-acid batteries to European manufacturers is limited



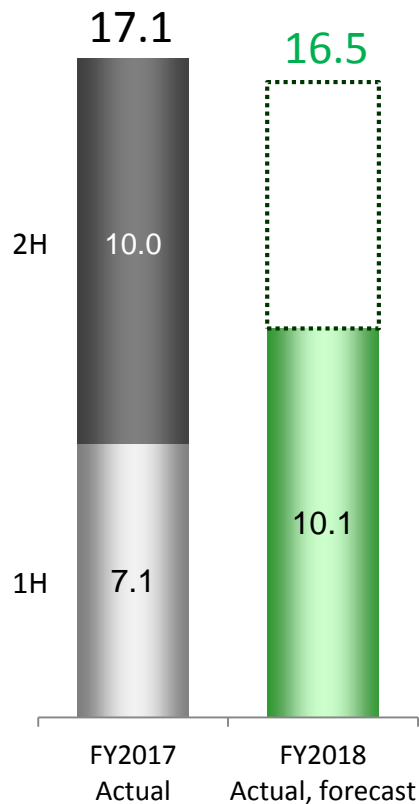
We can expand the market share in 12V LiB without cannibalization

## 2. Segment Results

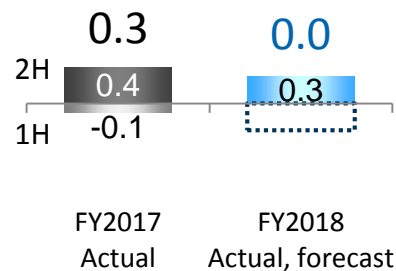
### Others

(Billion yen)

#### Net sales



#### Operating income/ operating income ratio



#### Topics

- Following the first submarine, we have received orders for lithium-ion batteries for the second and third submarines as well
- Sales of lithium-ion aircraft batteries increased

#### Main Profit Change Factors

Increased production of lithium-ion batteries for submarines

### 3. Revision to Consolidated Results Forecast

	FY2017 Actual	FY2018 Initial forecast	FY2018 Revised forecast	Change (Revised-Initial)	
Net sales	411.0	450.0	<span style="border: 1px solid orange; padding: 2px;">Record</span> 440.0	-10.0	
Operating income (Operating income ratio)	21.9 5.3%	22.0 4.9%	23.0 5.2%	+1.0 +0.3p	
Operating income before amortization of goodwill (Operating income ratio before amortization of goodwill)	24.1 5.9%	24.5 5.4%	25.5 5.8%	+1.0 +0.4p	
Ordinary income	21.4	23.0	<span style="border: 1px solid orange; padding: 2px;">Record</span> 24.0	+1.0	
Profit attributable to owners of parent (Net profit ratio)	11.4 2.8%	13.0 2.9%	<span style="border: 1px solid orange; padding: 2px;">Record</span> 14.0 3.2%	+1.0 +0.3p	
Profit attributable to owners of parent before amortization of goodwill (Net profit ratio before amortization of goodwill)	13.9 3.4%	15.5 3.4%	16.5 3.8%	+1.0 +0.4p	
Conditions	Domestic lead price quote	¥323,500/t	¥340,000/t	¥340,000/t	±0
	LME	2,318US\$/t	2,500US\$/t	2,500US\$/t	±0
	Exchange rate	¥112.04/US\$	¥110.0/US\$	¥110.0/US\$	±0

# 3. Revision to Consolidated Results Forecast

(Billion yen)

		FY2017 Actual		FY2018 Initial forecast		FY2018 Revised forecast		FY2018 1H	
		Net sales	Operating income (Op. income ratio: %)	Net sales	Operating income (Op. income ratio: %)	Net sales	Operating income (Op. income ratio: %)	Net sales	Operating income (Op. income ratio: %)
Automotive Battery	Japan	89.2	6.1 (6.9)	94.0	6.2 (6.6)	94.0	7.0 (7.4)	41.4	2.7 (6.4)
	Overseas	185.6	9.0 (4.8)	220.0	10.5 (4.8)	210.0	10.5 (5.0)	92.6	5.0 (5.4)
Industrial Battery and Power Supply		74.2	7.4 (9.9)	75.5	7.3 (9.7)	75.5	7.5 (9.9)	29.3	0.6 (2.1)
Automotive Lithium-ion Battery		44.8	1.3 (2.9)	44.0	0.5 (1.1)	44.0	0.5 (1.1)	22.0	-0.3 (-1.3)
Others		17.1	0.3 (1.7)	16.5	-	16.5	-	10.1	0.3 (2.8)
Total		411.0	24.1 (5.9)	450.0	24.5 (5.4)	440.0	25.5 (5.8)	195.4	82 (4.2)

