

FY2019 1st Half Financial Results (2018/4-9)

Oct. 31, 2018 DENSO CORPORATION



Overview of FY2019 1st Half Financial Results

- Despite natural disasters, revenue increased due to the increase in global car production and the subsidiaries DENSO TEN which was consolidated on the last November.
 Operating profit decreased due to transient profit in the last fiscal year, variance of periods in collecting expenses and increase in investment for future growth.
- Upward revision to full-year forecast considering the first-half financial results and the latest movement in the foreign exchange markets.
- 3. Annual dividend payment will be 140 yen, a 5 yen increase from the previous forecast on each of interim and fiscal year-end payment.

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2/28

			Revenue)	004	est transition strate	(Unit:Billions	
		201	8/4-9	201	7/4-9	Chai	nge
	evenue	(5.00())	2,625.0	and the second states of the second	2,363.5	+261.5	+11.1%
	Derating Profit	(5.8%)	152.4	(8.7%)	204.4	-52.1	-25.5%
	ts & others(*1)		17.8		22.3	-4.5	
1.1.1.1	ofit before come Taxes	(6.5%)	170.2	(9.6%)	226.8	-56.6	-24.9%
Pr	ofit (*2)	(4.3%)	114.1	(6.5%)	154.2	-40.1	-26.0%
						(Unit:Millio	ns of Units)
	Foreign Exchange Rate	JPY	110/\$	JPY	111/\$	-1 JPY	
reco		JPY	130/Euro	JPY	126/Euro	+4 JPY	
Precondition	Domestic Car Production		4.47		4.54	-0.07	-1.5%
Ĭ	Overseas Car Production of Japanese		10.23		9.89	+0.35	+3.5%
	(North America)		(2.90)		(3.01)	(-0.11)	(-3.7%)

[Overview of the Consolidated Financial Results]

- 1. Consolidated revenue totaled 2,625.0 billion yen, increased by 261.5 billion yen (+11.1%) from the previous year.
- 2. Consolidated operating profit totaled 152.4 billion yen, decreased by 52.1 billion yen (-25.5%) from the previous year.
- Consolidated profit attributable to owners of the parent company totaled 114.1 billion yen, decreased by 40.1 billion yen (-26.0%) from the previous year.



[Sales by Customer (Quantity Base)]

Sales to Toyota Group

Sales to the Toyota Group increased by 14.5% from the previous year. The reasons are as follows; 1) Impact of DENSO TEN. 2) The car production increased in China. 2) Vehicle equipped with safetyrelated

products has been increased in Japan.

Sales to non-Toyota Group companies

Sales to non-Toyota Group companies increased by 8.3% from last year. The reasons of each manufacture are as follows; 1)Honda : Sales expansion of display related products in North America. Increase of car

production in Japan. 2) FCA : Increase of car production in North America. 3) General Motors : Improved products mix in North America.



[Sales by Product (Quantity Base)]

Sales of Powertrain Systems Products

Sales increased in Asia and Japan due to the production volume increase.

Sales of Mobility Systems Products

Sales increased in Japan due to the increase in vehicle equipped with safety-related products and sales expansion of display related products in North America.

The impact of DENSO TEN which has become a subsidiary in the last November and TD mobile which has become a subsidiary in the last July is also the factor to increase sales in Electronic systems products and non-automotive business.



[Factors that Contributed to Increases or Decreases in perating Profit]

Negative factors

- 1. Expense : -19.0 billion yen / Depreciation: -12.0 billion yen was due to the increase of investment for future growth area.
- 2. Labor cost : -9.0 billion yen was due to salary increase and bonus mainly in Japan.
- 3. Others : -33.5 billion yen was due to the transient profit in the last fiscal year. There was the factor which was the variance of periods incollecting application fees but this will decrease by the end of this fiscal year.
- 4. Other income/expenses : -15.1 billion yen was due to the gain on revaluation of TD mobile securities which was consolidated in the last fiscal year.

Positive factors

- Production volume increase: +27.0 billion yen was due to production volume increase and sales expansion. In spite of the natural disasters in Japan, production volume increased in the all regions including Japan.
- 2. Variable cost reduction: +17.0 billion yen was due to cost reduction efforts and improved productivity.



[Revenue and Operating Profit by Each Region*] *Excluding the effect of foreign exchange

<u>In Japan</u>

- 1. In spite of the natural disasters, the revenue increased by 11.8% from the previous year due to an increase in vehicles equipped with safety-related products, as well as the impact from the newly consolidated subsidiaries, DENSO TEN .
- 2. Despite a rise in production volume and cost-reduction efforts, an increase in investment for future growth in addition to the transient profit in the last fiscal year led to a drop in operating profit by an 49.5 percent from the previous year.

