



**ADVANTEST**<sup>®</sup>

**FY2020 3Q**  
**(Three months ended December 31st, 2020)**  
**Financial Briefing**

January 28th, 2021  
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.

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## Financial Results for FY2020 3Q

Atsushi Fujita  
Director, Managing Executive Officer (CFO)

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## FY20 3Q Summary of Results

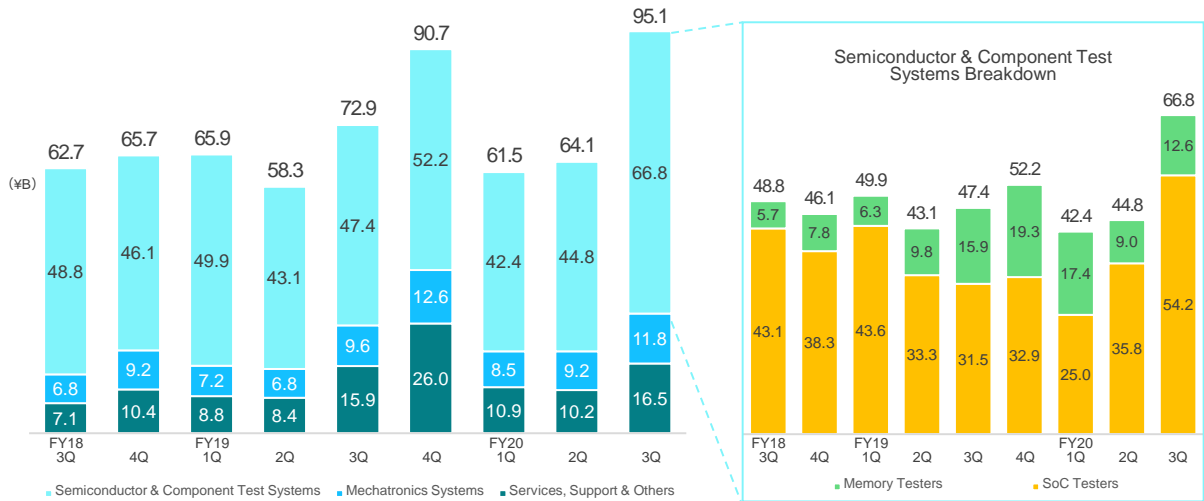
(¥B)

	FY19				FY20							
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	QoQ		YoY		
								(Δ)	(%)	(Δ)	(%)	
Orders	65.9	58.3	72.9	90.7	61.5	64.1	95.1	+30.9	+48.2%	+22.1	+30.4%	
Sales	66.2	71.6	69.9	68.2	66.7	77.4	78.1	+0.7	+0.9%	+8.2	+11.7%	
Gross Profit	39.4	41.0	39.4	36.7	38.0	41.6	40.2	-1.5	-3.6%	+0.8	+2.0%	
Gross Margin	59.5%	57.3%	56.4%	53.8%	56.9%	53.9%	51.5%	-2.4pts		-4.9pts		
Operating Income	15.2	17.7	14.2	11.6	13.5	17.4	15.3	-2.2	-12.8%	+1.0	+6.9%	
Operating Margin	22.9%	24.8%	20.4%	17.0%	20.2%	22.6%	19.5%	-3.1pts		-0.9pts		
Income Before Tax	14.9	18.4	14.5	10.8	12.9	16.4	13.9	-2.6	-15.7%	-0.6	-4.4%	
Net Income	12.1	14.7	11.9	14.8	10.6	13.9	12.0	-1.9	-13.7%	+0.1	+0.7%	
Net Income Margin	18.3%	20.5%	17.1%	21.7%	15.8%	18.0%	15.4%	-2.6pts		-1.7pts		
Backlog increased due to M&A				+4.2								
Backlog	74.6	61.3	64.3	91.0	85.7	72.5	89.5	17.0	23.4%	+25.2	+39.2%	
Exchange Rate	1 US\$	¥111	¥108	¥108	¥110	¥108	¥107	¥105	¥2 Appreciation		¥3 Appreciation	
	1 Euro	¥125	¥121	¥119	¥121	¥118	¥123	¥124	¥1 Depreciation		¥5 Depreciation	

### ○ FY2020 3Q Summary of Results

- First of all, we would like to express profound gratitude to our suppliers, other business partners, and employees, who all continue to support Advantest's business amidst the "second wave" and "third wave" of the COVID-19 pandemic.
- Business results for the October-December period exceeded our prediction in October.
- SoC semiconductor demand from the high performance computing (HPC) and smartphone sectors was strong, and our business environment improved faster than was expected three months ago.
- Supported by these trends, 3Q SoC tester orders as well as overall orders reached new quarterly records.
- Sales and profits also exceeded expectations.
- Orders, sales, and profits will be explained in detail in the following slides.

