



ADVANTEST[®]

FY2018
(Period Ended March 31th, 2019)
Information Meeting

April 25th, 2019
Advantest Corporation

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NOTE

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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operation == "MIRROR_X":  
    mirror_mod.use_x = True  
    mirror_mod.use_y = False  
    mirror_mod.use_z = False  
operation == "MIRROR_Y":  
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obj.select= 1  
mirror_ob.select=1  
context.scene.objects.active  
obj["Selected"] + str(modifier)  
mirror_ob.select= 1
```

Financial Results for FY2018

Atsushi Fujita
Managing Executive Officer (CFO)

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FY18 Results Highlights

- In response to increased demand for higher semiconductor performance and enhanced reliability assurance, robust demand for testers continued
- Although the business environment deteriorated in the second half, with semiconductor inventory adjustments appearing, orders set a new record
- Our efforts to strengthen our production and support systems in order to meet high demand have enabled a new sales record
- As a result of measures to improve operational efficiency, net income, ROE and annual dividends also set new records

○ FY18 Results

- In response to the increase in demand for higher semiconductor performance and stronger reliability assurance, robust tester demand continued through the full year.
- Supported by these trends, the business environment deteriorated in the second half, with semiconductor inventory adjustments appearing, yet we were able to post record high orders.
- We achieved record high sales by strengthening our production and support system to meet high demand.
- As a result of efforts to improve operational efficiency, net income, ROE, and annual dividends also reached record highs.

FY18 Summary of Results

	FY17		FY18		
	Results	Forecast as of Jan. 2019	Results	vs. FY17	
				(Δ)	(%)
Orders	247.8	265.0	275.2	+27.4	+11.1%
Sales	207.2	278.0	282.5	+75.2	+36.3%
Operating Income	24.5	63.0	64.7	+40.2	+2.6x
Operating Margin	11.8%	22.7%	22.9%	+11.1pts	
Income Before Tax	24.3	64.0	66.2	+41.9	+2.7x
Net Income	18.1	54.5	57.0	+38.9	+3.1x
Net Income Margin	8.7%	19.6%	20.2%	+11.5pts	
IFRS15 Backlog adjustment		▲3.0	▲3.0		
Increase in backlog due to acquisition of Astronics SLT business			+2.4		
Backlog	82.8	66.8	74.9	▲7.9	▲9.5%
Exchange Rate	1 US\$	¥111	¥110	¥110	¥1 Appreciation
	1 Euro	¥129	¥130	¥129	-
Dividend per share	¥32	¥88	¥92		up ¥60

○ FY2018 Results Summary

- Orders +11.1% YoY ¥275.2 billion
- Sales +36.3% YoY ¥282.5 billion
