



**ADVANTEST**<sup>®</sup>

**FY2019 3Q**  
**(Three months ended December 31st, 2019)**  
**Financial Briefing**

January 29th, 2020  
Advantest Corporation

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# NOTE

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## Accounting Standards

– Our results and outlook, described in this presentation, have been prepared in accordance with IFRS.

## Cautionary Statement with Respect to Forward-Looking Statements

– This presentation contains “forward-looking statements” that are based on Advantest’s current expectations, estimates and projections. These statements include, among other things, the discussion of Advantest’s business strategy, outlook and expectations as to market and business developments, production and capacity plans. Generally, these forward-looking statements can be identified by the use of forward-looking terminology such as “anticipate,” “believe,” “estimate,” “expect,” “intend,” “project,” “should” and similar expressions. Forward-looking statements are subject to known and unknown risks, uncertainties and other factors that may cause Advantest’s actual results, levels of activity, performance or achievements to be materially different from those expressed or implied by such forward-looking statements.

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```
...mirror_object = ...
operation == "MIRROR_X":
mirror_mod.use_x = True
mirror_mod.use_y = False
mirror_mod.use_z = False
operation == "MIRROR_Y":
mirror_mod.use_x = False
mirror_mod.use_y = True
mirror_mod.use_z = False
operation == "MIRROR_Z":
mirror_mod.use_x = False
mirror_mod.use_y = False
mirror_mod.use_z = True

selection at the end -add
obj.select= 1
obj.select= 1
context.scene.objects.active
["Selected" + str(modifier)]
mirror_ob.select= 0
mirror_ob.select= 0
```

## Financial Results for FY2019 3Q

Atsushi Fujita  
Director, Managing Executive Officer (CFO)

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## FY19 3Q Summary of Results

	FY18				FY19				(¥B)			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	QoQ		YoY		
								(Δ)	(%)	(Δ)	(%)	
Orders	70.6	76.2	62.7	65.7	65.9	58.3	72.9	+14.6	+25.1%	+10.2	+16.2%	
Sales	70.9	72.7	74.9	64.0	66.2	71.6	69.9	-1.7	-2.3%	-5.0	-6.7%	
Gross Profit	38.2	38.9	42.5	34.4	39.4	41.0	39.4	-1.6	-3.9%	-3.1	-7.3%	
Gross Margin	53.9%	53.6%	56.8%	53.8%	59.5%	57.3%	56.4%	-0.9pts		-0.4pts		
Operating Income	15.8	18.0	20.7	10.2	15.2	17.7	14.2	-3.5	-19.6%	-6.5	-31.2%	
Operating Margin	22.3%	24.7%	27.6%	15.9%	22.9%	24.8%	20.4%	-4.4pts		-7.2pts		
