# Financial Results Presentation 1st Half of Fiscal Year ending March 2019



Sanken Electric Co., Ltd.

November 5, 2018





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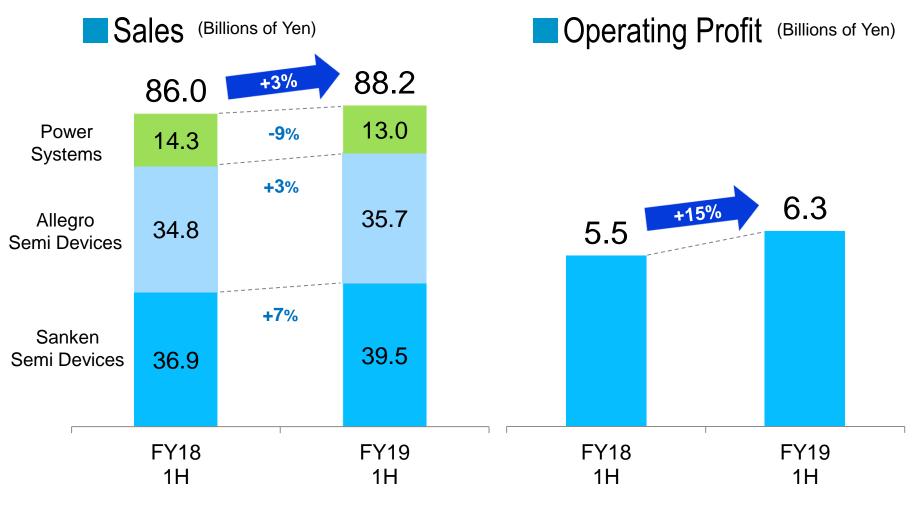
# 1H Financial Results



## **Summary of Results in 1H FY March 2019**



Achieved increase in sales and profit boosted by Sanken's white goods and Allegro's auto businesses.



• 1H Exchange rate (Yen/US\$): FY18 111.06 FY19 110.27



#### **Consolidated Results: 1H of FY March 2019**



(Billions of Yen)

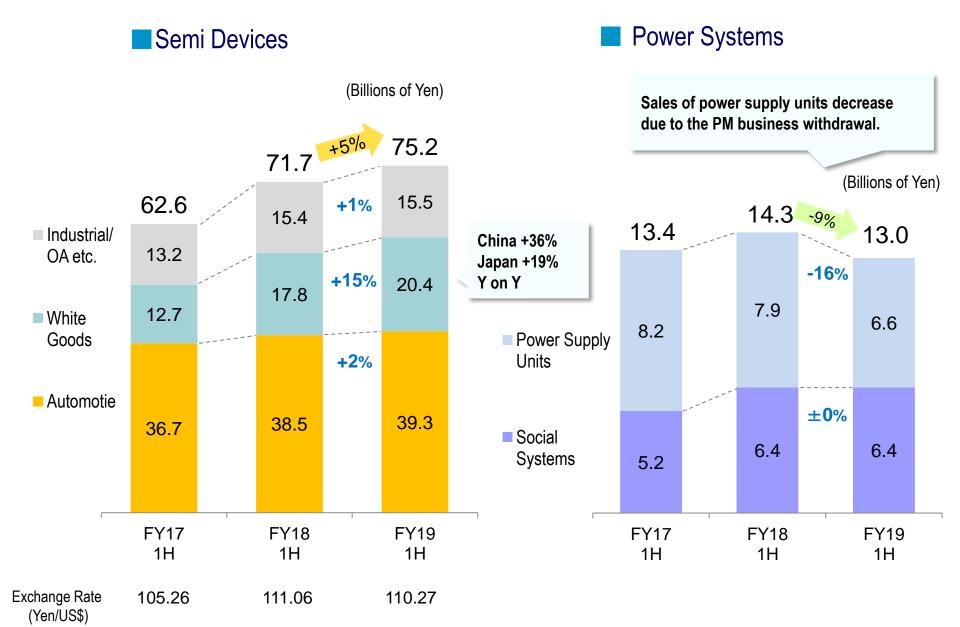
		FY18		FY19		1H on 1H Changes	Guidance issued	Changes
		1H	1Q	2Q	1H	(%)	May 2018	(%)
	Sales	86.0	42.7	45.5	88.2	+2.6	87.2	+1.1
	Semi. Devices	71.7	36.5	38.7	75.2	+4.9	75.8	-0.8
	Power Systems	14.3	6.2	6.8	13.0	-9.1	11.4	+14.0
Operating Profit		5.5	2.5	3.8	6.3	+14.5	5.2	+21.2
	Ordinary Profit	5.7	1.8	3.5	5.3	-0.7	4.4	+20.5
	Extraordinary Income and losses	-16.5	0.0	0.0	0.0	_	-	-
CC	NI attributable to ntrolling shareholder	-13.1	0.6	1.6	2.2	_	1.5	+46.7