## Quarterly Orders by Segment



Note: Intersegment transactions have been eliminated from totals

### ○ FY2020 3Q Orders by Segment

#### ○ Semiconductor & Component Test Systems

- ¥66.8 billion +49.3% QoQ
- SoC tester orders reached ¥54.2 billion, an increase of ¥18.4 billion from the previous quarter.
- Display driver ICs (DDI) principally drove orders, against the background of the increasing adoption of OLEDs in 5G smartphones, and the increasing incorporation of touch sensors into DDI.
- Demand for application processors for 5G smartphones also grew more than expected, helping to eliminate the surplus of testers in the supply chain affected by US-China friction, and generating new investments.
- Orders of memory testers by Chinese players increased by ¥3.6 billion from the previous quarter.

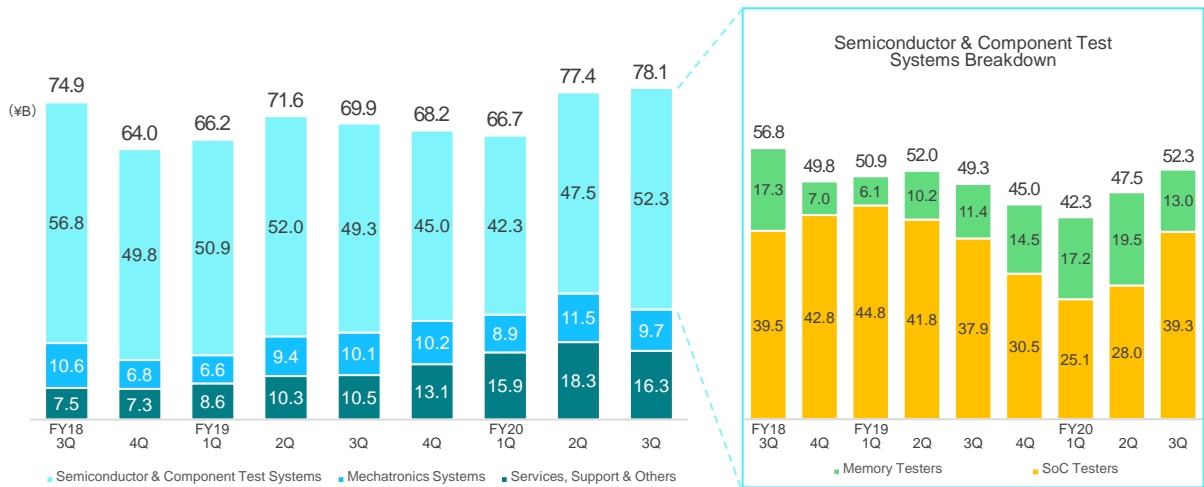
#### ○ Mechatronics Systems

- ¥11.8 billion +29.8% QoQ
- EUV-related demand drove higher nanotechnology product orders.

#### ○ Services, Support & Others

- ¥16.5 billion +61.8% QoQ
- In addition to a seasonal increase in annual maintenance contract renewals, system level test-related orders increased.