Income Before Tax	16.5	18.6	20.6	10.5	14.9	18.4	14.5	-3.9	-21.0%	-6.1	-29.8%	
Net Income	13.9	16.2	17.9	9.0	12.1	14.7	11.9	-2.7	-18.7%	-6.0	-33.3%	
Net Income Margin	19.6%	22.4%	23.9%	14.0%	18.3%	20.5%	17.1%	-3.4pts		-6.8pts		
IFRS15 Backlog adjustment	-3.0											
Increase in backlog due to acquisition of Astronics SLT business				+2.4								
Backlog	79.5	83.0	70.8	74.9	74.6	61.3	64.3	+3.0	+4.9%	-6.5	-9.2%	
Exchange Rate	1 US\$	¥108	¥111	¥113	¥111	¥108	¥108	-		¥5 Appreciation		
	1 Euro	¥131	¥129	¥130	¥126	¥125	¥121	¥2 Appreciation		¥11 Appreciation		

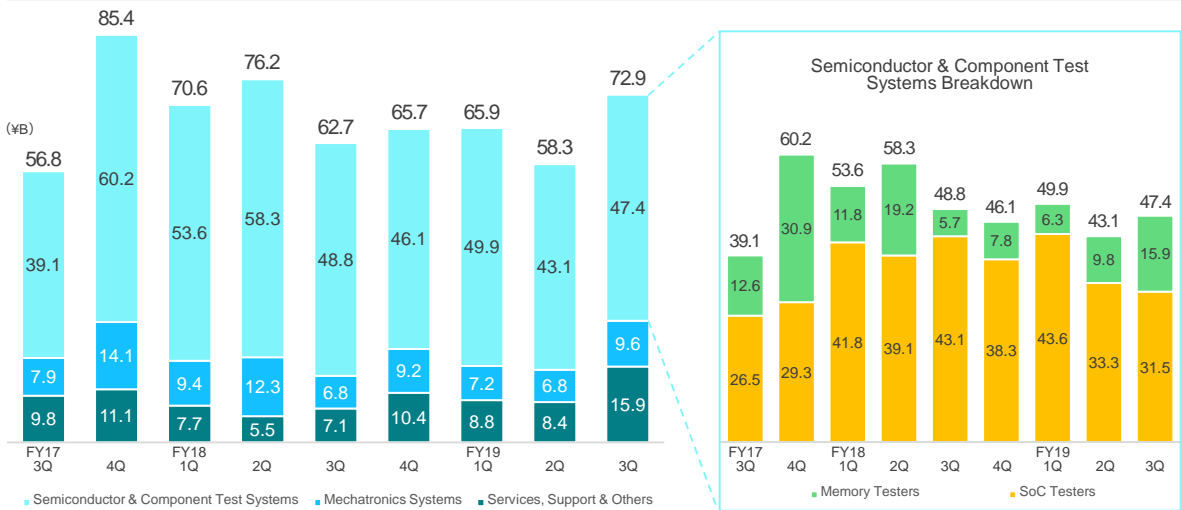
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### ○ FY2019 3Q Results Summary

- Looking back on the business environment in 3Q:
- Given the uncertainty in the global economy, prolonged trade friction between the U.S. and China, and stagnation in the semiconductor market, we expected orders for 3Q to decline QoQ.
- However, towards the end of 2019, inquiries for memory and storage-related testers came in earlier than expected, and system-level test-related inquiries received under the umbrella of our Services, Support & Other segment grew much more than expected. In fact, orders increased to 72.9 billion yen, a 14.6 billion yen gain over 2Q.
- Supported by this increase in orders, memory tester sales grew, boosting sales in 3Q to 69.9 billion yen and operating income to 14.2 billion yen, both of which were higher than we expected three months ago.
- Details of orders, sales, and profits will be explained on the next and subsequent slides.

## Quarterly Orders by Segment



Note: Intersegment transactions have been eliminated from totals

### ○ FY2019 3Q Orders by Segment

#### ○ Semiconductor & Component Test Systems

- ¥47.4 billion      +10.1% QoQ
- SoC testers accounted for 31.5 billion yen, and memory testers for 15.9 billion yen.
- SoC tester orders decreased slightly from 2Q, but aggressive orders for testers for next-generation advanced SoCs used in 5G smartphones continued in 3Q, just as in the first half.
- In memory testers, earlier-than-expected inquiries for LPDDR5 testers used for memory to be installed in flagship 5G smartphone models, and rebounding investment in flash memory, resulted in better results than expected three months ago.

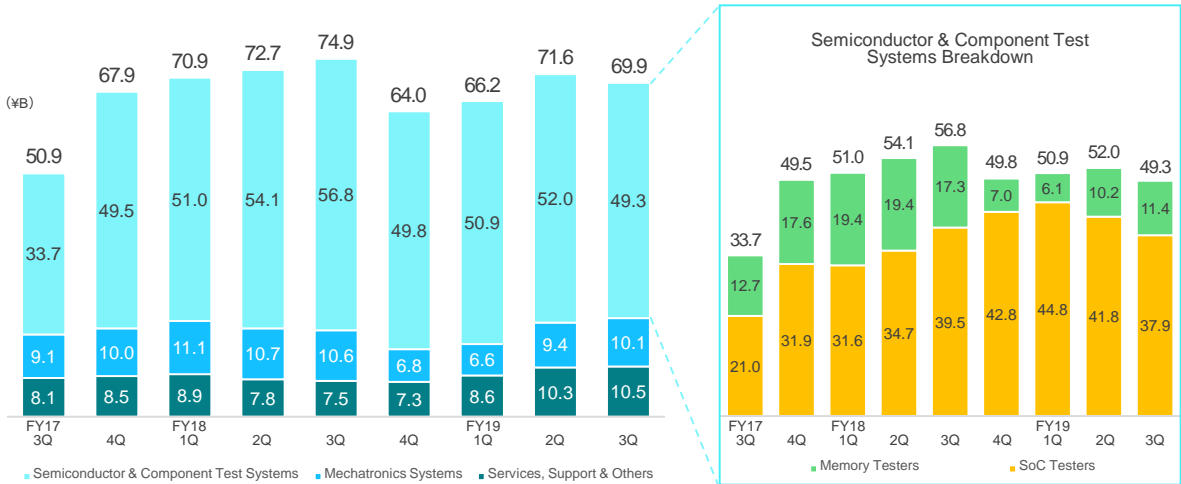
#### ○ Mechatronics Systems

- ¥9.6 billion      +41.6% QoQ
- Thanks to greater-than-expected growth of memory tester orders, orders for this segment were also higher than expected.