<sup>• &</sup>quot;1H on 1H Changes" are derived from the figures presented here expressed in billions of yen.



#### 1H Consolidated Net Sales by Market





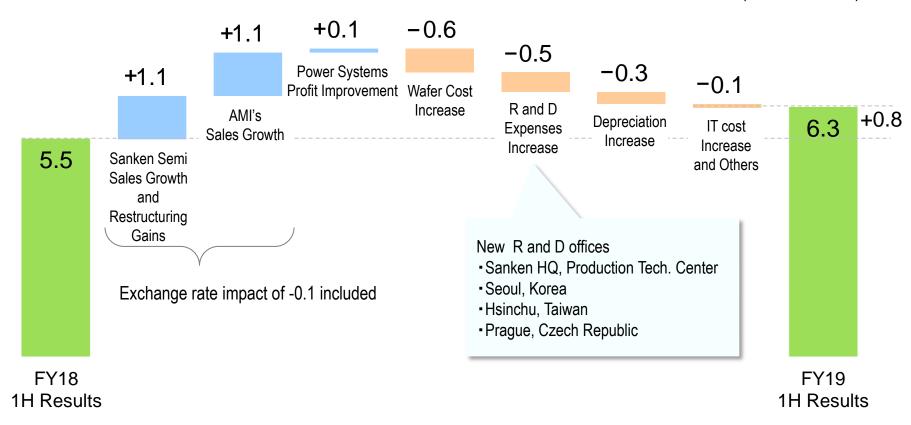


## **Factors of Change in 1H Operating Profit**



- The management executed strategic growth investments.
- Sales growth and restructuring gains covered cost increases such as wafer price hikes.

(Billions of Yen)



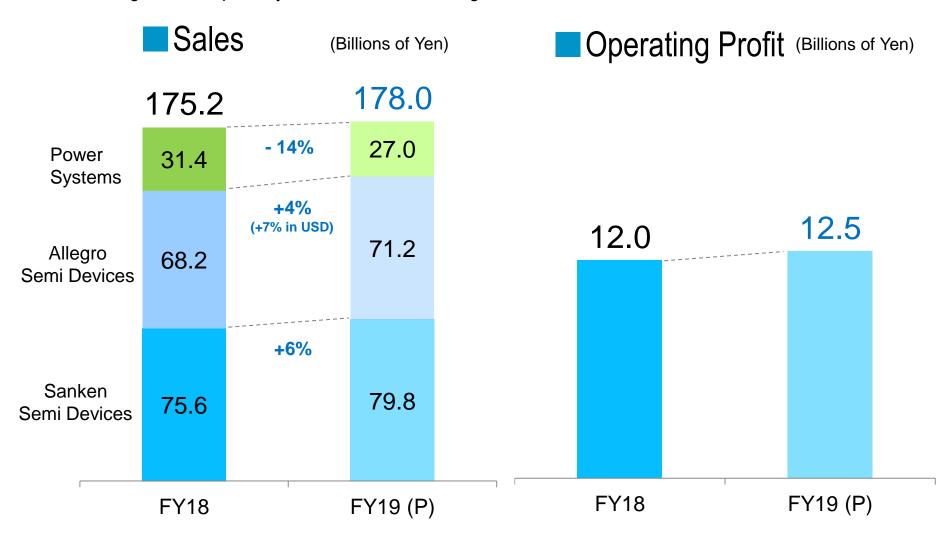
# Guidance for FY March 2019



#### **Summary of Guidance for FY March 2019**



The management kept full-year forecasts unchanged due to uncertainties in the Chinese market.