- Operating Income +2.6x YoY ¥64.7 billion
- Net Income +3.1x YoY ¥57.0 billion
- Smartphone-related tester demand remained at a higher-than-expected level in 4Q, pushing full-year results higher than our January forecast.
- Influenced by our February acquisition of the system-level test (SLT) business of US company Astronics, backlog increased by 2.4 billion yen.

FY18 4Q Summary of Results

	FY17				FY18								(¥B)
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	QoQ		YoY		
									(Δ)	(%)	(Δ)	(%)	
Orders	49.4	56.2	56.8	85.4	70.6	76.2	62.7	65.7	+2.9	+4.7%	▲19.8	▲23.1%	
Sales	40.7	47.7	50.9	67.9	70.9	72.7	74.9	64.0	▲11.0	▲14.6%	▲4.0	▲5.9%	
Gross Profit	20.6	24.9	23.2	37.9	38.2	38.9	42.5	34.4	▲8.1	▲19.1%	▲3.4	▲9.1%	
Gross Margin	50.6%	52.1%	45.8%	55.7%	53.9%	53.6%	56.8%	53.8%	▲3.0pts		▲1.9pts		
Operating Income	2.2	5.2	3.2	13.9	15.8	18.0	20.7	10.2	▲10.5	▲50.8%	▲3.6	▲26.3%	
Operating Margin	5.5%	10.9%	6.4%	20.4%	22.3%	24.7%	27.6%	15.9%	▲11.7pts		▲4.5pts		
Income Before Tax	1.6	4.8	3.4	14.5	16.5	18.6	20.6	10.5	▲10.1	▲49.1%	▲4.0	▲27.7%	
Net Income	1.0	3.9	2.6	10.6	13.9	16.2	17.9	9.0	▲9.0	▲50.1%	▲1.7	▲15.9%	
Net Income Margin	2.4%	8.2%	5.0%	15.6%	19.6%	22.4%	23.9%	14.0%	▲9.9pts		▲1.6pts		
IFRS15 Backlog adjustment					▲3.0								
Increase in backlog due to acquisition of Astronics SLT business								+2.4					
Backlog	50.9	59.4	65.3	82.8	79.5	83.0	70.8	74.9	4.1	+5.8%	▲7.9	▲9.5%	
Exchange Rate	1 US\$	¥112	¥111	¥112	¥111	¥108	¥111	¥113	¥111	¥2 Appreciation		-	
	1 Euro	¥121	¥128	¥132	¥134	¥131	¥129	¥130	¥126	¥4 Appreciation		¥8 Appreciation	

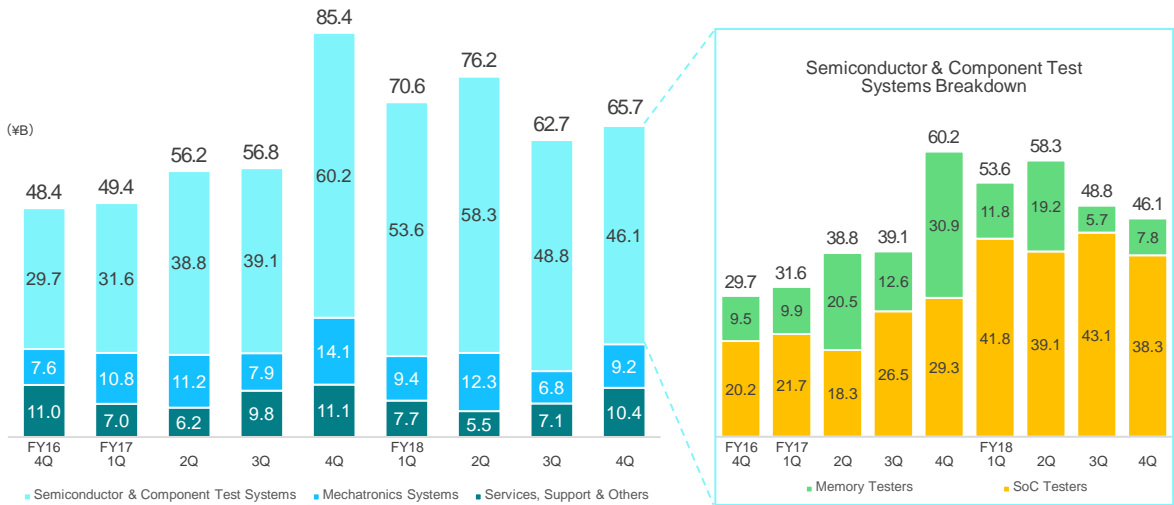
6 | **ADVANTEST**

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○ FY2018 4Q Results Summary

- FY18 quarterly results.
- Three months ago, 4Q orders were expected to decrease compared to 3Q, but strong SoC tester demand drove orders higher than 3Q.

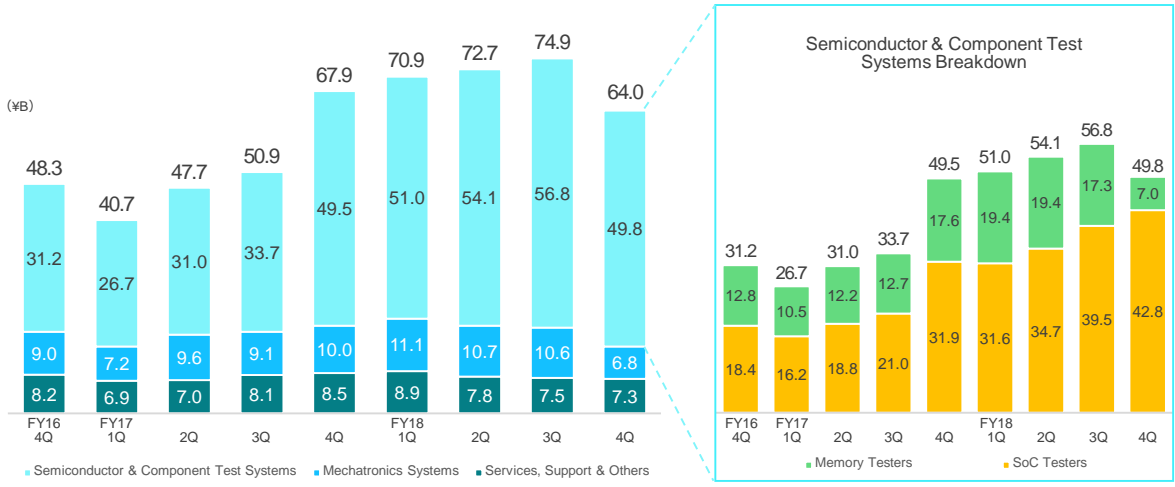
Quarterly Orders by Segment



Note: Intersegment transactions have been eliminated from totals

- FY2018 4Q Orders by Segment
- Semiconductor & Component Test Systems
 - ¥46.1 billion -5.8% QoQ
 - In SoC testers, demand for semiconductors used in smartphones, such as application processors, display driver ICs, and image sensors, pushed orders to 38.3 billion yen.
 - In memory testers, orders for high-speed DRAM and NAND flash testers drove overall orders to 7.8 billion yen, an increase of 2.1 billion yen QoQ.
- Mechatronics Systems
 - ¥9.2 billion +37.0% QoQ
 - Orders for nanotechnology products for advanced processes grew.
- Services, Support & Others
 - ¥10.4 billion +45.6% QoQ
 - Orders for maintenance contracts grew.