#### ○ Services, Support & Others

- ¥15.9 billion      +88.9% QoQ
- In addition to a seasonal increase in annual maintenance contracts, orders related to system-level test for both SSDs and SoCs exceeded expectations, leading to results significantly higher than initially expected.

## Quarterly Sales by Segment



Note: Intersegment transactions have been eliminated from totals

### ○ FY2019 3Q Sales by Segment

#### ○ Semiconductor & Component Test Systems

- ¥49.3 billion      -5.2% QoQ
- SoC tester sales were 37.9 billion yen. As with orders, 3Q saw a high number of customers moving toward mass production of SoC products in preparation for full-scale sales of 5G smartphones.
- Memory tester sales were 11.4 billion yen. Sales to Chinese and Taiwanese memory manufacturers were strong.

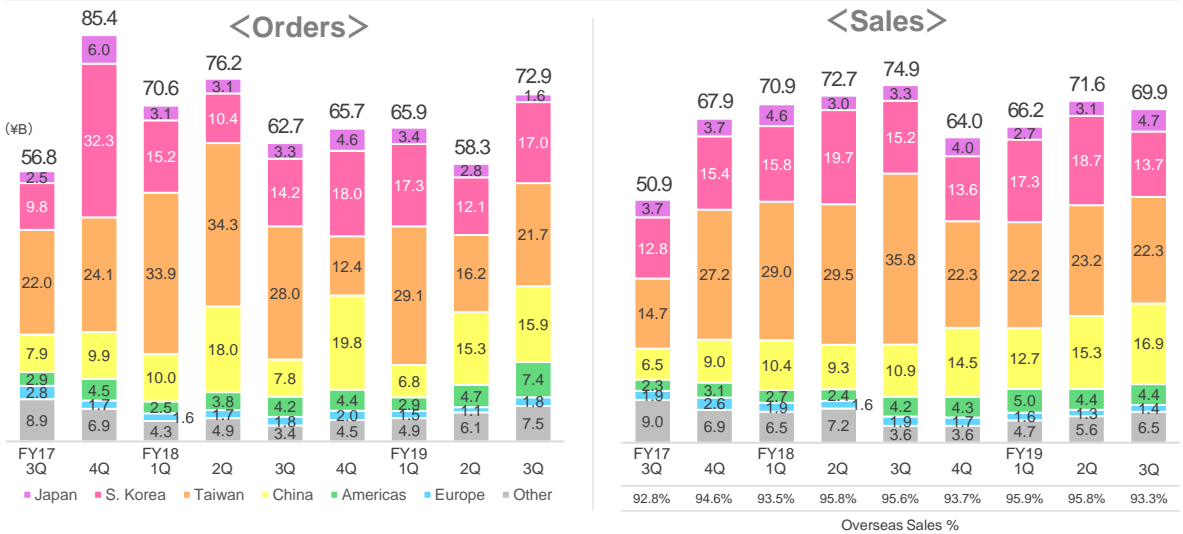
#### ○ Mechatronics Systems

- ¥10.1 billion      +8.0% QoQ

#### ○ Services, Support & Others

- ¥10.5 billion      Flat QoQ

## Quarterly Orders / Sales by Region



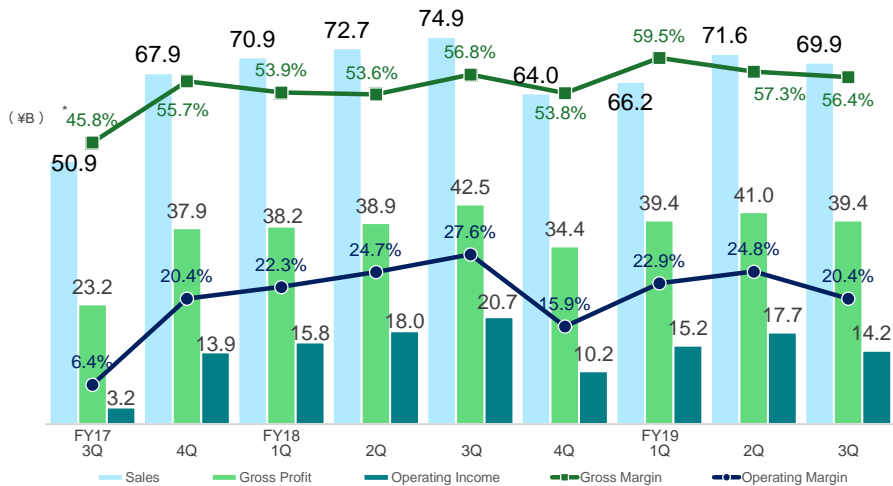
### ○ FY2019 3Q Orders by Region

- South Korea  
Continuing the trend of recent quarters, smartphone-related SoC orders were strong.  