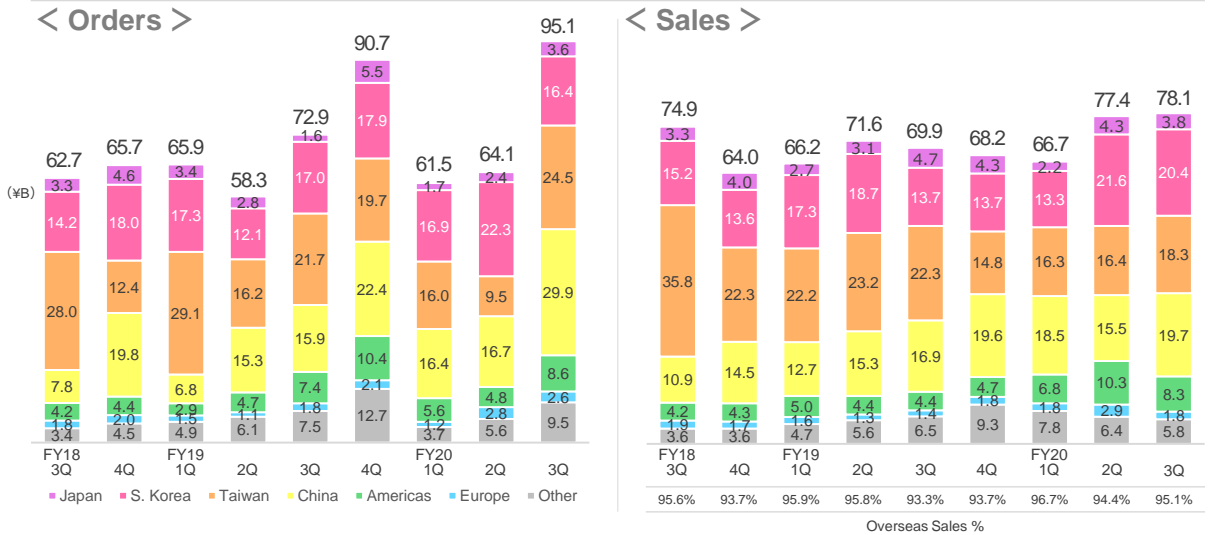
## Quarterly Sales by Segment



Note: Intersegment transactions have been eliminated from totals

- FY2020 3Q Sales by Segment
- Semiconductor & Component Test Systems
  - ¥52.3 billion      +9.8% QoQ
  - Sales breakdown: SoC testers ¥39.3 billion, memory testers ¥13.0 billion.
  - Smartphone-related products, especially DDI and image sensors, were the driving force behind the increase in SoC tester sales.
  - Sales of memory testers decreased due to a decline in orders in 2Q.
- Mechatronics Systems
  - ¥9.7 billion      -15.4% QoQ
  - Sales of test handlers and device interfaces fell in line with the decline in sales of memory testers.
- Services, Support & Others
  - ¥16.3 billion      -11.0% QoQ
  - 3Q sales of system-level test products decreased in reaction to stronger momentum in the first half, but remained in line with our expectations.

# Quarterly Orders / Sales by Region



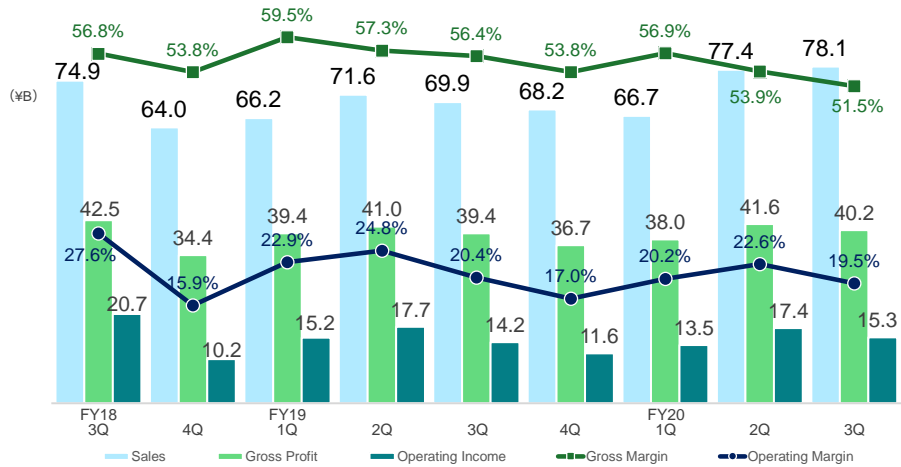
○ FY2020 3Q Orders / Sales by Region

- Taiwan / China  
Smartphone-related SoC tester inquiries rose, principally for DDI test.
- South Korea  
Orders declined in reaction to high SoC tester orders in 2Q.

○ FY2020 3Q Sales by Region

- China  
Sales of SoC testers for DDI and other applications expanded.
- Americas  
System level test sales cooled off.