<u>Overseas</u>

- 1. The revenue increased all region due to car production increase and sales expansion.
- 2. Operating profit increased in Europe and Asia due to the increase in production and cost reduction effort. In North America, despite the cost reduction effort, operating profit decreased from the previous year due to the increase in expenses for R&D and the investments for expanding production capabilities.

			to Revenue)						(Unit:Billions	
		As of		19/3 Revised		Change from	June 2018	18/3	Actual	Change from March 20	
_		Jui	ne 2018			Amount	Ratio			Amount	Ratio
Re	evenue		5,400.0		5,400.0	-	-		5,108.3	+291.7	+5.7%
O	perating Profit	(7.2%)	390.0	(7.3%)	393.0	+3.0	+0.8%	(8.1%)	412.7	-19.7	-4.8%
	ance income/ ts & others(※1)		37.0		37.0	0.0			37.2	-0.2	
	ofit before come Taxes	(7.9%)	427.0	(8.0%)	430.0	+3.0	+0.7%	(8.8%)	449.9	-19.9	-4.4%
Pr	ofit (% 2)	(5.6%)	303.0	(5.6%)	305.0	+2.0	+0.7%	(6.3%)	320.6	-15.6	-4.9%
								(Unit:Mill	ions of Units)		
_	Foreign Exchange	JPY	106/\$	JPY	110/\$	+4 JPY		JPY	111/\$	-1 JPY	
Precondition	Rate	JPY	130/Euro	JPY	130/Eurc	-		JPY	130/Euro	+0 JPY	
ondi	Domestic Car Production		9.58		9.57	-0.01	-0.1%		9.37	+0.20	+2.19
tion	Overseas Car Production of Japanese Manufacturers		20.95		20.69	-0.26	-1.2%		20.15	+0.54	+2.7%
	(North America)		(5.94)		(5.92)	(-0.02)	(-0.3%)		(6.03)	(-0.11)	(-1.8%
%1 Finance income, Finance costs, Foreign exchange gains/loss, Share of the profit of associates accounted for using the equity method											

[Full year Financial Forecast]

Considering the first half financial results and the currency,

- 1. We expect revenue of 5,400.0 billion yen.
- 2. We expect operating profit to be 393.0 billion yen.

3. We used 110 yen to the U.S. dollar and 130 yen to the euro for the full year financial forecast.



[Factors that Contributed to Increases or Decreases in Full-Year Forecasts for Operating Profit]

Negative factors

-101.5 billion yen is due to the increase in Expense, depreciation and Labor cost for investment in future growth as well as the impact of Currency exchange loss..

Positive factors

+81.8 billion yen is due to Production volume increase and Variable cost reduction.

As a result, we expect operating profit of the full year to be 393.0 billion yen, 19.7 billion yen decrease from the previous year.



[Return to Shareholders]

To increase returns to shareholders and improve capital efficiency, a resolution was adopted at the board of directors meeting held on October 31st to acquire own shares. Total number of shares to be purchased is up to 6 million shares or 30 billion yen. A resolution was also adopted to cancel 6.12 million of its own shares.



[Return to Shareholders]

Interim and year-end dividend per share is 70 yen, 5 yen up each from the previous year, which will result in the annual dividend per share to be 140yen.

We will continue to enhance corporate value and further profit return by dividend and acquisition of own shares to our shareholders.





[DENSO Group Long Term Policy 2030]

The slogan of the Long Term Policy 2030 is "Bringing hope for the future for our planet, society, and all people."

We have established DENSO Group Mid-term policy to accelerate our business.

(2) DENSO Group Mid-term Policy 2021

1. Creating new kinds of value

(1) Assert leadership in electrification and in automated driving by establishing de facto standards that straddle product sectors in integrated vehicle platforms.

(2) Create and propagate business models for spawning new value in mobility services and leaps in convenience.

(3) Position factory automation and agriculture as pillars of new-business development and work through strategic alliances and other bold measures to assert a strong presence in those sectors.

(4) Connect with brilliant minds at centers of innovation worldwide to increase our agility in nurturing a continuing stream of new products.

2. Strengthening profitability in support of future growth

 Increase our management agility globally by reworking our organization on the lines of a downsized headquarters and performance-oriented business units and subsidiaries worldwide.
Advance the performance of key products, such as motors, ECU, semiconductor devices, and sensors, with leading-edge technology, and reinforce the basis of our competitiveness through a commitment to asserting key product standards.