Note: Operating income is operating income before amortization of goodwill and operating income ratio is operating income ratio before amortization of goodwill.

### 3. Revision to Consolidated Results Forecast

#### Consolidated results forecast



Segment	Change		Factors
	Net sales	Operating income before amortization of goodwill	
Automotive Battery (Japan)		+¥0.8 bn	<ul style="list-style-type: none"> <li>➤ Reflected profit increase (for 1H) due to declines in raw material prices.</li> </ul>
Automotive Battery (Overseas)	-¥10.0 bn		<ul style="list-style-type: none"> <li>➤ Sales are expected to decline due to changes in selling prices caused by declines in raw material prices.</li> <li>➤ Sales of automotive batteries for new vehicles are expected to decline in the Chinese automobile market.</li> </ul>
Industrial Battery and Power Supply		+¥0.2 bn	<ul style="list-style-type: none"> <li>➤ Sales of lead-acid storage batteries for battery-operated forklifts are expected to increase.</li> <li>➤ After slow 1H, power supply sales are expected to recover.</li> </ul>



# 4. Balance Sheet

(Billion yen)

	3/31/2018	9/30/2018	change		3/31/2018	9/30/2018	change
Current assets	179.4	173.8	-5.6	Liabilities	183.6	181.0	-2.6
• Cash and deposits			+5.2	• Notes and accounts payable			-1.0
• Notes and accounts receivable			-12.1	• Electronically recorded obligation			-1.1
• Inventories			+3.1	• Payables			-2.0
				• Short-term borrowings			-8.8
				• Long-term borrowings			+12.4
Fixed assets	209.8	210.2	+0.4	Net assets	205.6	203.0	-2.6
• Property, plant and equipment			-0.4	• Retained earnings			+1.7
• Intangible assets incl. goodwill			-0.8	• Net unrealized gain on available-for-sale securities			+3.1
• Investment securities			+2.0	• Foreign currency translation adjustments			-4.6
				• Non-controlling interests			-2.5
Total assets	389.2	384.0	-5.2	Total liabilities and net assets	389.2	384.0	-5.2

Collected accounts receivable from sales increase at the end of the fiscal year

Inventories accumulated for the demand season

Paid accounts payable from purchase increase at the end of the fiscal year

Impact of rising prices of stock holdings

Impact of rising prices of stock holdings

Impact of stronger yen against local currencies of Turkey and South Korea

	3/31/2018	9/30/2018
Equity ratio	45.2%	45.7%
ROE (return on equity)	8.2%	-
Interest-bearing debt	¥75.1bn	¥78.7bn

Note: ROE is the ratio to profit before amortization of goodwill.

# 5. Capital Investment, Depreciation, R&D Costs

(Billion yen)

		FY2017 1H	FY2018 1H	FY2017 Full year	FY2018 Full year (forecast)
<b>Capital Investment</b>		5.5	8.1	15.2	30.0
Automotive Battery	Japan	0.8	1.6	2.4	4.0
	Overseas	2.4	2.9	6.3	10.0
Industrial Battery and Power Supply		0.3	0.5	1.1	2.5
Automotive Lithium-ion Battery		0.6	1.9	1.3	7.5
Others		1.4	1.2	4.2	6.0
<b>Depreciation</b>		8.2	7.7	16.5	17.0
Automotive Lithium-ion Battery		2.6	2.2	5.2	4.7
<b>R&amp;D Expenses</b>		4.8	4.4	11.2	12.0
(Ratio of R&D expenses to net sales)		2.6%	2.2%	2.7%	2.7%