## Sales / Gross Profit / Operating Income



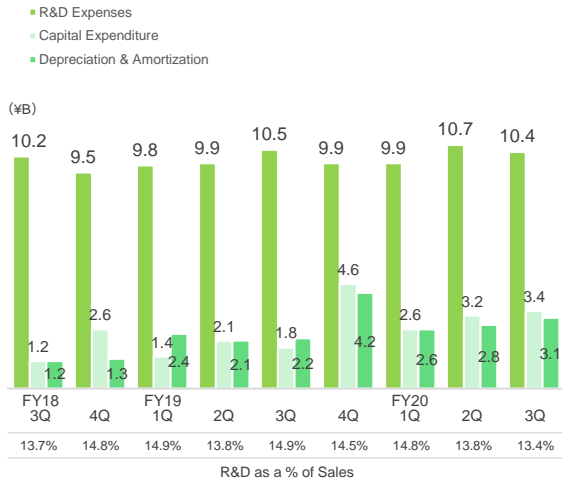
### ○ FY2020 3Q Sales / Gross Profit / Operating Income

- Gross margin 51.5%  
Our sales mix included fewer highly profitable products than in the previous quarter, and some 3Q system level test sales were offset by costs associated with the launch of new products, resulting in a decline. We expect gross margin to improve in 4Q.
- SG&A (including total other income and expenses) ¥24.9 billion  
SG&A expenses were flat QoQ.
- Operating income ¥15.3 billion
- Operating margin 19.5%

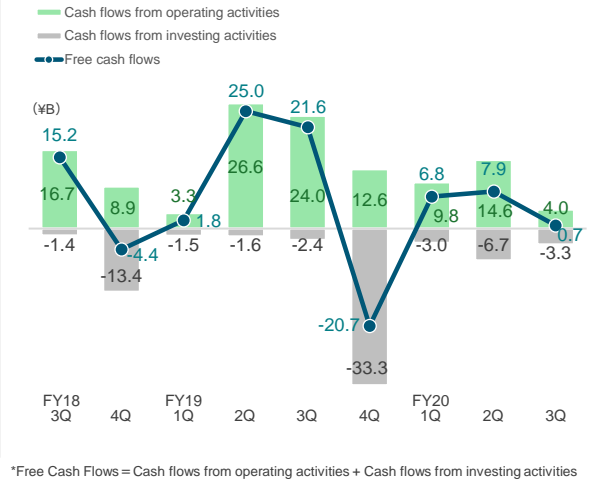


# Investments / Cash Flow

## <Investments>



## <Cash flow>



### ○ FY2020 3Q R&D Expenses/Capex/D&A

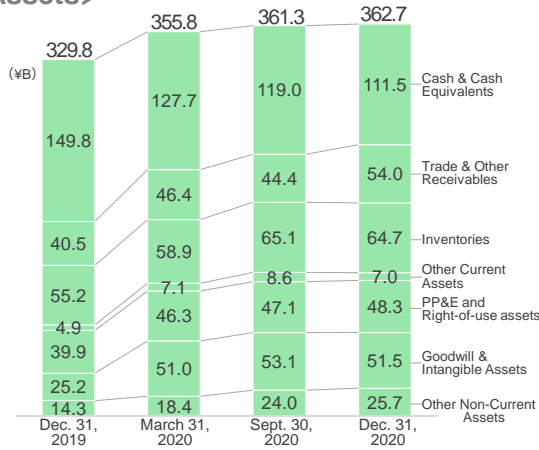
- R&D Expenses      ¥10.4 billion
- R&D to sales ratio    13.4%
- Capex                      ¥3.4 billion
- Depreciation and Amortization      ¥3.1 billion

### ○ FY2020 3Q Cash Flow

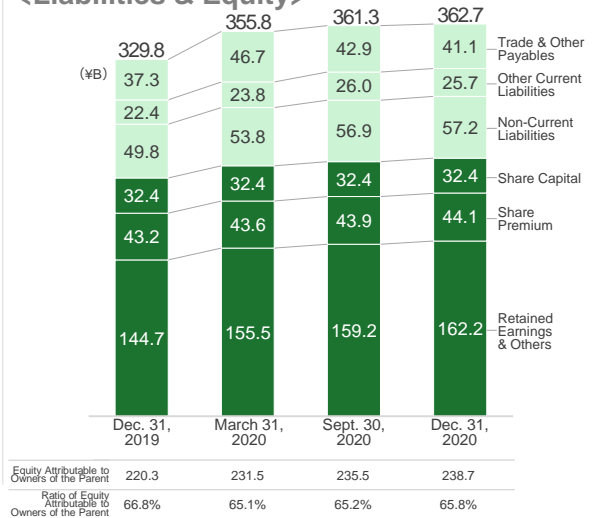
- Free cash flow      ¥0.7 billion
- Operating cash flow did not grow in 3Q because sales clumped up near the end of the quarter.

