

15 February, 2019

**(Correction) T-2021 Mid-Term Plan (Supporting Materials)**

Tokai Carbon has corrected part of the contents of its “T-2021 Mid-Term Plan (Supporting Materials)” released on 14 February 2019.

**Chart 3 (Page 3)**

Adding decimal point for 2018 Sales and Operating income result;

	(Before)	(After Correction)
Sales	2313bn	231.3bn
Operating Income	752bn	75.2bn

**Chart 4 (Page 4)**

Figure correction of “ROE before adjustment” as 48.4% to 47.1%.

This figure is in the remarks located at the footer section of the chart (please refer to the underlined part below where correction was made);

(Before)

\*FY2018 ROE shows the adjusted ROE after deducting ¥22.8 billion special income on step acquisitions relating to consolidating Tokai Carbon Korea (ROE before adjustment is 48.4%)

(After Correction)

\*FY2018 ROE shows the adjusted ROE after deducting ¥22.8 billion special income on step acquisitions relating to consolidating Tokai Carbon Korea (ROE before adjustment is 47.1%)

End of notice

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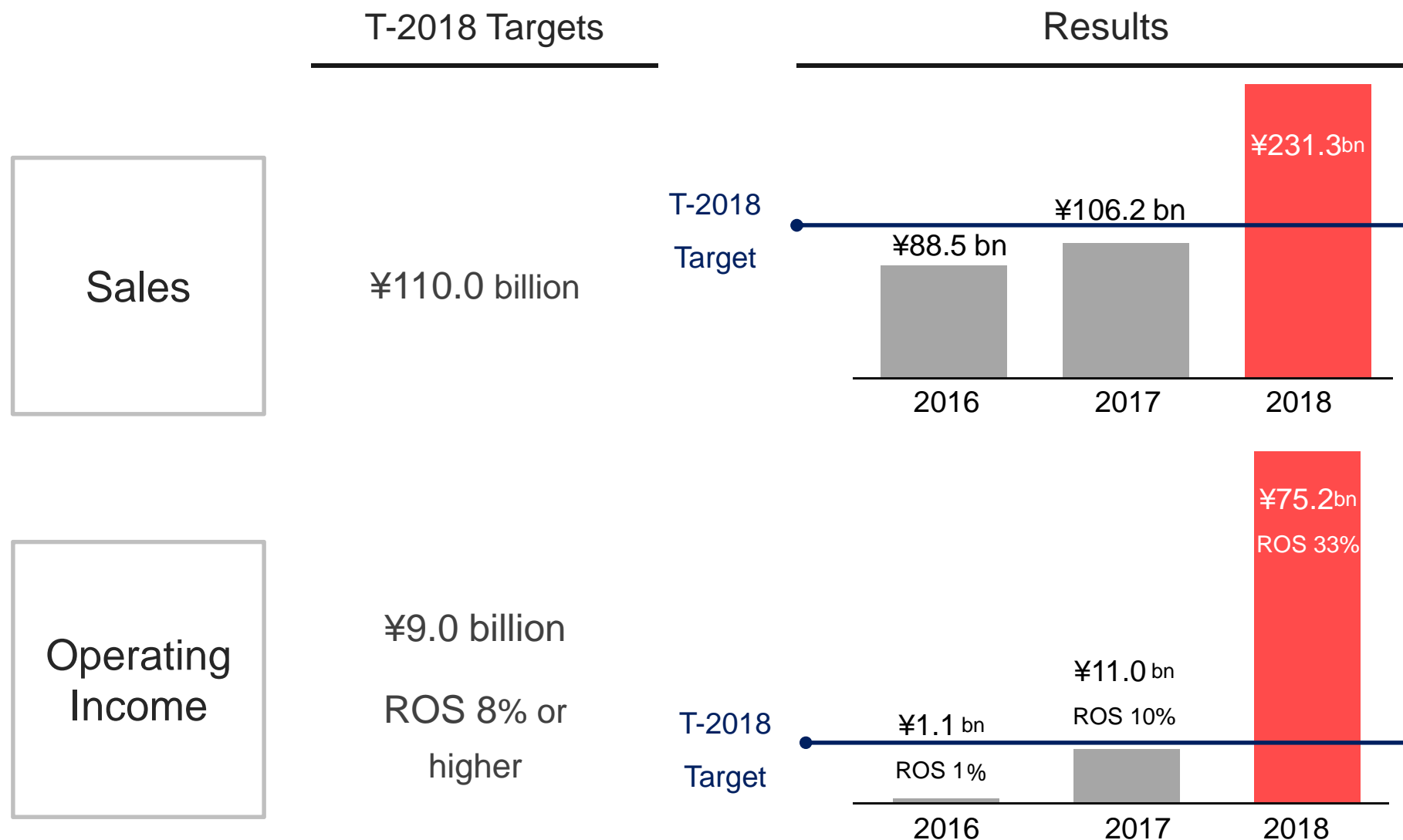