Memory tester orders, formerly sluggish, were also up, thanks to orders for LPDDR5 volume production testers.
- Taiwan  
Orders for testers for volume production of advanced SoCs for 5G smartphones continued at a high level.
- China  
Local semiconductor companies in China continued their active investment in both SoC testers and memory testers.

### ○ FY2019 3Q Sales by Region

- South Korea  
Sales of memory testers declined in reaction to the previous acceleration of customer investment.
- Taiwan / China  
Sales continued to be good in both regions amidst strength in SoC testers and increased demand for memory testers.

## Sales / Gross Profit / Operating Income



\*In FY17 3Q, a ¥3.3 billion write-down of inventories was recorded in our nanotechnology business. The gross margin in FY17 3Q excluding the effect of the write-down was 52.3%.

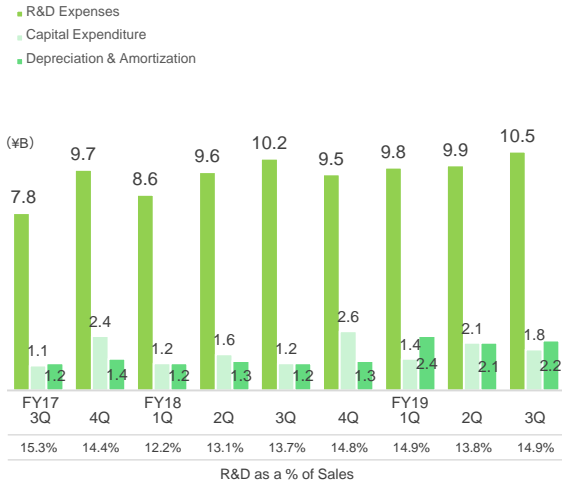
### ○ FY2019 3Q Sales / Gross Profit / Operating Income

- Gross margin 56.4%**  
 Our product mix was slightly worse than in 2Q, but we were able to maintain a gross margin above 55%.
- SG&A ¥25.2 billion**  
 Since 1Q, we have been actively increasing our employee headcount as an investment in future growth. Compared to the first half, costs have increased slightly.
- Operating income ¥14.2 billion**
- Operating margin 20.4%**  
 The large difference year-on-year is due to the one-time profit of approximately 2.5 billion yen posted in 3Q of FY18, resulting from changes to our pension system, which boosted operating income.

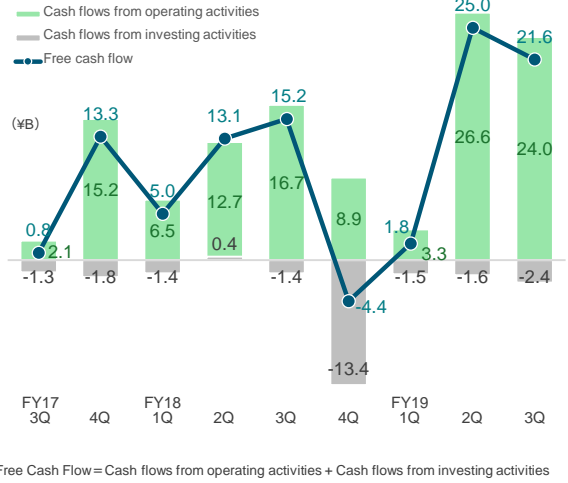


# Investments / Cash Flow

## <Investments>



## <Cash flow>



### ○ FY2019 3Q R&D Expenses / Capex / D&A

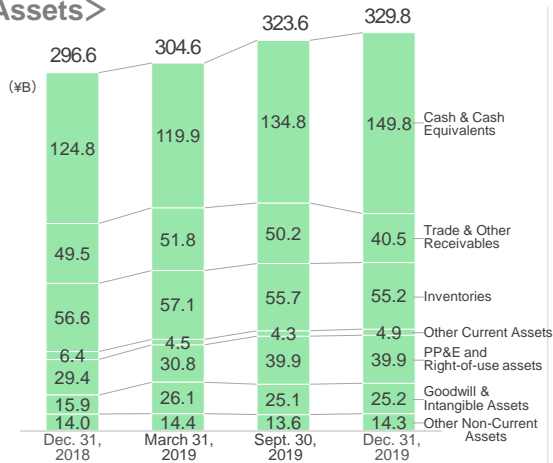
- R&D Expenses           ¥10.5 billion  
Increased as a result of new hiring.