# Financial Position

## <Assets>



## <Liabilities & Equity>



### ○ Balance Sheet for Period Ending December 31st, 2020

- Total Assets                                   ¥362.7 billion
- Cash & Cash Equivalents                   ¥111.5 billion  
Down ¥7.5 billion from the end of the previous quarter
- Equity Attributable to Owners of the Parent                                   ¥238.7 billion
- Ratio of equity attributable to owners of the parent   65.8%  
Up 0.6 points from the end of the previous quarter
- The share repurchase announced in July was completed on October 30. A total of 2.49 million shares were acquired at a total cost of ¥13.1 billion.



## **FY2020 Outlook**

Yoshiaki Yoshida

Representative Director, President & CEO

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# Semiconductor Tester Market Trends: January 2021 Outlook

## CY20 Actual (Provisional)

- SoC tester market: 5G / North American smartphone-related demand and HPC tester demand remained strong and offset the impact of US-China friction
- Memory tester market: Recovery is progressing on growth in data center investment, rising demand for WFH, and expanding Chinese memory investments

## CY21 Estimate

- SoC tester market: No change to the big-picture market drivers of investments in test capacity improvement, progressing in tandem with the evolution of semiconductors. Expectations for reinforcement of test for advanced-node semiconductors for HPC and 5G smartphones, as well as display driver ICs (DDI)
- Memory tester market: We expect that the trends towards advanced nodes, greater device density, and higher speeds / broader bandwidth will continue to increase demand for testers

	CY18 Actual	CY19 Actual	CY20 Actual (Provisional)	CY21 Estimate
SoC Tester Market	Approx. \$2,550M	Approx. \$2,700M	Approx. \$2,800M (October estimate: approx. \$2,700M)	Approx. \$2,800M-3,000M
Memory Tester Market	Approx. \$1,150M	Approx. \$650M	Approx. \$1,100M (October estimate: approx. \$1,000M)	Approx. \$1,100M-1,300M

## ○ Semiconductor Tester Market Trends: January 2020 Outlook

- Six months ago, we warned that surplus test capacity generated by the tightening of American regulations on a major Chinese player could significantly reduce demand for testers.
- However, test demand for HPC has continued to be strong, North American smartphone-related test demand has been higher than expected, and competition for market share among Chinese smartphone makers has hastened the elimination of surplus testers from the supply chain. Reflecting these market changes, we have raised our CY20 SoC tester market estimate to approximately \$2,800M.
- With regard to surplus testers, OSAT investment is now at normal levels.
- The SoC tester market is expected to continue growing in CY21 amid demand ranging broadly across various sectors, including 5G smartphones and HPC, where an increasing number of products use advanced process semiconductors, and DDI products, which are gaining functionality.
- Based on our own performance, we estimate that the CY20 memory tester market came in at about \$1,100M. CY21 is expected to see further expansion of tester demand due to process shrinks, greater device density, higher device speeds and broader bandwidths.
- We continue to pay close attention to the impact of the COVID-19 pandemic, and will respond swiftly to market changes while striving to maintain and expand our market share.