# 01

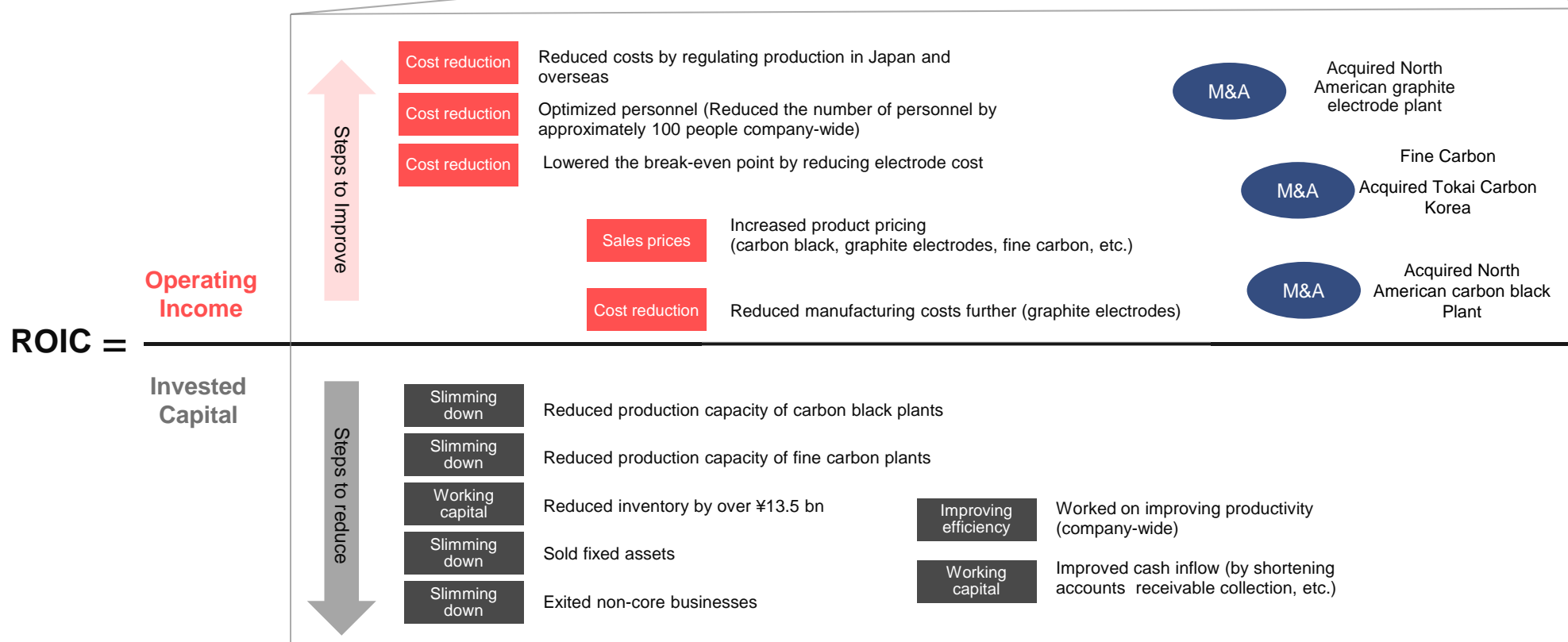
Looking Back

Both net sales and operating income target was achieved.



- Completed structural reformation during Phase 1 (FY2016). Achieved ROIC improvement backed by good business environment
- During Phase 2 (FY2017-2018), we completed three M&A at ¥59.7bn for further growth

	2015	2016	2017	2018
ROIC	2.1%	0.7%	7.7%	31.8%
ROE	2.0%	6.8%	10.4%	35.1%*
ROS	3.9%	1.3%	10.4%	32.5%



\*FY2018 ROE shows the adjusted ROE after deducting ¥22.8 billion special income on step acquisitions relating to consolidating Tokai Carbon Korea (ROE before adjustment is 47.1%)





# 02

New Mid-Term  
Management Plan

- |  | FY2019<br>(Forecast) | (For reference)<br>FY2016, 3 years ago |
|--|----------------------|--|
|--|----------------------|--|

Tokai Carbon Group Vision Statement		
Consolidated Sales	¥322.7 billion	¥ 88.5 billion
No. of employees (consolidated)	3,200	1,980
Market capitalization	¥363.9 billion * as of February 12, 2019	¥85.0 billion
Overseas sales ratio	73 %	51 %
Overseas employee ratio	57 %	39 %

Strengthening the global business base while actively investing in expanding opportunities for growth

## External Environment

- Continued growth in the areas of EAF steel, tires, and the electronics industry
- Continued tight supply in raw material for graphite electrodes and feedstock oil for carbon black
- Uncertainty in semiconductor cycle
- Trend toward stricter environmental regulations (China, IMO2020, EPA, etc.)
- Deceleration of the Chinese economy
- Acceleration of environmental changes in the global economy

## Internal Environment

- Building a consolidated governance structure commensurate with the size of our rapidly expanding

## Basic Policies of T-2021, the new Mid-Term Management Plan

### Strengthening the revenue base

- Generating stable cash flow in core businesses
- Post-merger integration for three acquisition projects (to built the optimal production structure)
- Major renovation of facilities, environmental investment