• Exchange rate (Yen/US\$): FY18 110.86 FY19 1H 110.27, 2H 105.00 (assumed)



#### **Guidance for FY March 2019**



(Billions of Yen)

		F	Y18 Actu	ıal	FY19 Projection Y on Y Cha			hanges	
		1H	2H	Full Year	1H	2H	Full Year	Amount	%
S	ales	86.0	89.2	175.2	88.2	89.8	178.0	+2.8	+1.6
	Semi. Devices	71.7	72.1	143.8	75.2	75.8	151.0	+7.2	+5.0
	Power Systems	14.3	17.1	31.4	13.0	14.0	27.0	-4.4	-14.0
0	perating Profit	5.5	6.5	12.0	6.3	6.2	12.5	+0.5	+4.2
0	rdinary Profit	5.7	6.1	11.8	5.3	5.7	11.0	-0.8	-6.8
СО	NI attributable to ntrolling shareholder	-13.1	1.7	-11.4	2.2	2.6	4.8	+16.2	-

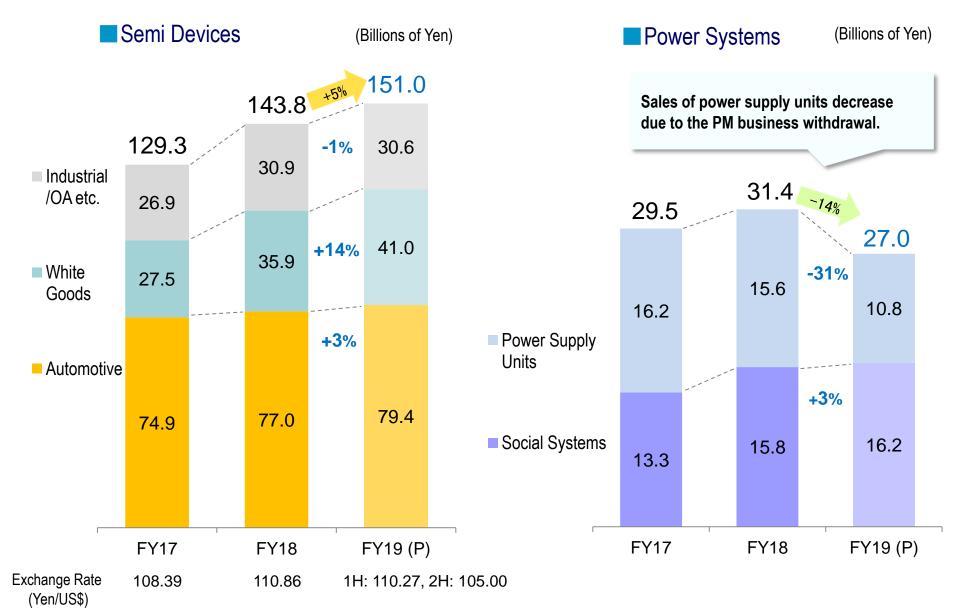
<sup>•</sup> Exchange rate: 105 Yen/US\$ (assumed for 2H FY19)

<sup>• &</sup>quot;Y on Y changes" are derived from the figures presented here expressed in billions of yen.