# 6. Cash Flow Statements

(Billion yen)

Operating C/F		Investing C/F		Financing C/F	
	<b>10.2</b>		<b>-8.9</b>		<b>1.6</b>
• Profit before income taxes	7.5	• Purchase of property, plant and equipment	-7.4	• Increase in borrowings	6.0
• Depreciation and amortization	8.6	• Purchase of shares of a subsidiary	-2.8	• Dividends paid	-2.9
• Decrease in receivables	11.1				
• Increase in inventories	-6.2				
• Increase in trade accounts payables	-4.8				
• Income taxes paid, etc.	-5.2				
<b>Balance of Cash and Cash Equivalents</b>					
		April 1, 2018	<b>19.8</b>	Sept 30, 2018	<b>24.1</b>

**Free C/F <sup>\*1</sup> 1.3**

## Highlights

- While inventories increased and decline in trade accounts payable, operating C/F totaled ¥10.2 billion, a record for 1H as we collected receivables.
- As a result, free C/F came to ¥1.3 billion despite capital investment and purchase of shares in a subsidiary.

\*1: Total of cash flow from operating activities and cash flow from investing activities

Although this document has been prepared with information believed to be correct, GS Yuasa Corporation does not guarantee the accuracy or the completeness of such information. Also, the information herein contains forward-looking statements regarding the Company's plans, outlooks, strategies and results for the future. All the forward-looking statements are based on judgments derived from information available to the Company at the time of release. Certain risks and uncertainties could cause the Company's actual results to differ materially from any projections presented herein.



## Reference

## CSR Policy



- Besides legal compliance, we respect international norms, guidelines, and initiatives related to social responsibility, work on sustainable development of our business through developing energy storage technologies, and contribute to people, society, and global environment.

1. Developing fair, transparent, and sound business, and anti-corruption
2. Respect for human rights
3. Conservation and improvement of adequate working environment
4. Fulfillment of our responsibilities to provide safe and secure products and services
5. Global environmental conservation
6. Building better relationships with local communities
7. Ensuring social responsibility within our supply chain

CSR Code of  
Conduct for all  
employees' code  
of conduct

## Participation in United Nations Global Compact (UNGC)



WE SUPPORT



SUSTAINABLE DEVELOPMENT GOALS  
17 GOALS TO TRANSFORM OUR WORLD



### The Ten Principles of the UN Global Compact

#### <Human Rights>

Principle 1 Businesses should support and respect the protection of internationally proclaimed human rights; and

Principle 2: make sure that they are not complicit in human rights abuses

#### <Labour>

Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;

Principle 4: the elimination of all forms of forced and compulsory labour;

Principle 5: the effective abolition of child labour; and

Principle 6: the elimination of discrimination in respect of employment and occupation.

#### <Environment>

Principle 7: Businesses should support a precautionary approach to environmental challenges;

Principle 8: undertake initiatives to promote greater environmental responsibility; and

Principle 9: encourage the development and diffusion of environmentally friendly technologies.

#### <Anti-corruption>

Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

## External ratings



### CSR evaluations

	ESG rating by MSCI (U.S.) *1	CSR assessment by Toyo Keizai Inc. *2				CSR assessment by EcoVadis (France) *3
		HR utilization	Environment	Corporate governance	Sociality	
2017	AA	AA	AA	AA	AA	50 points (rank: silver)
2016	A	C	C	B	C	37 points (rank: bronze)

\*1: ESG rating of MSCI (U.S.) is done by Japan ESG Select Leaders Index and is seven-grade evaluation of AAA, AA, A, BBB, BB, B and CCC.

\*2: Toyo Keizai Inc.'s CSR assessment is five-grade evaluation of AAA, AA, A, B and C.