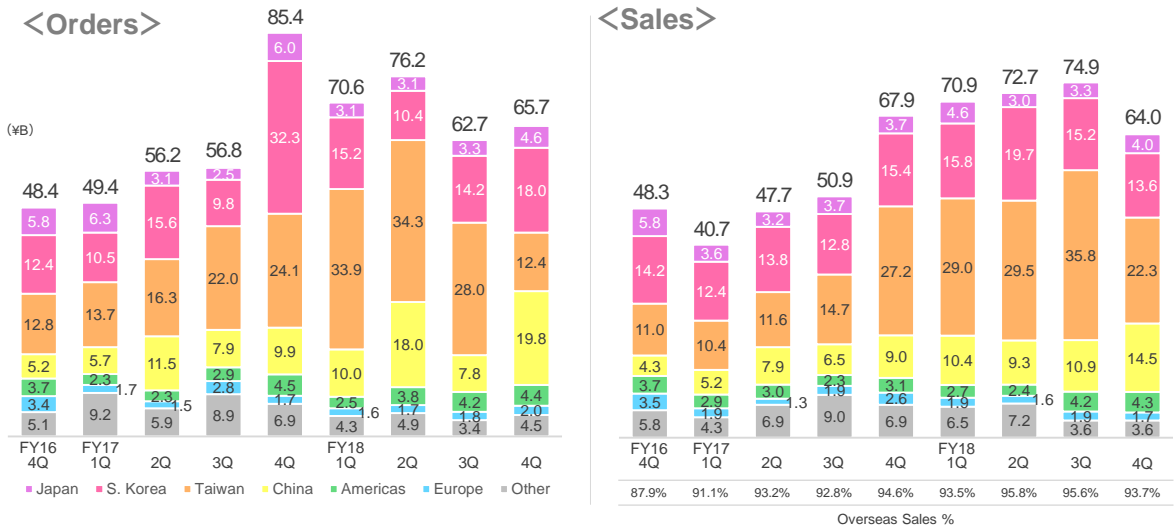
Quarterly Sales by Segment



Note: Intersegment transactions have been eliminated from totals

- FY2018 4Q Sales by Segment
- Semiconductor & Component Test Systems
 - ¥49.8 billion -12.1% QoQ
 - SoC tester sales were 42.8 billion yen, another quarterly sales record.
 - Memory tester sales stayed at 7.0 billion yen due to declining orders in 3Q.
- Mechatronics System
 - ¥6.8 billion -35.8% QoQ
 - Device interface sales shrank in step with memory tester sales.
- Services, Support & Others
 - ¥7.3 billion Flat QoQ

Quarterly Orders / Sales by Region



○ FY2018 4Q Orders by Region

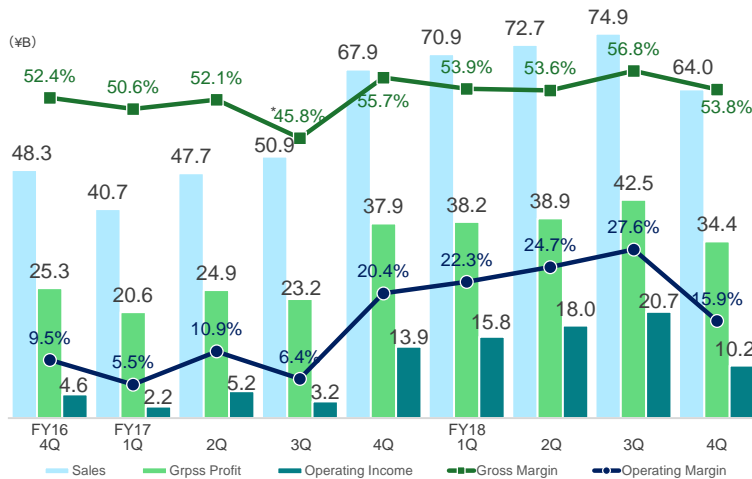
- South Korea, China, & Taiwan
Events such as the ramp-up of advanced processes and the rise of a local semiconductor supply chain in China overlapped, making this a quarter that saw changes in our regional mix. As a result, orders from China and South Korea grew.

South Korea is seen as a memory semiconductor-producing region, but SoC testers were stronger than memory testers in FY18 against the backdrop of higher performance of smartphones.

○ FY2018 4Q Sales by Region

- Taiwan
Sales shrank, primarily in memory.

Sales / Gross Profit / Operating Income



	(¥B)	
	FY17	FY18
Sales	207.2	282.5
Gross Profit	106.6	154.0
Gross Margin	51.4%	54.5%
SG&A	82.1	89.3
Operating Income	24.5	64.7
Operating Margin	11.8%	22.9%

*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%.

○ FY2018 4Q Sales / Gross Profit / Operating Income

- **Gross margin 53.8%**
4Q product mix was slightly worse than 3Q, and period-end inventory evaluation also contributed to a decline vs 3Q.
- **SG&A ¥24.2 billion**
Substantial SG&A expenses were flat. Posted SG&A expenses increased by 2.4 billion yen compared to 3Q, when we posted a profit of 2.5 billion yen due to shifting a portion of the company's pension system to a defined contribution pension system.
- **Operating income ¥10.2 billion**
Decreased by 10.5 billion yen QoQ, due to a decline in sales, a decline in gross margin, and the one-time profit effect due to the pension plan transition mentioned above.