### Expanding opportunities for growth

- Expanding capacity in growth areas
- Optimizing business and product portfolios
- Ongoing M&A and investment in strategic areas
- Ongoing initiatives in strengthening technology development

### Building a consolidated governance structure

- Head office re-organization and reviewing systems
- Expanding functions of regional headquarters in North America
- Securing and developing human resources

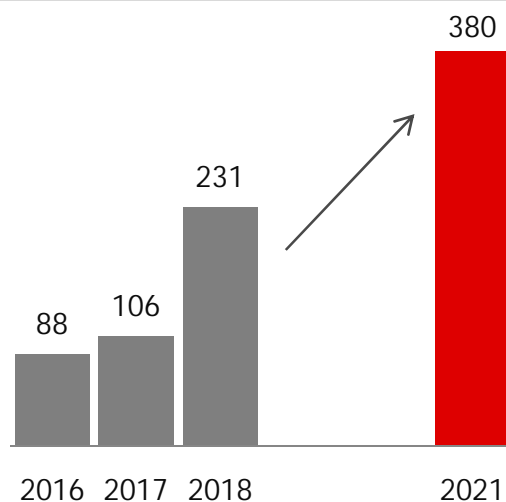


Aiming for greater growth while maintaining high profitability

## Net Sales

¥380 billion

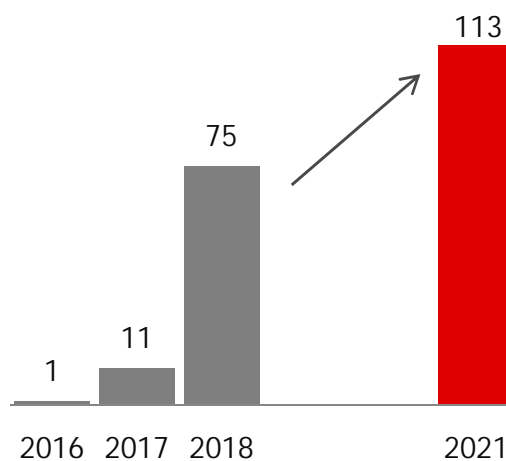
FY2021



## Operating Income

¥113 billion

FY2021

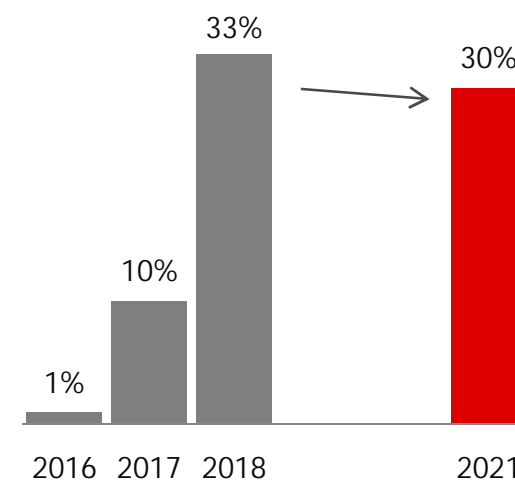


## ROS

30%

FY2021

Reference : ROE 22% ROIC 28%



# (Reference) Segment Data

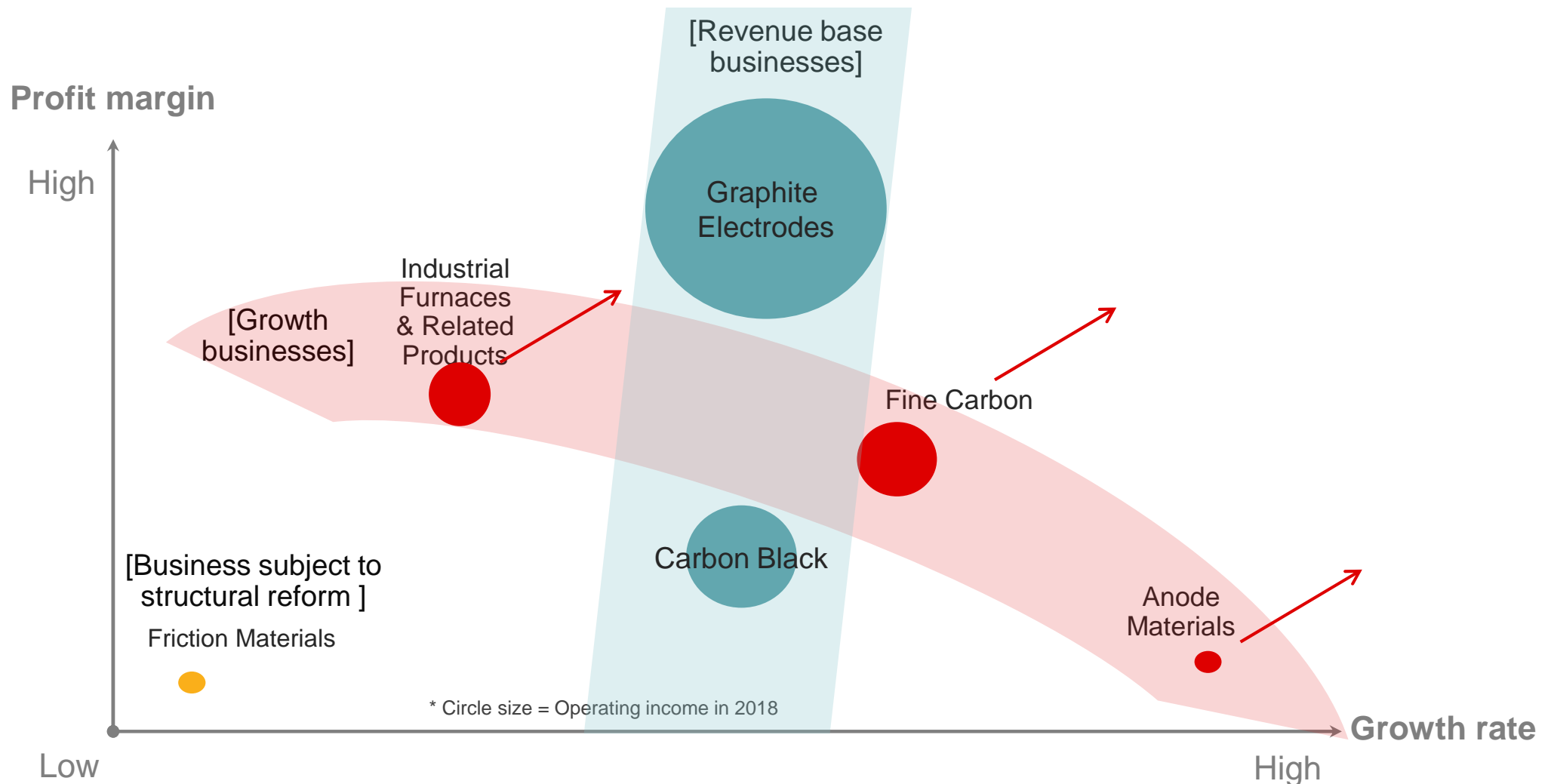
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(100 million yen)

		Results	T-2021	
		2018	2019 (Forecast)	2021 (Targets)
Net Sales		2,313	3,227	3,800
	Graphite Electrodes	1,020	1,418	1,710
	Carbon Black	769	1,153	1,240
	Fine Carbon	254	346	450
	Industrial Furnaces and Related Products	113	140	160
	Other Operations	Friction materials	94	100
		Anode materials	58	140
		Other	1	0
	Total other		155	240
Operating Income		752	987	1,130
	Graphite Electrodes	560	727	780
	Carbon Black	106	146	185
	Fine Carbon	57	87	125
	Industrial Furnaces and Related Products	30	36	45
	Other Operations	10	13	20
	Inter-segment eliminations	-12	-22	-25

\* Exchange rate assumptions for T-2021: JPY105/USD, JPY120/EUR

- Establish graphite electrodes and carbon black as the revenue bases
- Invest in fine carbon, industrial furnaces and related products, anodes, and other areas as growth businesses
- Strive to optimize the business portfolio through continual rebalancing





We have defined the following five key measures for pursuing the basic policies of the mid-term management plan

Key Measures	(Position in the Basic Policy)
Generating stable cash flow in the graphite electrode business	Strengthening the revenue base