## **Guidance for Consolidated Net Sales by Market**



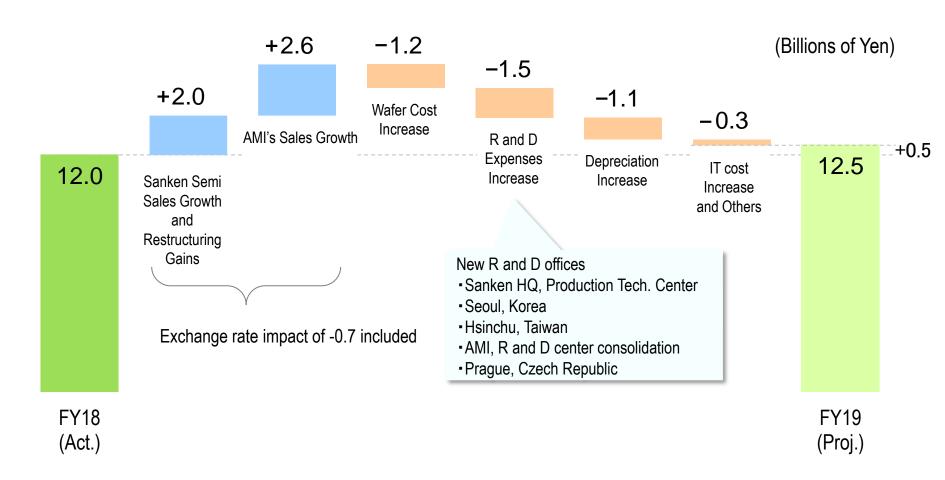




# **Factors of Change in Operating Profit**



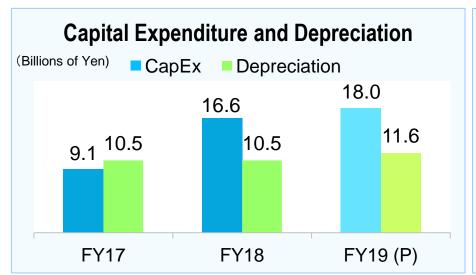
- The management steadily implements growth strategies despite uncertainty in the Chinese market.
- Strategic growth investment will negatively impact profits in 2H, but the target profit will be secured by sales increase and restructuring gains.

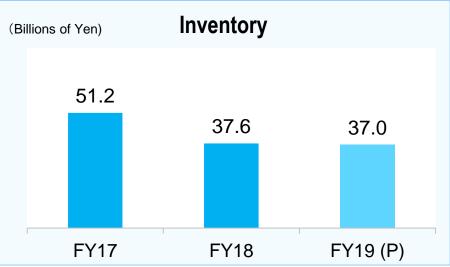


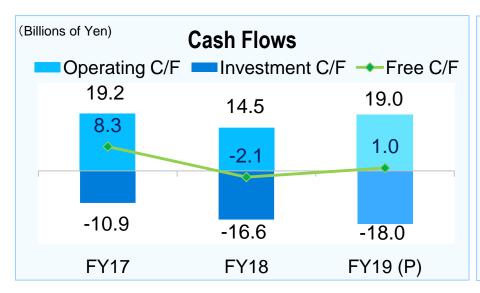


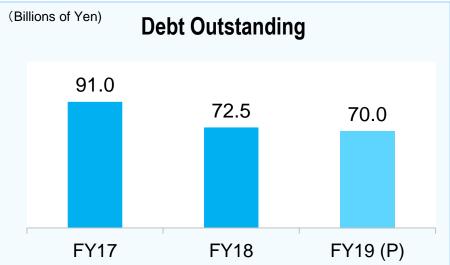
## **FY March 2019 Consolidated Financial Targets**











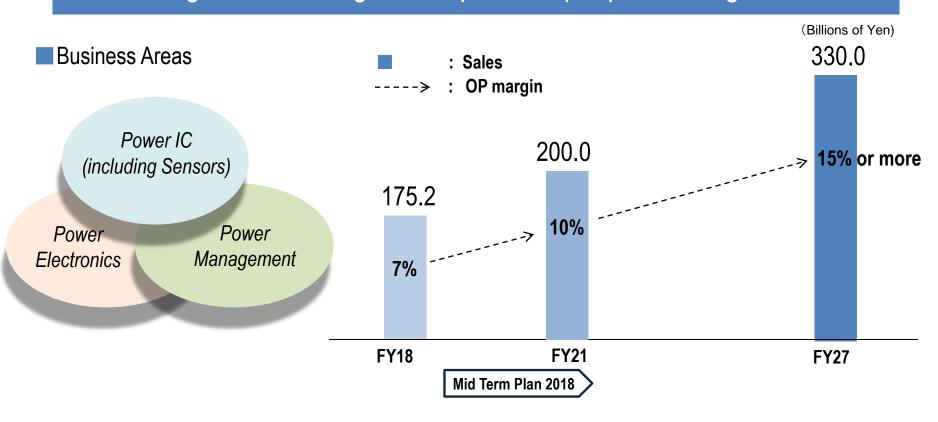
# Growth Strategies



# **Growth Strategies**



To become a highly profitable company through unique set of technologies, and energized output from people and organizations.