- **Operating margin 15.9%** Declined by 11.7 points

○ FY2018 Full Year Operating Income

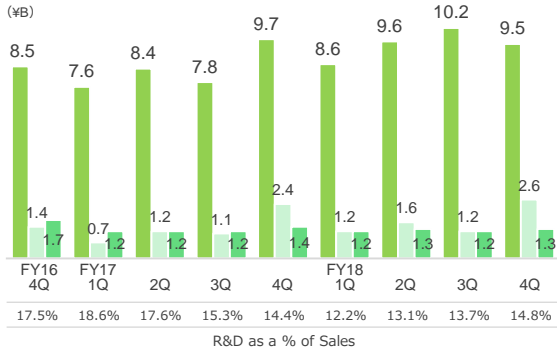
- As shown in the table on the right, we have increased operating income significantly by reducing the growth of SG&A expenses even as sales grow.
- Core operating income, which deducts temporary operating profit and loss, was 60.9 billion yen. Core operating margin was 21.6%.

Investments / Cash Flow Condition

<Investments>

- R&D Expenses
- Capital Expenditure
- Depreciation & Amortization

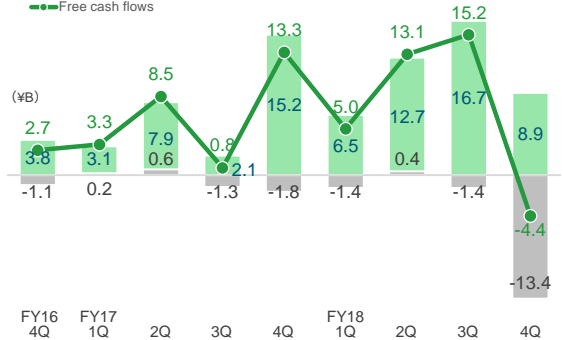
	FY17	FY18
R&D Expenses	33.5	37.9
R&D as a % of Sales	16.2%	13.4%
Capex	5.4	6.6
D&A	5.0	5.0



<Cash flows>

- Cash flows from operating activities
- Cash flows from investing activities
- Free cash flows

	FY17	FY18
Cash flows from operating activities	28.3	44.8
Cash flows from investing activities	▲2.3	▲15.9
Free cash flows	25.9	28.9



*Free Cash Flows=Cash flows from operating activities + Cash flows from investing activities

FY2018 4Q R&D Expenses/Capex/D&A

- R&D Expenses ¥9.5 billion
- R&D to sales ratio 14.8%
- Capex ¥2.6 billion
- Depreciation and Amortization ¥1.3 billion

FY2018 Full Year

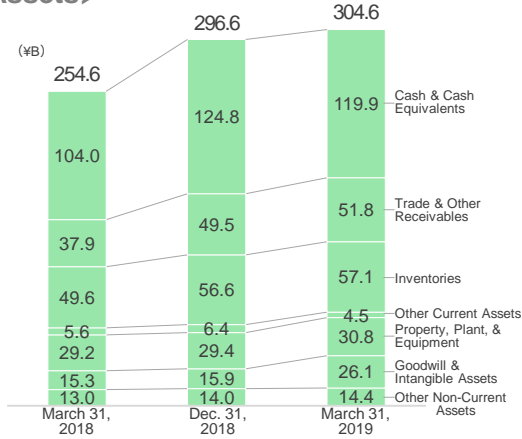
- Investments were in line with our plans.

Cash Flow

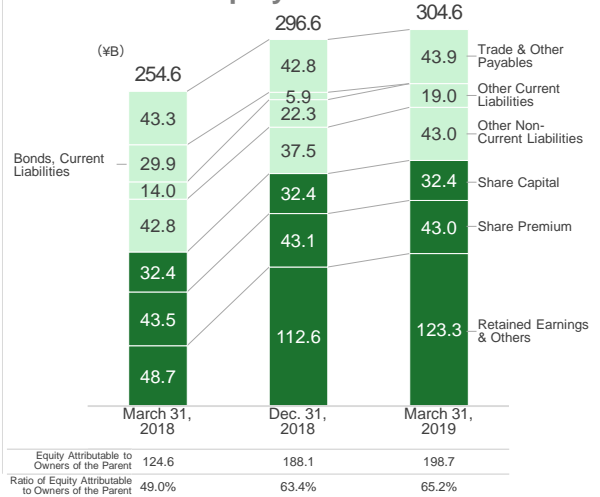
- The acquisition of the Astronics SLT business increased investment cash flow expenditures in 4Q, thus free cash flow was negative.

Financial Position

<Assets>



<Liabilities & Equity>



○ Balance Sheet for Period Ending March 31st, 2019

- Total Assets ¥304.6 billion
- Cash & Cash Equivalents ¥119.9 billion
¥16.0 billion up from the end of the previous fiscal year
- Goodwill & Intangible Assets ¥26.1 billion
¥10.8 billion up from the end of the previous fiscal year

Increased from the end of the previous fiscal year, due to the acquisition of the Astronics SLT business in February.

As the amount of PPA has not been finalized yet, we booked goodwill and intangible assets for the fiscal year ended March 2019 based on provisional estimates. We are currently in the process of allocating acquisition costs. This process is expected to be completed at the end of June.

- Bonds, Current Liabilities
Convertible bonds maturing in February 2019 were fully converted.