Integrated management of global carbon black plants	Strengthening the revenue base
Rebuilding the revenue model for the fine carbon business	Strengthening the revenue base
¥50 billion investment in growth areas	Expanding growth opportunities
Building and strengthening consolidated governance	Build the consolidated governance structure

1



Maintain the spread between raw material prices and graphite electrode prices

The tight supply in raw materials will continue to create tight supply in graphite electrodes. Establish a revenue base that won't be affected by raw material prices by introducing a formula-based system.

2



Invest in renovating and maintaining existing equipment

The manufacturing equipment which is operating at full capacity is aging. We will engage in large-scale equipment renovation to maintain stable production. This will also provide the benefit of improved productivity.

3



Lower the breakeven point by integrating North American locations

Integrating new locations will optimize production locations and improve the level of technology in the group. This will reduce costs further.

## Our strengths

- Creating a strong business structure through structural reform
- Establishing an efficient supply system via the tripolar structure of Japan, USA, and Europe
- Building long-term, stable relationships with raw materials manufacturers at all locations

1



Integrate and optimize North American locations

Secure appropriate margins in the North American market where supply is tight. Also share technology with other locations.

2



Reduce costs through the efficient use of energy and other means

Manage the use of feedstock oil, improve productivity, share technology for efficient use of waste heat within the group, and work to reduce overall cost and maximize output.

3



Increase the percentage of high value-added products

Increase the high value-added products (specialty products) as a percentage of products sold by sharing information on products developed in Japan. Reduce reliance on the commodity market and capture share in high-margin markets.