## FY20 Forecast

	FY19		FY20				vs. FY19		Vs. New Full-Year Forecast	
	Results	1Q Results	2Q Results	3Q Results	4Q Forecast	Full-Year Forecast	(Δ)	(%)	FY20 Forecast as of Oct.	(Δ)
Orders	287.8	61.5	64.1	95.1	89.3	310.0	+22.2	+7.7%	260.0	+50.0
Sales* <sup>1</sup>	275.9	66.7	77.4	78.1	82.8	305.0	+29.1	+10.5%	275.0	+30.0
Operating Income	58.7	13.5	17.4	15.3	20.8	67.0	+8.3	+14.1%	52.5	+14.5
Operating Margin	21.3%	20.2%	22.6%	19.5%	25.1%	22.0%	+0.7pts		19.1%	+2.9pts
Income Before Tax	58.6	12.9	16.4	13.9	20.8	64.0	+5.4	+9.3%	50.9	+13.1
Net Income	53.5	10.6	13.9	12.0	25.0	61.5	+8.0	+14.9%	42.5	+19.0
Net Income Margin	19.4%	15.8%	18.0%	15.4%	30.2%	20.2%	+0.8pts		15.5%	+4.7pts
Backlog	91.0	85.7	72.5	89.5	96.0	96.0	+5.0	+5.5%	76.0	+20.0
R&D Expenses	40.1	9.9	10.7	10.4	11.0	42.0	+1.9	+4.7%	41.0	+1.0
Capex	9.9	2.6	3.2	3.4	3.8	13.0	+3.1	+31.3%	12.0	+1.0
D&A	10.9	2.6	2.8	3.1	3.0	11.5	+0.6	+5.5%	11.0	+0.5
Exchange Rate* <sup>2</sup>	1 US\$	¥109	¥108	¥107	¥105	¥105	¥3 Appreciation		¥106	-
	1 Euro	¥121	¥118	¥123	¥124	¥125	¥1 Depreciation		¥120	¥2 Depreciation

\*1: Intersegment transactions have been eliminated from totals

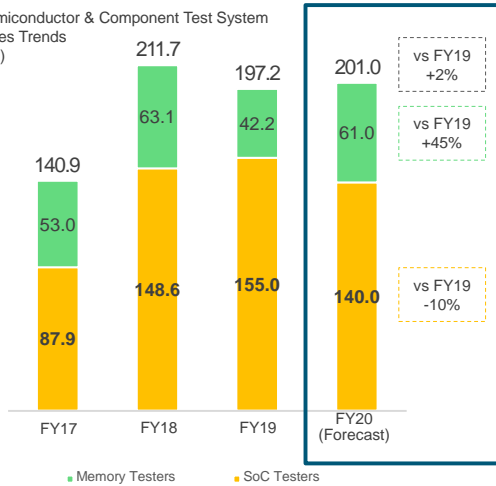
\*2: Our latest forecast for the impact of exchange rate fluctuations on FY20 operating income is plus ¥700 million per 1 yen of JPY depreciation vs USD, and minus ¥150 million per 1 yen of JPY depreciation vs the euro

### ○ FY2020 Forecast

- Based on our results through 3Q and our forecast for 4Q, we have again revised our full-year forecast.
- Our orders forecast has been raised by ¥50.0 billion and our sales forecast has been raised by ¥30.0 billion, compared to our October forecast. This would represent record high orders and sales, with sales in the ¥300.0 billion range.
- Our operating income and net income forecasts have been raised by ¥14.5 billion and ¥19.0 billion, respectively, compared to our October forecast.
- In addition, our 4Q quarterly net income forecast takes into account the recording of deferred tax assets in anticipation of future tax reduction effects.
- Until now, Advantest's effective tax rate has been low due to the tax reduction effect of using a loss carryforward accounting adjustment, but the balance of the losses that were carried over is expected to be consumed this year. Thus, our effective tax rate from the next fiscal year onwards is expected to be in the mid 20% range.
- Our full-year forecast is based on exchange rate assumptions of ¥106 to the US dollar and ¥122 to the euro.
- Our gross profit margin for the full year is forecast to be about 54%, unchanged from October.
- Due to the revision of our European subsidiary's pension plan, a liquidation profit of approximately 25M euros has been incorporated into our operating income forecast for 4Q.
- Advantest's year-end dividend is expected to be ¥57. Adding this to the interim dividend of ¥38, we predict that we will pay an annual dividend of ¥95, which represents an increase of ¥13 over FY2019.