To achieve

- Focus on strategic markets Strengthen technology development



# **Growth Strategies**



■ Semiconductor development reform (measures for growth strategies)

Development flow		Measures	Target			
	Design Concept	Implement "the SPP" <u>Sanken Power-electronics Platform</u>	<ul><li>Semi Devices: platform design.</li><li>Power Systems: modular design.</li></ul>			
	Process	Seoul Power-device Design Center	<ul> <li>Develop quickly leading-edge technologies for power process.</li> </ul>			
	Package	Seoul Package Design Center	<ul> <li>Develop quickly the next- generation packages and required element technologies.</li> </ul>			
	Software	Taiwan Sanken Design Center	<ul> <li>Design firmware for digitally- controlled power ICs.</li> </ul>			
	Production Line	Production Technology Center	<ul> <li>Strengthen prod. technology.</li> <li>Serve as a pilot-line for factory automation, IoT, and AI.</li> </ul>			
	Reliability Assessment	Semi Devices Reliability Evaluation Center	<ul><li>Shorten reliability evaluation cycle time.</li><li>Improve efficiency and functions.</li></ul>			



#### **Process Design**



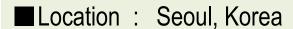
#### Seoul Power-device Design Center

Develop competitive, leading-edge technology for power processes.





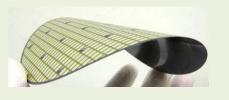




■# of staff: Plan 50

Hired 41

(as of the end of September)







# **Package Design**

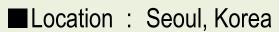


#### Seoul Package Design Center

Develop competitive element technology for assembly and package.



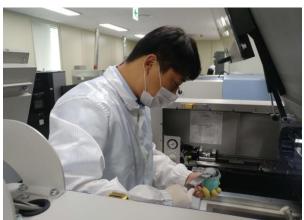




■# of staff: Plan 20

Hired 18

(as of the end of September)







# **Software Design**



#### Taiwan Sanken Design Center

Design digitally-controlled IC for "Power IoT" and related firmware.







■ Location : Hsinchu, Taiwan

■# of staff: Plan 13

Hired 11

(as of the end of September)





#### **Production Line Design**

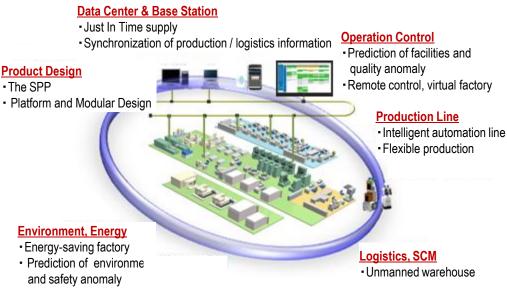


#### <u>Production Technology Center</u>

Enhance production technology, reduce costs, and set up a smart factory.

- Implement "the SPP" (Sanken Power-electronics Platform)
- Upgrade production technology, including elemental and material technology and production line design
- Improve productivity significantly through the use of automation technology, visual image examination, IoT, and AI





-4-story building with floor space of 8,400m<sup>2</sup> -Demolition started in Aug, 2018 -Scheduled to be completed in Jan, 2021



## **Reliability Assessment**



#### Semi Devices Reliability Evaluation Center

Integrate semi evaluation functions, improve efficiency, and lower cost













■# of staff : 30

Completion : March, 2019 In operation : May, 2019

Floor space : 1,690m<sup>2</sup>





# **Allegro MicroSystems**



#### Manchester headquarters

Consolidate headquarters and strengthen development functions.







- Extension of Manchester facility (1,400m<sup>2</sup>)
- Completed in Nov, 2018
- Floor space: 11,395m<sup>2</sup>



Worcester to be sold



#### **Capital Expenditure**



- IPM for white goods
- Automotive IC, Sensors etc.
- Strengthen development

- Capacity expansion at Sanken
- Capacity expansion at Sanken, Allegro
- Expansion of Allegro Philippines
- Expansion of Allegro Manchester facility
- Set up overseas design centers

		Japan				Overseas			
		Yamagata	Fukushima	Ishikawa	Kashima	Dalian	Polar	Allegro	Design Center
	Semiconductor chips	•	•				•		
Capacity Expansion	Automotive Products		~	~	~	~		~	
	IPM for white goods			•		•			
	•		~			~			
Str							~	~	



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