## Our strengths

- Having locations in the Southeast Asian and North American markets where supply is tight
- Having the technology for managing use of various kinds of feedstock oil
- Product development with major tire manufacturers (on developing high-value added products)



1



## Restructure the CVD SiC business

Allocate the CVD production equipment optimally among Japan, South Korea, and USA, and achieve synergies among the three locations in technology and sales.

2



## Improve productivity, reduce costs, and maximize cash flow

Target further reduction in costs and a shift to high value-added products.

3



## Pursue opportunities for mutual growth with Tokai Carbon Korea

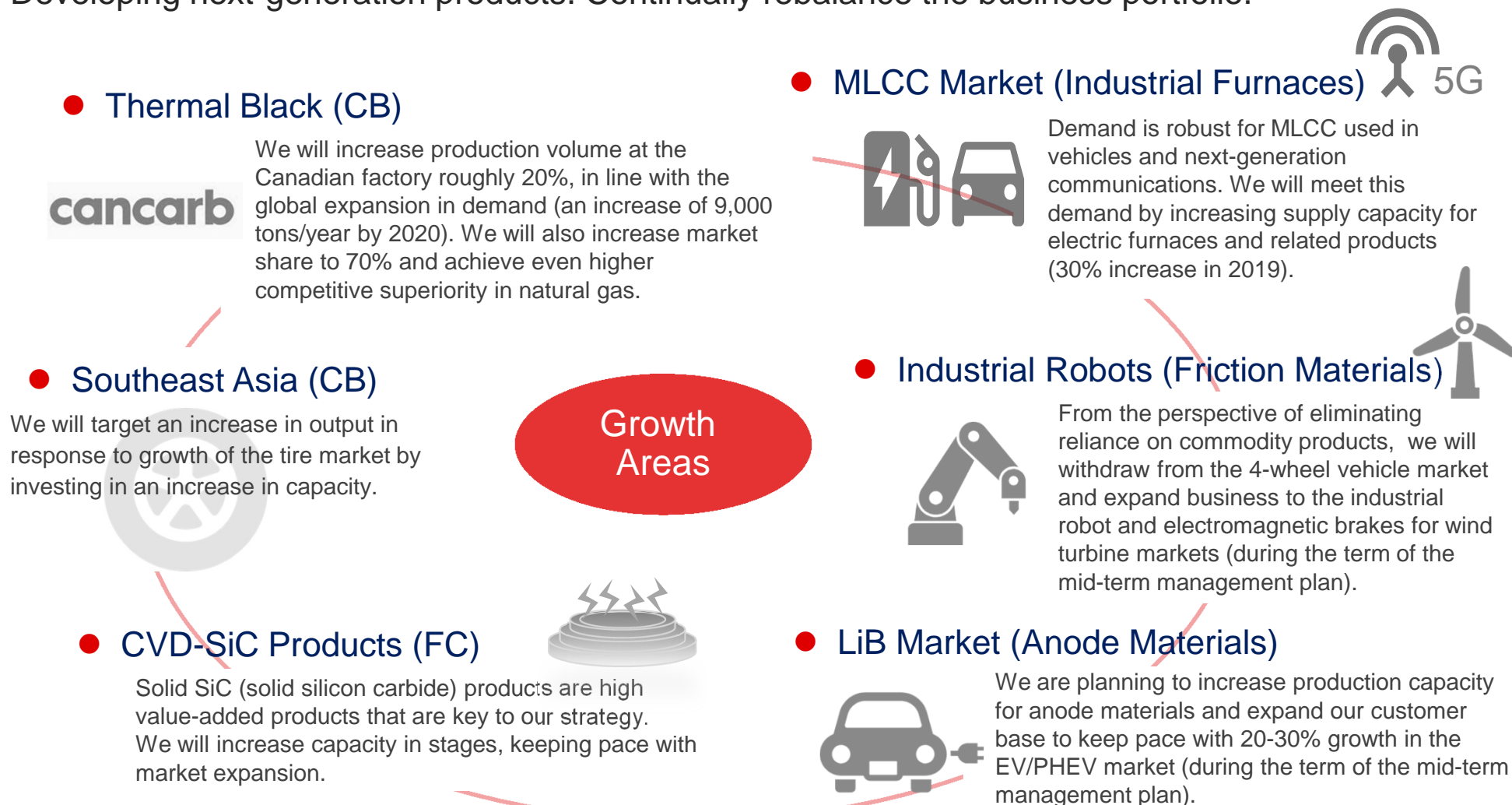
Capture demand for switching from silicon/quartz materials in the Solid SiC focus ring market with manufacturing technology and production capacity that is overwhelmingly superior to that of competitors.

### Our strengths

- A market share of roughly 50% in solid SiC products; reducing reliance on graphite electrodes for solar cells and semiconductors
- World' largest CVD production capacity
- Ability to handle the entire process from materials processing to SiC coating

Concentrate management resources in areas of growth.

Developing next-generation products. Continually rebalance the business portfolio.