## FY20 Outlook by Segment

Semiconductor & Component Test System Sales Trends (¥B)



### Semiconductor & Component Test Systems

#### <SoC Testers> (+¥23.0B vs Oct. forecast)

- Competition among smartphone players sparked higher-than expected tester demand for SoC semiconductors such as application processors (APU) and DDI products. We have significantly raised our full-year sales forecast
- In the DDI space, we are seeing growing demand related to the transition to TDDI, which is driven by the increasing functionality of display panels
- We also anticipate growth centered on HPC and 5G smartphones in 4Q

[Progress toward mid-term sales growth targets (forecast)]

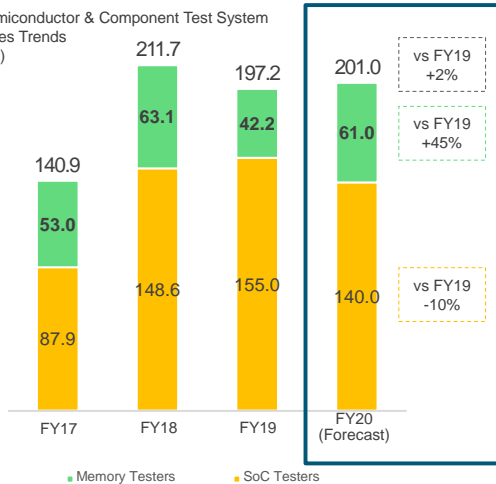
	FY15-17 average	FY18-20 average	Change
SoC Testers	¥79.1B	¥147.9B	+87%
Memory Testers	¥35.3B	¥55.4B	+57%
Total	¥114.2B	¥203.3B	+78%

### ○ FY20 SoC Tester Business Outlook

- Our full-year sales forecast for SoC testers has been raised by ¥23.0 billion from our October forecast, to ¥140.0 billion.
- In addition to firm test demand for HPC, smartphone-related tester investment is currently vibrant, and this favorable environment is expected to continue in 4Q.
- On top of the ongoing boom in smartphone- and HPC-related demand, there are expectations for the recovery of test demand across broader areas including DDIs and analog ICs in CY21. We are building out our supply system in preparation for future expansion of SoC tester demand.

## FY20 Outlook by Segment

Semiconductor & Component Test System Sales Trends (¥B)



### Semiconductor & Component Test Systems

#### <Memory Testers> (+¥4.0B vs Oct. forecast)

- Demand for server memory linked to data center investment and high-performance memory for game consoles is driving tester sales
- Chinese customers' capital investments in capacity expansion also remain firm
- In 4Q we expect strong inquiries for both DRAM and Non-Volatile Memory (NVM) testers

[Progress toward mid-term sales growth targets (forecast)]

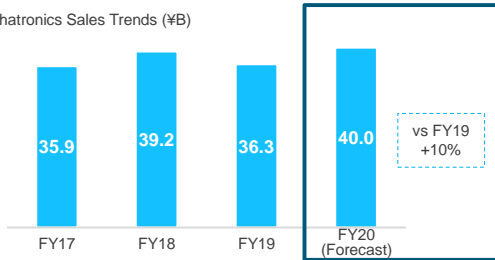
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SoC Testers	¥79.1B	¥147.9B	+87%
Memory Testers	¥35.3B	¥55.4B	+57%
Total	¥114.2B	¥203.3B	+78%

### ○ FY20 Memory Tester Business Outlook

- Memory tester sales are trending above the previous fiscal year's level, supported by growth in demand for server memory linked to data center investment.
- We have also revised this forecast upward in light of confirmed investments by Chinese memory companies in the second half.
- As explained in our market outlook, the industry is seeking to deliver further miniaturization, greater density, higher frequency speeds, and broader bandwidths. In addition, memory makers are currently positive about increasing production, and we expect strong inquiries for both DRAM and NAND testers in 4Q.

## FY20 Outlook by Segment

Mechatronics Sales Trends (¥B)



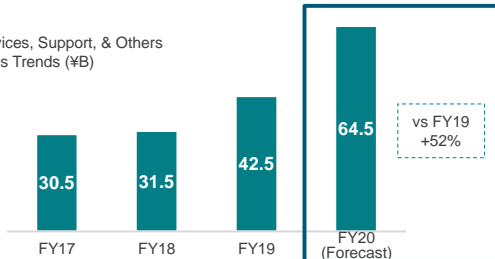
### Mechatronics Systems (+¥2.0B vs Oct. forecast)

–Sales of interface products, which are highly correlated with memory testers, are expanding

[Progress toward mid-term sales growth targets (forecast)]

	FY15-17 average	FY18-20 average	Change
Mechatronics Systems	¥30.9B	¥38.5B	+25%

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



### Services, Support, & Others (+¥1.5B vs Oct. forecast)

–In addition to the effect of our Essai acquisition, the system level test business is performing well in general. Sales are expected to increase significantly YoY