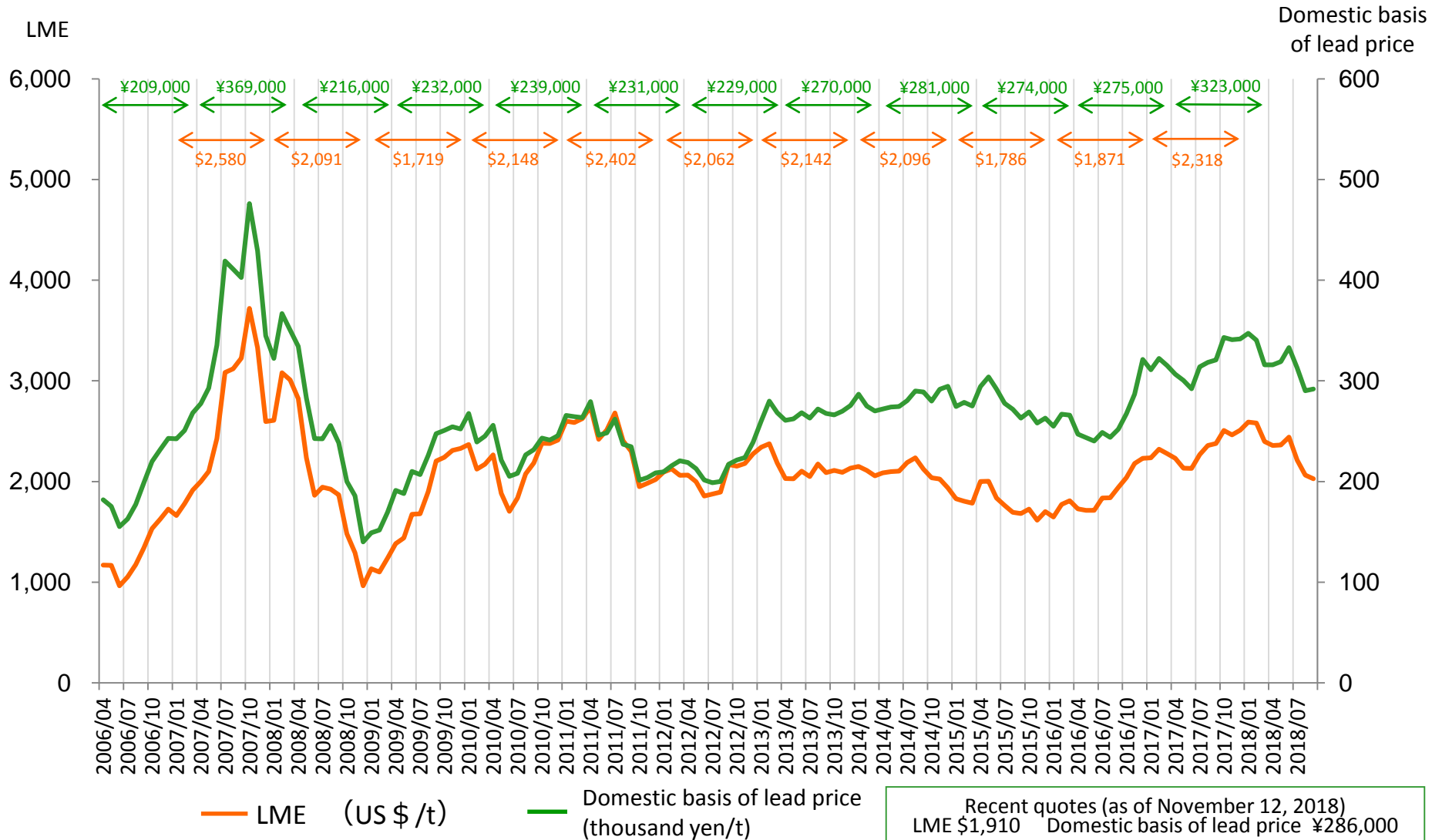
\*3: EcoVadis (France) Total marks for CSR assessment is 100 points. The average score of the companies surveyed is 43.7 points.

### Evaluation, certification and accreditation for GS Yuasa's CSR-related efforts

- Received the highest rank “particularly excellent in terms of initiatives for employees’ health” from DBJ Employees’ Health Management Rating
- Selected as a certified company of the Company with Excellent Health Management 2018 –White 500- by the Ministry of Economy, trade and Industry
- Received Kurumin Mark, certified as a company that supports child care by the Ministry of Health, Labour and Welfare



## Raw Materials Prices





## Interest-Bearing Debt, D/E Ratio