\* CB: Abbreviation for Carbon Black

\* FC: Abbreviation for Fine Carbon

\* MLCC: Abbreviation for Multi-Layer Ceramic Capacitor

\* LiB: Abbreviation for Lithium Ion Battery

# Building and Strengthening Consolidated Governance Structure 16

We will work to identify and clarify the challenges in building a consolidated governance structure that is commensurate with the rapid expansion in the size of our business as “a global carbon company contributing a better society”.

## Environmental Changes

- Expand business scale
- Increase in the number of global locations:
  - To 70% of total sales from overseas sales
  - To 60% of all employees being overseas employees
- Increase the degree of focus on ESG management



## T-2021 Initiatives

- Instill the corporate philosophy in all employees and integrate brands
- Expand and strengthen the corporate division
- Restructure the organization and systems
- Build a global cash management system
- Expand the North American regional headquarters function
- Secure and develop human resources
- Build an ESG management base and expand disclosure of information





03

Capital Allocation

Maintaining solid and flexible financing position to take advantage of growth opportunities, based on financial soundness

Basic view on capital allocation

## Basic Financial Policy

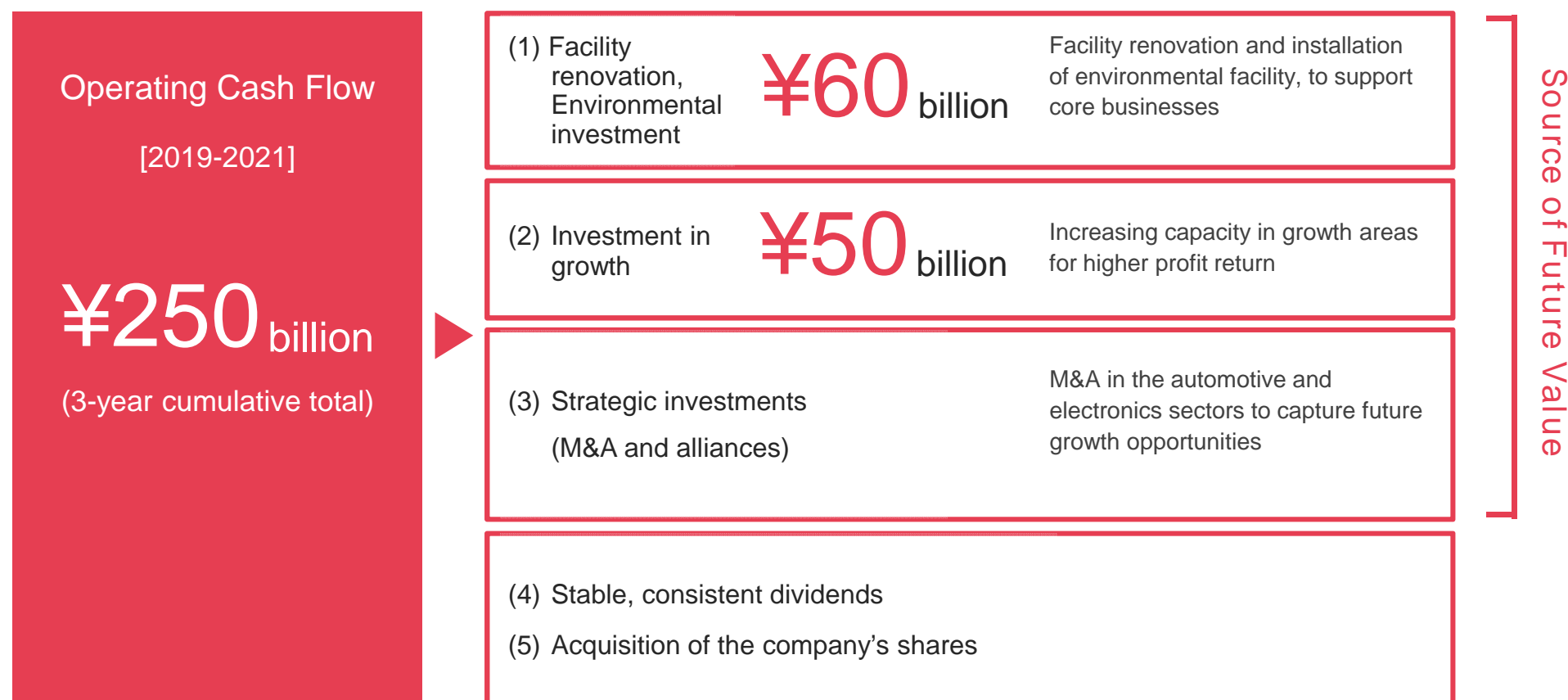
Our basic policy is to ensure liquidity and maintain soundness of the financial base to support our core businesses (graphite electrodes, carbon black, and fine carbon) and other components of our diverse business portfolio.

## Policy on Financing

Our basic policy is to provide the funds needed for investment in growth through operating cash flow generated from our businesses and cash on hand. We fully utilize the financial and capital markets for mid- to long-term stable financing for capital needs that exceed that level.

Tokai Carbon effectively uses the generated cash for the following purposes to maximize corporate value, based on the premise of maintaining a solid financial base.