(3) In our core product sectors, generate unprecedented workplace performance by pressing ahead with measures for achieving further advances in *dantotsu* ("best by far") plants and for animating our plants through the Factory Internet of Things.

(4) Accelerate product development and achieve high profitability by working with partners and independently to revolutionize processes.

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14 / 28

[DENSO Group Mid-term Policy 2021]

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In "Creating new kinds of value," we will enhance the development of electrification and automated driving technologies and develop new platforms for future mobility services.

In "Strengthening profitability in support of future growth," we will promote technological innovations of key products such as ECUs, sensors, semiconductors, and motors and deploy dantotsu plants and Factory Internet of Things globally.



[DENSO Group Mid-term Policy 2021]

In "Transforming Our Business Foundation," we will tap the full potential of each team member and maximize our workplace vitality and our responsiveness to challenges and opportunities by nurturing a motivational workplace and by making the most of advanced information technology.

We will accelerate these efforts to achieve the future of mobility in which all people can feel safe and happy.



[Toyota group collaboration]

The auto industry has been undergoing a once-in-a-century revolution due to automated driving, electrification, and connectivity.

The business environment has been changing rapidly. The question is not whether we can win or lose. We face a life-or-death battle.

DENSO and Toyota Motor Corporation agreed to transfer Toyota's electronic components business to DENSO based on the Home & Away concept of the Toyota Group.

Suppliers need to take a similar approach to establish a system to compete with external competitors.

The Toyota Group suppliers have decided to combine their forces and

take a new step forward. Specifically, they will bring together their strengths and expertise to create a new "home."

Products and technologies that achieve automated driving and accelerate electrification will be delivered to more customers to spread these technologies and contribute to creating the future of mobility.



[Toyota group collaboration : Electrification]

A joint venture to develop and sell the drive modules for Electrification

To spread electrification, it is necessary to offer drive modules that meet various needs of customers such as EVs and HVs. Aisin Seiki and DENSO have increased the competitiveness of key components required for electrification, such as transaxles, inverters, and motors, and provided such components to various customers.

The joint venture will expand the lineup of drive modules to meet the diverse electrification needs such as HVs, PHVs, FCVs, and EVs.

The joint venture will ensure system compatibility with customers' engine specifications, and spread electrification around the world including China where the EV market is expected to expand rapidly.

The joint venture will propose drive modules that take full advantage of the strengths of the two companies and meet various needs of customers in order to spread electrification and help create a sustainable society.



[Toyota group collaboration : Automated Driving] A joint venture for the development of integrated ECU software

To spread automated driving, it is necessary to offer highly reliable products that protect people's lives.

This requires integrated ECUs that make judgments through sophisticated combination of the vision, driving, turning, and stopping sensors with the steering and brakes. The control software plays the key role.

DENSO, Aisin Seiki, ADVICS, and JTEKT will establish a joint venture to develop more reliable control software for integrated ECUs by harnessing their expertise in automated driving. The joint venture will undertake projects from the four companies to develop and supply control software for integrated ECUs based on automakers' specifications. The four companies will sell automated driving systems to automakers by combining integrated ECUs that incorporate the embedded control software with their respective components.

The joint venture will take full advantage of the strengths of respective companies and contribute to spreading automated driving that ensures safe and secure travel for everyone, from advanced driver assistance (Level 2) to fully automated driving (Level 4).



Market trend

In advanced countries, the powertrain will be increasingly electrified to meet the fuel economy regulations in respective countries. For the time being, the mainstream will be electrified vehicles equipped with an internal combustion engine such as HVs. The development needs of respective automakers are expected to diversify.

Demand for internal combustion engines will continue for inexpensive eco-friendly cars in emerging countries. Internal combustion engines are expected to become more efficient and cleaner.



In this business environment, we will lead the electrification market based on our technologies that have been refined over many years of

operation and our track record in supplying products. Meanwhile, we

will continue to improve the conventional engine technologies, such as those for improving fuel economy and making internal combustion

engine systems cleaner, in order to reduce the environmental impact

and achieve highly efficient transportation.



Efforts in electrification

Regarding inverters, DENSO has developed ground-breaking core technologies and has a world-leading track record in mass production. In the development process, DENSO identified the performance requirements in the market, and developed highoutput power cards and double-sided cooling technologies, which are core technologies, and reduced the size of inverters and achieved high performance.

The product lineup of inverters will have to be expanded to meet the performance of respective HVs and EVs.