- R&D to sales ratio    14.9%
- Capex                    ¥1.8 billion
- Depreciation and Amortization    ¥2.2 billion  
As mentioned earlier, the application of the new IFRS lease accounting standards from this fiscal year, and amortization of intangible assets in the system-level test business acquired from Astronics in February, caused depreciation and amortization to increase YoY.

### ○ Cash Flow

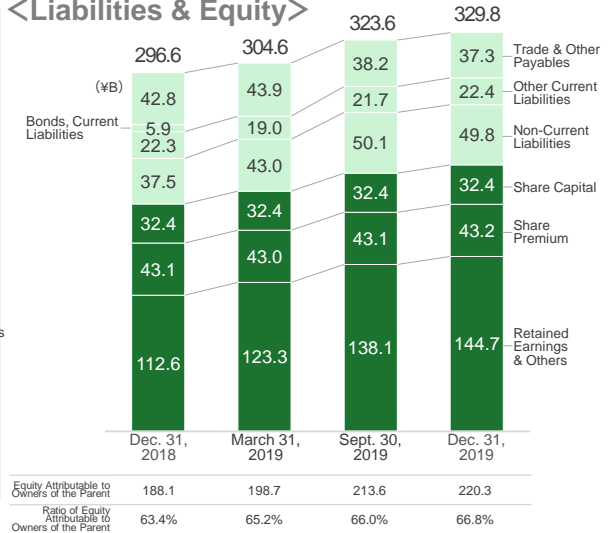
- Free cash flow        ¥21.6 billion  
Collection of receivables continued from 2Q, generating a high level of cash inflow.

# Financial Position

## <Assets>



## <Liabilities & Equity>



### ○ Balance Sheet for Period Ending December 31st, 2019

- Total Assets                      ¥329.8 billion
- Cash and cash equivalents                      ¥149.8 billion  
Up ¥15.0 billion from the end of the previous quarter
- Equity Attributable to Owners of the Parent                      ¥220.3 billion
- Ratio of equity attributable to owners of the parent    66.8%  
Up 0.8 point from the end of the previous quarter



## **FY2019 Outlook**

Yoshiaki Yoshida

Representative Director, President & CEO

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# Semiconductor Tester Market Trends (Outlook as of Jan. 2020)

## CY19 Actual (Provisional)

- Demand for testers for the development and production of high-end SoCs, mainly for 5G, grew. The SoC tester market expanded YoY
- The memory tester market also picked up, supported by higher-performance memory device and volume production ramps by Chinese memory companies

## CY20 Estimate

- Given the greater-than-expected growth of the SoC tester market in CY19, it is presently expected to be flat in CY20, but the market's structure is unchanged, with semiconductor evolution driving investments in test capacity enhancement and stimulating further growth
- The memory tester market is recovering. There is a possibility of further demand increases, depending on the rate of DRAM market improvement

	CY18 Actual	CY19 Actual (Provisional)	CY20 Estimate
SoC Tester Market	Approx \$2,550M	Approx \$2,700M (Est. as of Oct: Approx \$2,600M)	Approx \$2,700M
Memory Tester Market	Approx \$1,150M	Approx \$650M (Est. as of Oct: Approx \$550M)	Approx \$800M

## ○ Tester Market Outlook

- Regarding the size of the tester market in CY19, we can give some preliminary estimates.
- In the SoC tester market, demand for high-end SoC testers, centering on 5G applications, accelerated and grew more than expected, driving YoY market expansion.
- The memory tester market also picked up more than we forecast in October, supported by higher-performance memory devices and volume production ramps by Chinese memory companies.
- The expansion of test enhancement and reliability assurance needs stemming from the evolution of semiconductor performance continues to drive structural growth in the tester market.
- Our current view is that the CY20 SoC tester market will remain flat, following the greater-than-expected growth of CY19, while the CY20 memory tester market will grow by slightly more than 20%.