- Equity Attributable to Owners of the Parent ¥198.7 billion
- Ratio of Equity Attributable to Owners of the Parent 65.2%
Up 16.2 points from the end of the previous fiscal year



FY2019 Outlook & Mid-Term Business Plan Progress Report

Yoshiaki Yoshida
Representative Director, President & CEO

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Tester Market Forecast (as of April 2019)

CY18 Results

- Amidst advancing semiconductor performance and reliability, many semiconductor manufacturers maintained active tester investment all year long
- Based on market trends, CY18 market size was greater than our January estimates

CY19 Forecast

- As uncertainty gathers over the global economy, the tester market is also entering a slowdown phase, but is expected to improve in the second half of FY19
- The CY20 tester market will expand again, driven by investment in next-generation advanced semiconductor test capabilities

	CY18 Actual	CY19 Estimates	% Change
SoC Tester Market	Approx. \$2,550M (January estimate: approx. \$2.4B)	Approx. \$2,000M (Unchanged from January estimate)	Down approx. 20% YoY
Memory Tester Market	Approx. \$1,150M (January estimate: approx. \$1.0B)	Approx. \$550-650M (January estimate: approx. \$700-800M)	Down approx. 40-50% YoY

○ CY2019 Tester Market Outlook

- Semiconductor performance will evolve in CY19 as well. As a result, we believe that various semiconductor manufacturers will continue to strengthen their test capabilities.
- However, the trade friction between the U.S. and China has not yet been resolved, and inventory adjustments continue in the supply chain of many products. For the time being, we expect the slowdown in tester demand to continue.
- Each customer will differ, but we are currently assuming that tester orders will recover from October.
- Our CY19 SoC tester market forecast is about \$2.0B, the same as estimated three months ago.
- Our memory tester market forecast has been lowered. Based on the present poor conditions, we estimate it at \$550M to 650M.
- In addition, we studied the size of the market in CY18 and revised our SoC and memory tester market estimates upward. As a result, the rate of decline YoY we foresee for the CY19 tester market has increased compared with our previous estimate. We now expect SoC to decrease by 20% and memory to decrease from 40% to 50% YoY.
- This illustrates how high the CY18 demand for testers was, both for Advantest and for our competitors. A rebound in CY19 is only to be expected.
- However, we do not consider CY18 to have been a market peak.
- The trends towards strengthening testing and reliability assurance to support higher semiconductor performance are continuing. The adoption of 5G, AI, and other technologies will push the tester market in CY20 higher than in CY19. In line with this trend, we believe that demand for testers will continue to grow despite ups and downs.

FY19 Forecast

	(¥B)			
	FY18 Results	Forecast	FY19 vs. FY18	
			(Δ)	(%)
Orders	275.2	230.0	▲45.2	▲16.4%
Sales	282.5	230.0	▲52.5	▲18.6%
Operating Income	64.7	30.0	▲34.7	▲53.6%
Operating Margin	22.9%	13.0%	▲9.9pts	
Income Before Tax	66.2	31.0	▲35.2	▲53.2%
Net Income	57.0	26.0	▲31.0	▲54.4%
Net Income Margin	20.2%	11.3%	▲8.9pts	
Backlog	74.9	74.9	-	-
Exchange Rate*	1 US\$	¥110	¥110	-
	1 Euro	¥129	¥130	¥1 Depreciation
ROE	35.3%	12.6%	▲22.7pts	

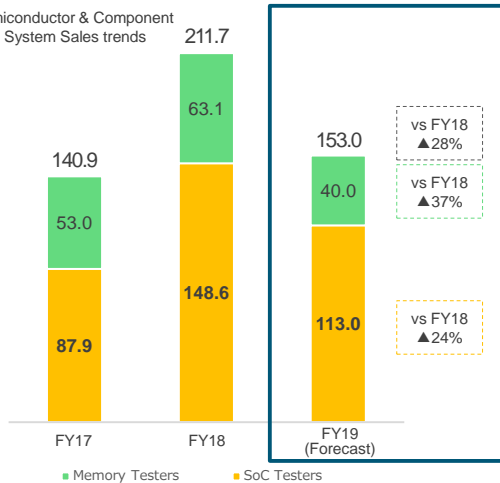
*The latest outlook for the impact of exchange rate fluctuations on FY19 operating income: plus 500 million yen for each 1 yen of yen depreciation vs USD, and minus 100 million yen for each 1 yen of yen depreciation vs the euro.

○ FY19 Forecast

- Affected by the market slowdown, FY19 results are expected to decline compared to FY18.
- Our forecast calls for 230 billion yen in full-year sales. Orders are expected to hit bottom in the first half and recover in the second half. We currently expect that sales in the first half will be higher than in the second half, due to our backlog.
- Also, even amidst headwinds, our forecast is still higher than FY17 results. The development of higher-performance semiconductors will buttress our performance.
- We believe that the semiconductor market will enter a major growth cycle from 2020, driven by 5G.
- The tester market will slow down this year, but it is similarly expected to recover in 2020, and 5G, AI, and the IoT will continue to sustain a mid-to long-term expansion.
- The targets of our mid-term management plan, announced last year, are three-year averages. We take a mid- to long-term perspective not influenced by environmental changes and performance fluctuations from year to year.
- Our FY18 sales reached an 18-year high, but our business was very different in 2000, when we last set a sales record, than it is now. We have transitioned from a structure reliant on memory testers to one that emphasizes SoC testers.