The output required for HVs, PHVs, and EVs can be attained by using a module structure that can make shared use of the core technologies and by changing the number of power cards.An extensive product lineup can be offered only by customizing the interface with the vehicles.

We will increase the development efficiency by using the common core technologies, expand the product lineup, and help customers expand their product fields.



We will pursue advances not only in electric vehicle systems but also in gasoline and diesel vehicle systems to meet the needs of

customers and society.

Regarding our revenue targets for FY2026, we will double the revenue of electrification systems compared to FY2017. The powertrain systems that incorporate internal combustion engines still have room for growth. We will increase the revenue of powertrain systems 1.2-fold compared to FY2017.

We will expand our business by improving the efficiency of internal combustion engines and accelerating electrification.



To achieve safe and secure mobility free from traffic accidents, DENSO will further upgrade the driver assistance functions and increase safety and convenience in active safety and parking assist.



In advanced safety and automated driving, an organization was formed to offer value from the viewpoint of vehicle systems. Efforts have been made to develop future ADAS and cockpit systems.

We will increase the speed of development through partnerships with various companies that have advanced technologies without

relying entirely on in-house development.

(5) Field of "Peac	e of mind" Appro	baches to R&D
DENSO conducts in-		
Expressway	Public road	Operational Design Domain Lv4
2014 Minamichita Road, Nagoya Expressway	2017 Abashiri	2014 Kume island
		Sullens Hazys
2017 Michigan 2018 Munich	2018 Kariya, Tokyo	2018 Narrow parking
Feedback tasks to R	GD after in-vehicle te	sts in various fields
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DENSO's initiatives to achieve automated driving

The development process requires tests in various environments including the road environment and weather.

We have been developing technologies through driving tests in various environments to identify issues in automated driving.



We will conduct field tests on public roads in different areas and accelerate the development and demonstration of an advanced mobility system in Tokyo to achieve the next-generation mobility.

In April 2018, we opened Global R&D Tokyo in Minato City, Tokyo. This automated driving R&D office collaborates with various partners including automakers, universities, research institutions, and startup companies to promote open innovation. We have decided to open a new facility for developing prototypes and demonstrating automated driving technologies on a site adjacent to Haneda Airport in June 2020.



The new facility will feature a development building for prototype production and vehicle maintenance as well as a proving ground for demonstrations. Automated driving technologies that are planned, researched, and developed by Global R&D Tokyo will undergo prototype development and demonstration in Haneda so that the entire process can be completed in the Tokyo area.

DENSO remains committed to developing technologies and products in the fields of "peace of mind" and "green" to achieve the future of mobility that make people's lives more convenient.



[Sustainability Management]

To achieve sustainable growth of the company by solving social issues, we identify priority issues to be addressed, and set long-term targets and KPIs to solve such issues.

We will step up these efforts and help attain SDGs to achieve a sustainable society and create the future of mobility that is friendly

to the environment and contributes to safety and happiness of all people.