- Regarding Advantest's CY19 market share, we estimate that we maintained a share of more than 50% of the total tester market for the second consecutive year (around 55% in SoC and 50% in memory).
- Demand for 5G-related SoC testers was initially expected to get off to a slow start. In fact, in CY19, significant demand arrived sooner than expected. Therefore, the CY20 SoC tester market is now expected to be at the same level as CY19.
- The memory tester market is recovering, but a full-scale recovery is still some time off. As the DRAM market improves, we expect customer motivation for tester investment to increase.

## FY19 Forecast

	FY18 Results	FY19			vs. FY18		vs. New Full-Year Forecast	
		1H Results	2H Forecast	Full-Year Forecast	(Δ)	(%)	FY19 Forecast as of Oct	(Δ)
Orders	275.2	124.2	145.8	270.0	-5.2	-1.9%	235.0	+35.0
Sales	282.5	137.8	132.2	270.0	-12.5	-4.4%	247.0	+23.0
Operating Income	64.7	32.9	23.1	56.0	-8.7	-13.4%	45.0	+11.0
Operating Margin	22.9%	23.9%	17.5%	20.7%	-2.2pts		18.2%	+2.5pts
Income Before Tax	66.2	33.3	23.4	56.7	-9.5	-14.4%	45.8	+10.9
Net Income	57.0	26.8	22.2	49.0	-8.0	-14.0%	36.5	+12.5
Net Income Margin	20.2%	19.4%	16.8%	18.1%	-2.1pts		14.8%	+3.3pts
Backlog	74.9	61.3	74.9	74.9	-	-	62.9	+12.0
Exchange Rate*1	1 US\$	¥110	¥109	¥107	¥108	¥2 Appreciation	¥107	-
	1 Euro	¥129	¥123	¥120	¥121	¥8 Appreciation	¥121	-
ROE	35.3%	-	-	22.8%	-12.5pts		17.6%	+5.2pts
Dividend per share*2	¥92	¥41	¥34	¥75	-		TBD	-

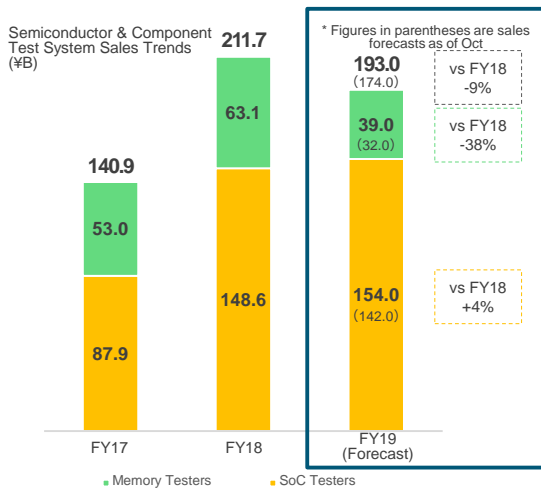
\*1: Our latest outlook for the impact of exchange rate fluctuations on FY19 operating income is minus 600 million yen for each 1 yen of yen appreciation vs USD, and plus 100 million yen for each 1 yen of yen appreciation vs the euro.

\*2: FY18 dividend per share: 50 yen in 1H, 42 yen in 2H.

### ○ FY19 Forecast

- Based on our results through 3Q and our forecast for 4Q, we have revised our earnings forecast for the current fiscal year upward again.
- In 4Q, we forecast orders of 72.9 billion yen, net sales of 62.3 billion yen, operating income of 8.9 billion yen, and quarterly net income of 10.3 billion yen. The assumed exchange rates for 4Q are 105 yen to the U.S. dollar and 120 yen to the euro.
- The new full-year forecast raises orders by 35.0 billion yen and sales by 23.0 billion yen compared to October's forecast.
- Our full-year gross profit margin forecast is approximately 57%, almost unchanged from our previous forecast.
- Our operating income forecast is up by 11.0 billion yen and our net income forecast is up by 12.5 billion yen compared to October's forecast.
- Our new net income forecast includes the anticipated posting of deferred tax assets that are expected to reduce tax expenses in the future, based on the CY20 market forecast described earlier.