–Our field service business also remains firm due to increasing installations

[Progress toward mid-term sales growth targets (forecast)]

	FY15-17 average	FY18-20 average	Change
Services, Support & Others	¥30.0B	¥46.2B	+54%

### ○ FY20 Mechatronics / Services, Support, & Others Business Outlook

- For our mechatronics-related business, we forecast sales of ¥40.0 billion for the current fiscal year. This forecast has been revised upwards by ¥2.0 billion in line with the upward revision of our memory tester sales forecast.
- In the services and other segment, system-level test products performed better than expected. Taking this into account, we have raised our segment sales forecast to ¥64.5 billion, an increase of ¥1.5 billion compared to our October forecast.
- This is due to an increase in demand for SoC-related system-level test products amidst increased investment in data centers and smartphone performance gains.



## Summary

- In CY20, WFH-related demand, active investment in data centers, and continuing smartphone-related semiconductor performance gains buoyed the tester market, despite the COVID-19 pandemic
- Equipment surpluses in the smartphone-related supply chain caused by US-China conflict had been virtually cleared by 3Q
- The improving business environment encourages us to aim for record high orders and sales in FY20. We have raised our full-year orders forecast by (Y) 50.0 billion and our sales forecast by (Y) 30.0 billion. We expect to achieve all of the targets set under our current mid-term management plan
- The tester market is expected to grow again in CY21, although it is unclear when the COVID-19 pandemic will be deemed to be over and when the global economy will recover
- We will continue to stay alert for any impact on procurement or manufacturing due to lockdowns, or any slowdown in supply chains, and ensure that we remain able to provide products and services as normal

### ○ Summary

- In CY20, the spread of the COVID-19 pandemic depressed the world economy from the start of the year, but associated lifestyle changes have also boosted demand for semiconductors. The semiconductor tester market has expanded due to WFH-related demand, increased investment in data centers, and continuous improvements in the performance of semiconductors for smartphones and other products.
- The problem of surplus SoC tester capacity, which was a concern in the summer due to the intensifying friction between the United States and China, was resolved sooner than we expected, as intense competition among smartphone makers accelerated the restructuring of the supply chain. The full-scale adoption of 5G is yet to come, and we can expect steady growth in the future.
- Based on our 3Q results, which exceeded our prediction, and a brighter 4Q outlook, we have raised our full-year orders forecast by ¥50.0 billion and our sales forecast by ¥30.0 billion. Both orders and sales will reach the ¥300.0 billion range for the first time in Advantest's history. We have a chance of achieving all the numerical targets set under our current mid-term management plan.
- It seems that it will take some time until the COVID-19 pandemic is declared to be over, and it is difficult to predict when the global economy will recover, but we expect that robust semiconductor demand and aggressive device performance improvements will continue, and we foresee that demand for both SoC and memory testers will continue to grow in CY21. We are currently formulating our next mid-term management plan, to be launched next fiscal year, but we can expect that its first year will get off to a good start.
- There is still a considerable risk that the COVID-19 pandemic will lead politicians to impose new lockdowns in various regions, affecting factory operations. Advantest's procurement and production systems, and hence our ability to meet increasing customer demand, may be impacted. While prioritizing the health of Advantest Group employees, we will take careful measures to ensure an uninterrupted supply of products and services to our customers.

## ESG & External Evaluation

Published "Integrated Annual Report 2020"



Advantest joined RE100, an international initiative that supports businesses in transitioning to 100% renewable energy sources

Advantest China was honored in the 2020-2021 Mercer China Healthiest Workplace Awards

Advantest was named as a "Winner Company" in the JACD Corporate Governance of the Year®\* 2020 Awards



Corporate Governance of The Year

### ○ ESG & External Evaluation

- For your reference, we have included some examples of external evaluation of Advantest's ESG that have appeared since August.
- In addition to the above, Advantest Group companies in every region have donated to organizations assisting medical staff in their lifesaving activities amidst the COVID-19 pandemic.
- Lastly, we would like to express our gratitude to the medical staff who work so hard every day in the fight against COVID-19, and to the suppliers who support Advantest's manufacturing system.
- In 2020, our business environment changed rapidly. Our success in responding to these changes is thanks to the efforts of all the Advantest Group employees who are resolutely carrying out their duties in cooperation with colleagues around the world. We would like to warmly thank our employees and their families for their support.