- Compared to the memory tester business, the SoC tester business addresses more customers and more diverse device types, and the supply chain, composed of fables, foundry, and OSAT companies, is more complex. This is a much more stable business, but on the other hand, compared to memory, SoC customers require more comprehensive support, making this a business that demands a large cost and time commitment.
- For FY19, we forecast a YoY rate of decline in profit exceeding that of sales, but this is because our forecast factors in broad personnel investments in R&D, SE, and sales support, and industry-academic partnerships as well as other research costs focused on topics relevant to the future of the test business, including the utilization of AI and the IoT, which will enable Advantest to maintain and expand our market share in 2020 and thereafter.

FY19 Outlook by Segment

Semiconductor & Component Test System Sales trends (¥B)



Semiconductor & Component Test Systems

<SoC Testers>

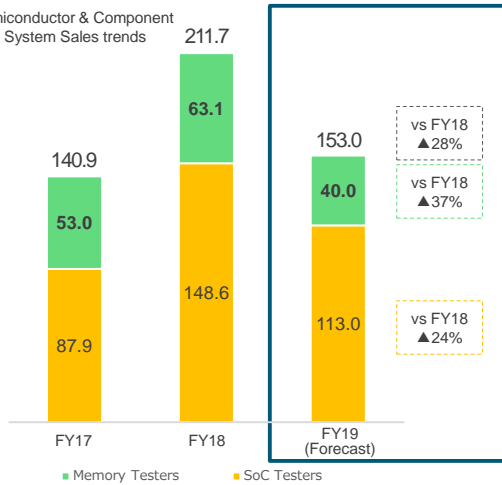
- Expected to decline vs favorable FY18, but advancing semiconductor performance will support SoC tester demand
- The development of test capacity for semiconductors supporting higher-performance smartphones, such as application processors and image sensors, continues to increase
- The full-scale launch of EUV will also support demand for high-end processor testers
- Meaningful 5G-related demand is expected in CY20 and thereafter

○ SoC Tester Business Outlook

- Although the impact of inventory adjustments will restrain demand below the level of FY18, we expect that FY19 will still see advances in semiconductor performance that support SoC tester demand.
- Sales will hinge on testers for semiconductors such as applications processors and image sensors that support new, higher-performance smartphone models.
- While there is concern about the slowdown in the smartphone market, tester demand does not necessarily correlate directly with the growth rate of smartphone shipments. As seen in our FY18 results, the increasing complexity of semiconductors used in smartphones creates growth in test items that generates tester demand.
- The full-scale launch of EUV will also support high-end processor tester demand.
- Display driver IC tester demand will also continue, even if not at the level of FY18.
- 5G-related test business has already emerged, and meaningful demand is expected in CY20 and thereafter. This will be discussed later.

FY19 Outlook by Segment

Semiconductor & Component Test System Sales trends (¥B)



Semiconductor & Component Test Systems

<Memory Testers>

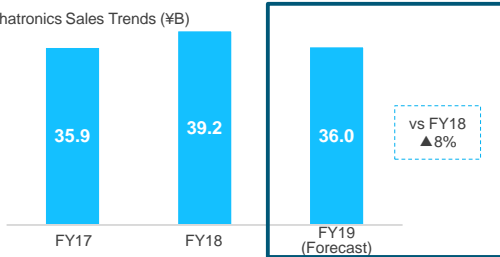
- Memory tester demand is being impacted by memory inventory adjustments
- The timing of tester demand recovery depends on the pace of bit demand recovery, but is expected to come in 2H
- In particular, we anticipate a positive trend in DRAM testers related to miniaturization, the shift to DDR5, and demand for high-speed products for HPC
- NVM is expected to be primarily driven by demand related to multi-layer NAND investment

○ Memory Tester Business Outlook

- Under the influence of memory inventory adjustments, demand for memory testers is sluggish, but we expect it to recover in the second half.
- In DRAM, we anticipate opportunities related to miniaturization, the shift to DDR5, and increased demand for high-speed products for HPC.
- NVM is expected to be primarily driven by demand related to multi-layer NAND investment. A Chinese NAND manufacturer is ramping up, and we have already received some orders from them.

FY19 Outlook by Segment

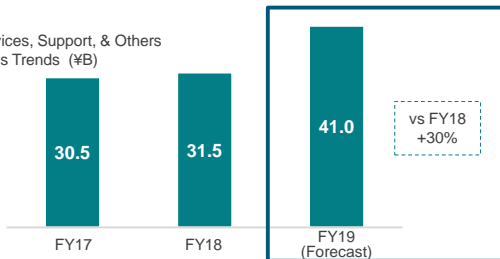
Mechatronics Sales Trends (¥B)



Mechatronics Systems

- With the slowdown in investment by memory customers, DI products are expected to decline.
- EUV-related demand is expected to boost sales of nanotech products

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



Services, Support, & Others

- Customer tester utilization is steady, driving expectations of steady trends in field service income, the core business of this segment
- Segment revenue will increase due to our acquisition of the Astronics SLT business

○ Mechatronics / Service Business Outlook

- Our mechatronics-related businesses are expected to decline slightly YoY.
- Due to the slowdown in memory investment, DI products are expected to decline.
- However, with the launch of EUV, nanotechnology products are projected to see higher sales.