Pre-Co	Pre-Conditions (Foreign Exchange Rate/Car Production)															
				019 First-H	lalf				019 Secon					2019 Full Y		
		Prior Year	Forecast (Original)	asof July 28	Actual	Change	Prior Year	Forecast (Original)	as of July 31	Forecast (Revised)	Change	Prior Year	Forecast (Original)	as of July 31	Forecast (Revised)	Change
Foreign Exchange	USD	111	105	107	110	- 1	111	105	105	110	-1	111	105	106	110	-
Rate (Yen)	EUR	126	130	130	130	+4	133	130	130	130	-3	130	130	130	130	+
Forex Impact on Operating Income	USD					-					-	2.5	2.5	2.5	2.5	0
per Yen (Billions of Yen)	EUR					-		_				1.0	1.0	1.0	1.0	0
Car Production of	Domestic	4.54	4.50	4.57	4.47	- 1%	4.84	5.00	5.00	5.10	+ 5%	9.37	9.51	9.58	9.57	+ 29
Japanese Manufacturers	North America	3.01	3.01	2.91	2.90	- 4%	3.02	3.03	3.03	3.02	- 0%	6.03	6.04	5.94	5.92	- 29
(Millions of Units)	Overseas	9.89	10.34	10.43	10.23	+ 3%	10.26	10.52	10.52	10.46	+ 2%	20.15	20.87	20.95	20.69	+ 39
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	18/4-9					ge	Change excludes FX difference	
	Amount	% to Total	Amount	% to Total		%	%	
Toyota	1,103.6	42.0	967.3	40.9	136.3	14.1	14.6	
Daihatsu	59.3	2.3	53.0	2.2	6.3	11.9	13.7	
Hino	32.3	1.2	28.1	1.2	4.2	15.0	15.0	
Toyota Group	1,195.2	45.5	1,048.4	44.3	146.7	14.0	14.5	
Honda	199.2	7.7	179.6	7.6	19.5	10.9	11.5	
FCA	114.7	4.4	113.8	4.8	0.9	0.8	2.6	
GM	109.3	4.2	88.5	3.8	20.8	23.5	24.0	
Ford	69.4	2.6	73.4	3.1	-3.9	-5.4	-5.0	
Hyundai/Kia	64.4	2.5	67.1	2.8	-2.7	-4.0	-5.6	
Mazda	59.0	2.2	55.4	2.4	3.6	6.6	6.2	
Suzuki	58.5	2.2	55.8	2.4	2.8	5.0	7.5	
SUBARU	52.8	2.0	47.5	2.0	5.3	11.2	11.4	
Nissan	50.2	1.9	46.8	2.0	3.4	7.3	7.0	
VW/AUDI	42.5	1.6	38.4	1.6	4.1	10.8	7.9	
Mitsubishi	30.6	1.2	24.2	1.0	6.4	26.7	25.8	
Isuzu	30.0	1.1	26.9	1.1	3.1	11.6	10.2	
BMW	21.9	0.8	20.5	0.9	1.3	6.4	4.0	
Volvo	20.7	0.8	17.7	0.8	3.0	17.2	14.3	
PSA	16.3	0.6	14.4	0.6	1.9	13.2	9.7	
Benz	15.6	0.6	17.5	0.7	-1.9	-10.7	-12.9	
OE Sales for others	175.6	6.7	156.3	6.6	19.3	12.4	11.6	
OEM Total After-market,	2,325.8	88.6	2,092.0	88.5	233.9	11.2	11.4	
After-market, Non-Automotive Business(*)	299.1	11.4	271.5	11.5	27.6	10.2	10.9	
Total	2,625.0	100.0	2,363.5	100.0	261.5	11.1	11.3	

	18/4-9 17/4-9			Chang	Change excludes FX difference		
	Amount	% to Total	Amount	% to Total	Amount	%	%
Thermal Systems	709.8	27.0	711.1	30.1	-1.3	-0.2	0.7
Powertrain Systems	634.7	24.2	604.3	25.5	30.5	5.0	4.
Electrification Systems	401.7	15.3	389.7	16.5		3.1	3.0
Mobility Systems	409.6	15.6	273.0	11.5	136.7	50.1	49.
Electronic Systems	326.2	12.5	296.9	12.6	29.3	9.9	10.4
Others(*)	50.5	1.9	30.1	1.3	20.4	67.9	72.
Automotive Total	2,532.5	96.5	2,305.0	97.5	227.6	9.9	10.
Non-Automotive Business(FA and agriculture, etc.) Total	92.4	3.5	58.5	2.5	34.0	58.0	59.
Total	2,625.0	100.0	2,363.5	100.0	261.5	11.1	11.3





Capital	Capital Expenditures, Depreciation and R&D Expenditures												
						(Ur	it: Billions	of Yen)					
			18/3		19/3F	Change(%)	Progress to 19/3						
		17/9	10/3	18/9	19/01	change(70)	Forecast						
	Japan	106.3	217.7	116.9	240.0	10.0%	48.7%						
	North America	16.2	43.8	32.0	62.5	97.5%	51.2%						
	Europe	13.8	30.8	11.4	32.0	-17.4%	35.6%						
	Asia	21.3	52.7	31.7	63.0	48.8%	50.3%						
	Others	0.8	2.2	1.3	2.5	62.5%	52.0%						
	Capital Exp.	158.4	347.2	193.3	400.0	22.0%	48.3%						
	Japan	75.2	154.7	82.6	172.5	9.8%	47.9%						
	North America	15.9	32.4	18.1	35.5	13.8%	51.0%						
	Europe	10.4	22.2	11.8	26.0	13.5%	45.4%						
	Asia	27.4	56.4	28.3	58.5	3.3%	48.4%						
	Others	1.5	2.8	1.0	2.5	-33.3%	40.0%						
	Depreciation	130.3	268.6	141.9	295.0	8.9%	48.1%						
	R&D Expenditure	201.4	447.4	245.1	500.0	21.7%	49.0%						
l	(Ratio to Revenue)	(8.5%)	(8.8%)	(9.3%)	(9.3%)								
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