## FY19 Outlook by Segment



### Semiconductor & Component Test Systems

#### <SoC Testers>

- In high-end SoCs for e.g. 5G, demand has not slowed as much as expected three months ago, despite having fallen in comparison to 1H. We have revised our full-year sales forecast upwards
- We expect to set a new SoC tester sales record, further exceeding the record set in FY18

#### <Memory Testers>

- We sense further improvement in the market environment
- 4Q should also see demand for flash and high-speed DRAM test

### ○ SoC Tester Business Outlook

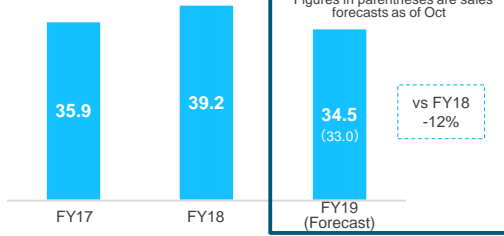
- In the SoC tester market, a sense of acceleration of investment in testers for application and baseband processors for 5G handsets has developed.
- Our 4Q SoC tester sales forecast incorporates the possibility of a rebound slump. However, 4Q demand has increased since three months ago.
- Based on these factors, we are raising our full-year SoC tester sales forecast by 12.0 billion yen. As the graph shows, this is likely to be a very strong fiscal year for our SoC tester business, exceeding its record-setting performance in FY18, thanks to increased demand for high-end SoC testers.

### ○ Memory Tester Business Outlook

- The memory tester market is recovering.
- Flash memory demand has started to perk up. Inventory adjustments have progressed and tester investment has resumed.
- DRAM is likely to take a long time to recover fully, but as regards interface test processes, LPDDR5 for smartphones is ramping up faster than expected.
- Local flash memory and DRAM companies in China are also actively investing.
- Based on the above factors, we have also increased our memory tester sales forecast for the current fiscal year by 7.0 billion yen.

# FY19 Outlook by Segment

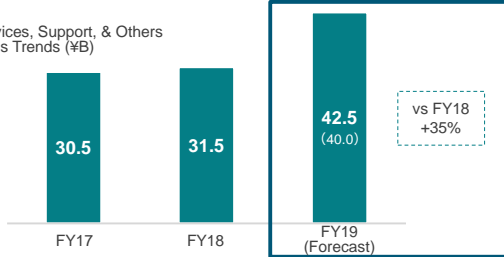
Mechatronics Sales Trends (¥B)



## Mechatronics Systems

– Demand for interface products has improved slightly since memory tester investment rebounded

Services, Support, & Others Sales Trends (¥B)



## Services, Support, & Others

– Field service sales, the core business of this segment, remained strong

– System-level test demand was also strong for both SSDs and SoCs

## ○ Mechatronics / Service Business Outlook

- In line with the increase in our memory tester sales forecast, we have increased our sales forecast for mechatronics by 1.5 billion yen, to 34.5 billion yen.
- In our Services, Support, and Others segment, we have increased our sales forecast by 2.5 billion yen. New businesses, such as our system-level test businesses, are growing.

# Measures for Medium- to Long-Term Growth

## Grand Design (Mid- to Long-Term Management Policy · FY18-27)

<Vision statement>

### Adding Customer Value in an Evolving Semiconductor Value Chain

<Management Goals>

#### ¥300B - ¥400B in annual sales

- Improve market share by 1% a year by focusing on growth areas and strengthening partnerships with customers (CY17 results: 36% → CY27 target: 46%)
- Develop new business around our core business area

## Mid-Term Plan (FY18-20 Average)

	Conservative	Base
Yearly market growth rate	0%	4%
Sales	¥230.0B	¥250.0B
Operating Margin	15%	17%
ROE	15%	18%
EPS	¥135	¥170

## Mid-Term Management Plan (FY18-20) Investment Policies

### <R&D>

- ✓ Continuously invest 30.0 billion yen or more annually

### <M&A>

- ✓ Mid-term management plan cumulative M&A investment framework is 100.0 billion yen
- ✓ Targets will expand our solutions portfolio across the semiconductor value chain

### <FY19 R&D / Capital Investment Outlook>

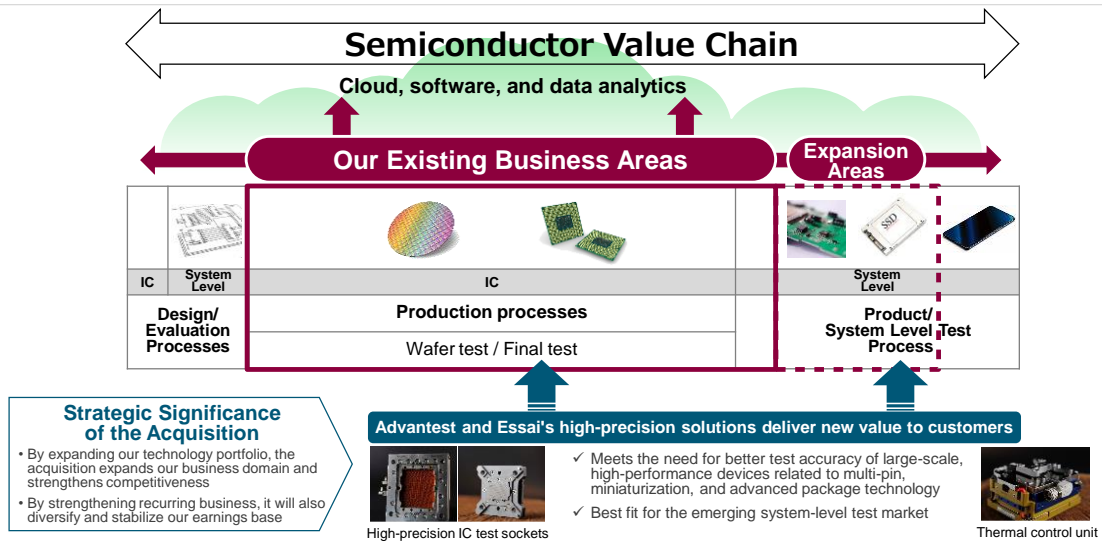
	FY18 actual	FY19 forecast
R&D Expenses	37.9B	40.0B
Capex	6.6B	10.0B
D&A	5.0B	9.5B

## ○ Measures for Medium- to Long-Term Growth

- Advantest is promoting management in line with the 10-year mid- to long-term management policy announced in April 2018.