- Regarding services and other businesses, we anticipate revenue growth due to the expectation of solid sales in field services and the effect of incorporating the system-level test business of Astronics Inc., acquired in February, into this segment.

Mid/Long-Term Management Policy

Grand Design (Long-Term Management Policy: FY18-27)

<Long-Term 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

<Cost / Profit Structure>

- Balancing sales growth with cost efficiency

	Cost structure model @ ¥300B
Sales	¥300.0B
Cost of Sales	46%
SG&A as % of Sales	32%
(of which R&D expenses)	13%
Operating Margin	22%



Mid-Term Management Plan (FY18-20)

- Product demand inevitably fluctuates on year, so numerical targets are three-year averages
- Expand our sales and market share by providing outstanding solutions for the next generation of test needs.
- Aggressively invest in R&D and M&A for mid-to long-term sales growth
- While maintaining a consolidated payout ratio of 30%, based on our growth investment outlook, we will consider flexibility in our total shareholder return policy

	Mid-Term Plan (FY18-FY20 Average)	
	Conservative	Base
Yearly tester market growth ratio	0%	4%
Sales	¥230.0B	¥250.0B
Operating Margin	15%	17%
ROE	15%	18%
EPS	¥135	¥170

○ Management Policy

- Next, I will discuss our direction in the medium to long term.
- In April last year, we formulated a 10-year long-term management policy starting in FY18, which defines what we should do in the mid-to long-term, and a three-year mid-term management plan, which we have begun to implement as a company.
- FY19 is the second year of this mid-term management plan.

Initiatives for Mid/Long-Term Growth

Important Measures Executed in FY18

- Focused on 5G and customer acquisition
- Realigned internal organization for long-term strategic execution
 - Globally integrated tester development teams
 - Created a team to identify areas for test business expansion, including the use of AI and data analytics
- Acquired the system-level test business of Astronics Inc. as a step toward expanding into adjacent business areas
- Introduced ROIC-based business management and evaluation tools to strengthen our business management system

ATS5034
System-level test system



Important Measures for FY19

- Enhance engagement with most important industry-leading customers
- Maintain and expand market share
- Reinforce personnel and develop human resources for medium-to long-term growth
 - Reinforce R&D engineering staff and marketing / sales / SE / service staff in priority regions
- Improve business efficiency for operational excellence
- Maximize utilization of ROIC in business operations

<R&D / Capital Investment Outlook>

	FY18 actual	FY19 forecast
R&D Expenses	37.9	37.0
Capex	6.6	10.0
D&A	5.0	6.0

○ Initiatives for Mid- to Long-Term Growth

- In FY18, the first year of our mid-term plan, we undertook initiatives targeting medium-to long-term growth as described here.
- As a result, we received orders from major customers for business related to 5G applications processors and modems, and they have asked us for closer cooperation on future development. 5G is technologically challenging even for our customers, and we are working together on R&D.
- To ensure the growth of our tester business, this year we will continue to focus on reinforcing engagement with the leading customers in the industry and on maintaining and improving market share.
- In parallel, we will also establish foundations for growth. In addition to strengthening personnel in terms of medium-to long-term growth, we will strengthen human resource development, further improve the efficiency of business operations, and maximize the utilization of ROIC in business operations.
- Regarding personnel, we have added 200 employees since the end of FY17, and are planning to add roughly another 200.
- Even in FY18, when sales grew strongly, our investment in factories and production equipment remained minimal. Although we do not plan to make large-scale production capacity investments in FY19, either, we plan to upgrade our factories and IT systems to improve production and development efficiency. Our FY19 capital investments will therefore be 10 billion yen, higher than last year.
- One of the most important things in our business is investment in people and technology.

Market Share Report



<SoC Testers> CY18 Market Share: 52% (+22pts YoY)

<Memory Testers> CY18 Market Share: 58% (+1pt YoY)

○ Market Share Report

- Our grand design and mid-term management plan set a target for annual increase in market share of 1%.
- We achieved significant share growth in CY18.
- This was driven by SoC testers. Our share of the SoC tester market was about 30% in CY17, but it reached approximately 50% in CY18.
- In the memory tester market, customer investment in all devices and processes has increased, and we faced competition in every field, but maintained our existing high share of greater than 50%.
- In CY19, we aim to retain our share gains and expand our share even further over CY18.
- And in CY20, we believe that test demand for communications semiconductors will expand in conjunction with the growth of 5G. It is also highly probable that processor and memory test demand will grow at the same time. The growth of demand for semiconductor test in these areas means that significant opportunities to increase our share will soon arrive.