Projected operating cash flow during the term of T-2021 and uses





# (1) & (2) Main Types of Facility Investment

20

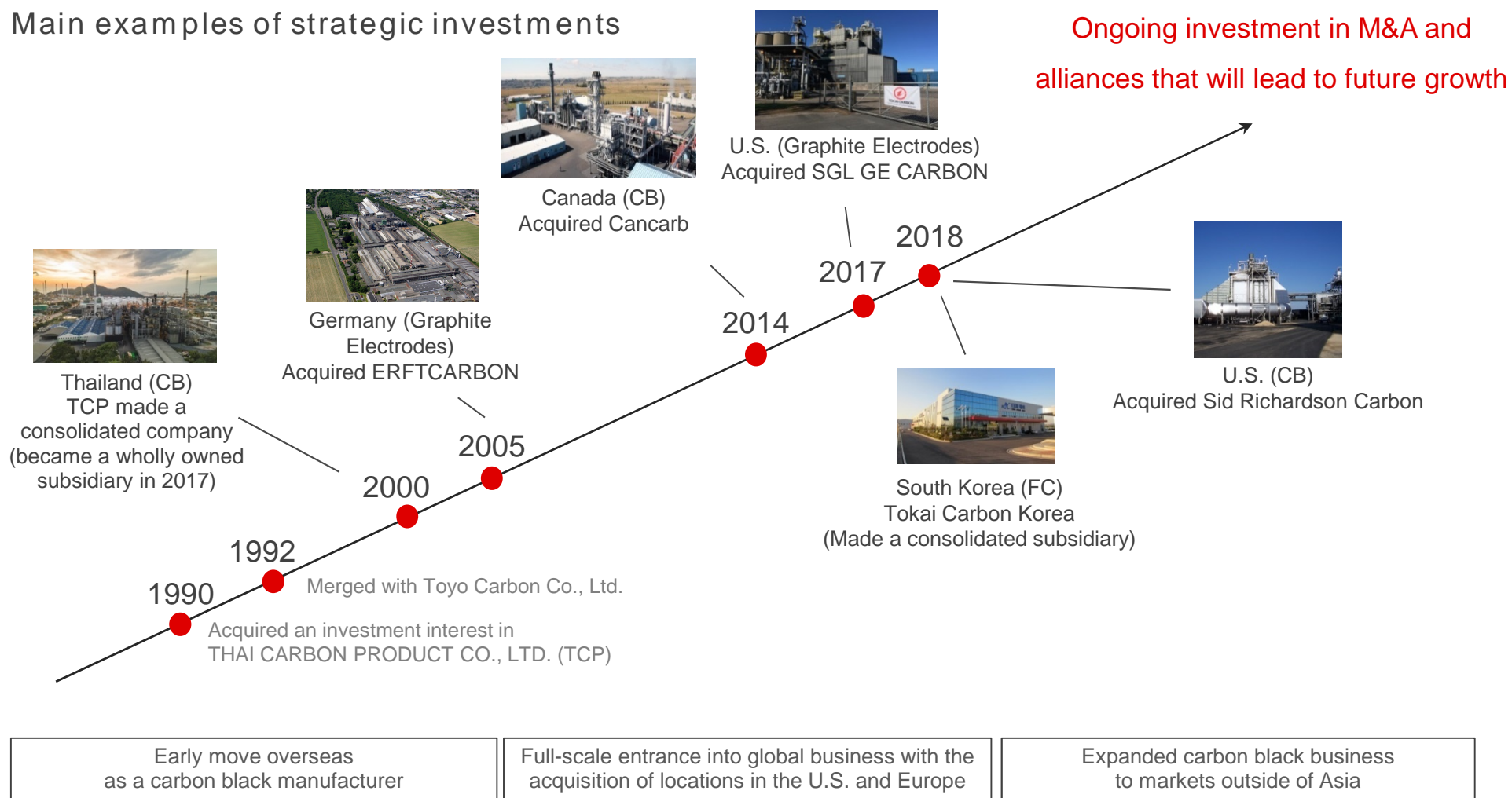
	Type	Estimated Investment (Over 3 years)	2019	2020	2021	Main Value Expected in Future
Graphite Electrodes	Facility renovation	¥17 billion	Building the optimal group production structure			Consistent Operation
	Investment in growth	¥3 billion	Down stream investment in U.S. etc.			Profit growth
	Environmental investment	¥2 billion		Mainly in Japan		Environment & safety
Carbon Black	Facility renovation	¥7 billion	State of the art facility			Consistent Operation
	Investment in growth	¥7 billion	Capacity expansion in Canada & Thailand			Profit growth
	Environmental investment	¥14 billion	EPA response, etc.			Legal compliance
Fine Carbon	Facility renovation	¥2 billion	Tanoura Plant			Consistent Operation
	Investment in growth	¥10 billion	Business restructuring & investment in CVD			Profit growth
	Environmental investment	¥2 billion		Tanoura Plant		Environment & safety
Industrial Furnaces	Investment in growth	¥11 billion	Capacity expansion			Profit growth
Friction Materials	Investment in growth		Improvement in productivity, electro magnetic brake capacity expansion			Higher margins
Anode Materials	Investment in growth		Capacity expansion			Profit growth
Total (including other periodical and R&D investments)		¥110 billion	¥32 billion	¥45 billion	¥33 billion	