- As part of our focus on growth areas and strengthening our partnerships with customers, we are increasing our SE and development employee headcount this fiscal year.
- We will also expand our new businesses to achieve further sales growth.
- We will develop solutions for areas adjacent to our current core business through M&A and partnerships.
- As an M&A investment framework for this policy, we have set a total of 100.0 billion yen to be spread across the duration of our mid-term management plan.
- As announced in our press release today, the acquisition of Essai, Inc. is a part of this M&A policy.



# Acquisition of Essai, Inc.



## ○ Acquisition of Essai, Inc.

- Essai is a test-related company based in Silicon Valley, whose main product is sockets that connect testers and semiconductor devices.
- Time to market and time to volume support are becoming more and more important to semiconductor companies providing high-end applications.
- In this context, Essai's excellent design and manufacturing capabilities enable rapid product delivery to their customers. Advantest will leverage our global footprint, production expertise, and customer base to further accelerate their business growth.
- Additionally, in combination with Advantest's final-test equipment and system-level testers, Essai's resources will enable us to provide enhanced end-to-end test solutions in the form of test cells including socket-accuracy assurance, further adding value to Advantest's product portfolio.
- Moreover, Essai's products are consumables, and as such are expected to contribute to Advantest's recurring business.
- In terms of technology, marketability, and sales synergies, Essai can make a significant contribution to achieving our long-term management goals, so we decided to acquire the company.
- For reference, Essai's sales have recently been about \$100 million per year. From FY20, we expect this business to contribute immediately to profit.

## Summary

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- Full-year forecast revised upwards again, based on robust demand for SoC testers and signs of recovery in the memory tester market
- The market in FY19 has been better than expected, but this is still a year of market adjustments. FY20 promises to be a year of recovery
- Advantest will continue to improve our business performance by combining organic efforts with resources acquired through M&A
- Despite risks such as US-China trade friction, geopolitical issues, and the Wuhan coronavirus, Advantest aims to exceed the results of FY18 in our next fiscal year

### ○ Summary

- In light of the strong performance of high-end SoC testers so far, and the recovery of the memory tester market, we have revised our full-year forecast upwards again.
- Though the adjustments in FY19 have not been as deep or long-lasting as we have experienced in the past, this has still been a year of adjustment for the tester market.
- We expect FY20 to be a year of recovery. In both SoC and memory, there is potential for the business environment to improve step-by-step.
- In addition, our business foundation is steadily evolving and becoming stronger.
- In February last year, we acquired the system-level test division of Astronics, and this January we acquired Essai in an acquisition aligned with tester market trends.
- As described in our Grand Design mid-to long-term management policy, we are expanding the scope and scale of our business beyond semiconductor volume production test.
- Although uncertainty in our business environment will continue, we will strive to exceed the strong performance of FY18 in the next fiscal year, leveraging our improved business structure and the recovery of semiconductor markets.