5G Will Drive Mid/Long-Term Tester Demand

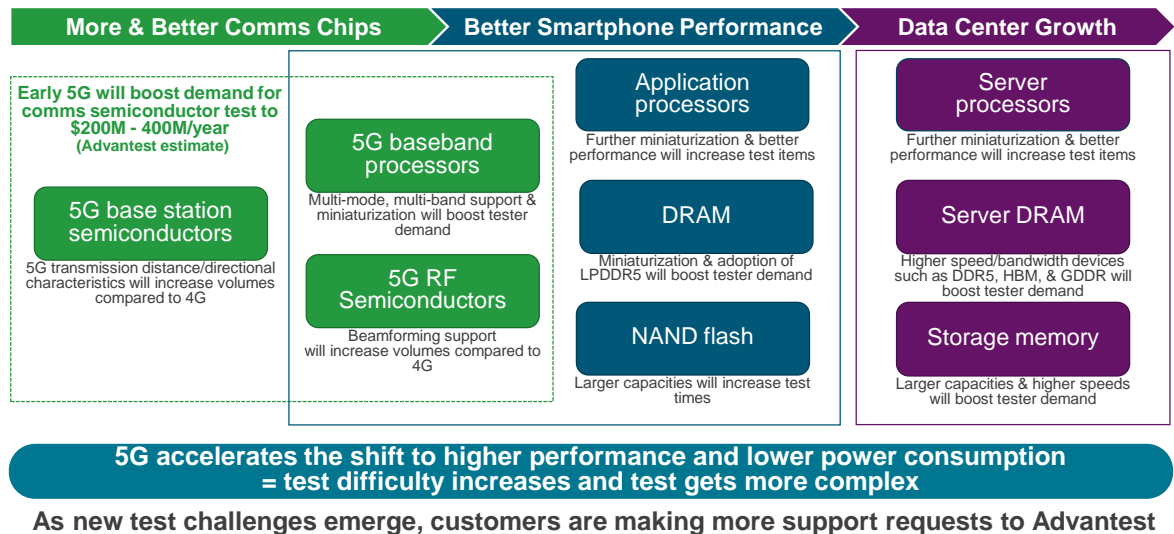


- 5G is not only a mobile network technology, but a fundamental technology that may redefine our society
- Encourages the progress of the digital transformation in diverse areas; expected to create continuous demand for semiconductors and testers

○ 5G Will Drive Market Opportunities

- Here I would like to clarify some of the business opportunities that 5G will bring.
- It is said that 5G is not only a new mobile network technology, but a fundamental technology that may redefine our society.
- With its high-speed, low-latency and large-capacity features, 5G will undoubtedly encourage the progress of the digital transformation as symbolized by ADAS/autonomous driving, IoT/smart devices, and AI.
- As a result, it has the potential to continue to boost semiconductor demand over the next ten years. This will also boost the tester market.

Relationship Between Early 5G & Tester Demand



○ Relationship Between 5G and Tester Demand in the Next Few Years

- This slide depicts the relationship between 5G and tester demand, which will materialize in the next few years.
- It is in the area of communications semiconductor test that the introduction of 5G is directly related to tester demand. Compared to 4G, 5G increases transmission speeds, transmission distances become shorter, and directivity becomes stronger. Also, 5G is multi-channel. This will lead to an increase in communications semiconductor production volumes.
- In terms of direct impact on the tester market, it is estimated that the 5G transition will boost the market from \$200 to \$400M per year.
- However, the impact of the 5G transition on the tester market does not end there.
- Due to 5G, smartphones and data centers will need higher performance to process higher volumes of data.
- This will spur the miniaturization of processors and DRAM. In addition, the speeds and capacities of DRAM and non-volatile memories will also have to increase.
- In response to these future test challenges, customers have already increased their requests for test solutions.
- Starting from this early 5G era, we believe it is necessary to invest in our workforce, as mentioned earlier under the topic of enhanced personnel investments.
- We believe that enriched customer support in the near term will be a key determinant of tester market share over the next 10 years.

Mid-Term Business Plan: 1st Fiscal Year Progress Report

	FY15-17 Average	Mid-Term Plan (FY18-FY20 Average)		FY18 Results
		Conservative	Base	
Sales	¥175.1B	¥230.0B	¥250.0B	¥282.5B
Operating Margin	9%	15%	17%	22.9%
ROE	12%	15%	18%	35.3%
EPS	¥74	¥135	¥170	¥302

- Results exceeded the target for all KPIs in the base scenario of our mid-term management plan (FY18-20) in the first year of the plan, FY18, due to the expansion of the tester market and our significant share gains. We have made strong progress toward achieving our three-year goals
- The market trends that support our medium-to long-term growth, such as evolving semiconductor performance and the increasing importance of test, remain unchanged. While uncertainty in the global economy spreads to the tester market, we expect revenue to decline in FY19, but we expect results to recover in FY20
- We will maintain our mid-term numerical targets and continue to strive to achieve them

○ Mid-Term Business Plan: 1st Fiscal Year Progress Report

- Finally, I will summarize the progress of our mid-term management plan in its first year.
- We were able to deliver results that exceeded the target values for all KPIs in the base scenario of our mid-term management plan in the first year of the plan, FY18, due to the expansion of the tester market and our significant share gains.
- Because it is a three-year plan, it should not be judged only on results in the first year, but this does indicate strong progress towards achievement of our targets.
- On the other hand, FY19 is expected to see a revenue decline, with all KPI forecasts currently below the target values of the medium-term management plan. Customer capital investment budgets will not increase stably. When figures increase more than estimates, there is always a rebound decrease. This is why we set the target values for our mid-term management plan as three-year averages.
- However, the market trends foreseen in our business plan that support our mid-to long-term growth, such as higher semiconductor performance and the increasing importance of test, remain unchanged. We expect results to recover in FY20.
- We will maintain the numerical targets of our mid-term management plan at their existing values, and continue to strive to achieve them.