### (3) Strategic Investment (M&A and Alliances)

21

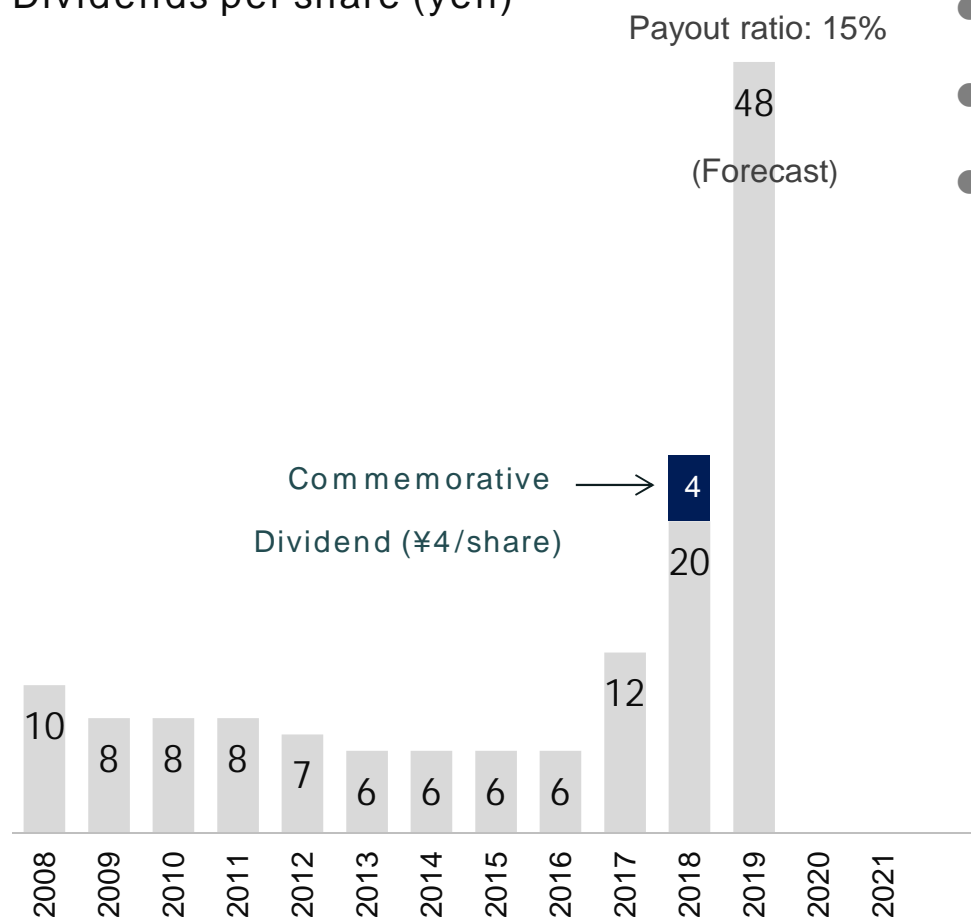
- We will actively explore proposals that will contribute to expansion in business scale and improvement in profitability
- Investments will be made in automotive-related and electronics sector

#### Main examples of strategic investments



Our goal is to achieve a dividend payout ratio of 30% during the term of T-2021 through ongoing dividend increases in line profit growth

Dividends per share (yen)



- Focus on stable, consistent dividends
- Target a dividend payout ratio of 30%
- We will also consider using surplus cash flow to buy back the company's shares as dictated by the level of surplus cash flow and collective consideration of the management environment surrounding the company, financial status, investment in growth, the level of the stock price, and other pertinent factors

We have adopted a rolling format from Mid-Term Management Plan T-2021 to respond flexibly to changes in the management environment and will update the plan annually.

	2019	2020	2021	2022	2023	2024
Current plan announcement →	Mid-Term Management Plan 2019-2021					
Future plan announcement →		Mid-Term Management Plan 2020-2022				
• • •			Mid-Term Management Plan 2021-2023			
• • •				Mid-Term Management Plan 2022-2024		

- This document contains forward-looking statements. They are based upon information available to the Company as of the date of release of this document and upon reasonable assumptions made by the Company relating to uncertain factors that impact future performance as of the date of release of this document.
- Actual results may differ significantly due to various factors going forward. Factors impacting the operating performance include, but are not limited to, economic conditions, raw material prices, product supply and demand and market conditions, and foreign exchange rates.
- The quantitative goals, reference targets, investment amounts, capital allocation, and other projections contained in this document are ultimately expressions of the company's mid- to long-term strategy and do not represent forecasts of performance. The company has no obligation to update this information.
- Please see the disclosures in the summary financial statements, which are based on the rules of Tokyo Stock Exchange, Inc., for the official earnings forecasts.

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Hotter than the Centigrade scale