

Consolidated Results for First Half of FY March 2019

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Senior Vice President

Hello, I'm Tetsuji Yamanishi, Senior Vice President of TDK. Thank you for taking the time to attend TDK's performance briefing for the first half (April to September) of the fiscal year ending March 2019. I will be presenting an overview of our consolidated results.

- **Net sales and operating income both achieved new records both on a half-yearly and a quarterly basis***

- Net sales rose 15.8% year on year. Operating income increased 40.7% year on year.
- In the Passive Components segment, TDK continued to expand earnings centered on Capacitors against a backdrop of strong demand in the automotive market.
- The ICT market drove overall earnings with brisk sales of Rechargeable Batteries for mobile device applications including smartphones, notebook PCs and tablets.
- HDD Heads increased profits as strong demand from data centers continued with further support gained from the restructuring of production sites.
- An impairment loss was recorded for ferrite magnets ahead of revitalizing the magnet business.

* Operating income is compared on the basis excluding a gain on sale of business recorded in the year ended March 2017.

First, let's take a look at the key points concerning earnings. Net sales rose 15.8% year on year, and operating income increased sharply by 40.7%. Net sales and operating income both achieved new records on a half-year and a quarterly basis.

In the Passive Components segment, sales of Capacitors and Inductive Devices continued to increase steadily in the automotive market, where demand has remained strong. Notably, in MLCCs, TDK saw continuous expansion in both net sales and operating income as it steadily captured demand for application products with high reliability and redundancy characteristics for automotive use. This contributed immensely to enhancing the profitability of the Passive Components segment as a whole.

In the Energy Application Products segment, in Rechargeable Batteries, we posted sharp increases in both sales and operating income. This result reflected further expansion of sales to major Chinese customers and a continued favorable trend in sales for applications other than smartphones such as tablets, laptops, and game consoles, coupled with the benefits of higher capacity utilization due to increased production and continuous cost saving efforts.

In the Magnetic Application Products segment, HDD Head sales volume decreased by around 6% year on year. Meanwhile, sales of Nearline HDD Heads increased, boosted by a tailwind of higher demand from data centers. With the added impact of reorganizing our production bases, both sales and operating income increased, with a marked increase in profitability.

In Magnets, TDK has been strengthening its business through product development and process innovation, aiming for business expansion in the automotive market, where demand is increasing. For Ferrite Magnets, we judged the situation too difficult to effect a major recovery in earnings in the short term, and recorded impairment losses on long-lived assets in the second quarter of the fiscal year ending March 2019, with a view to revitalizing the Magnet business.

Consolidated results for first half of FY March 2019

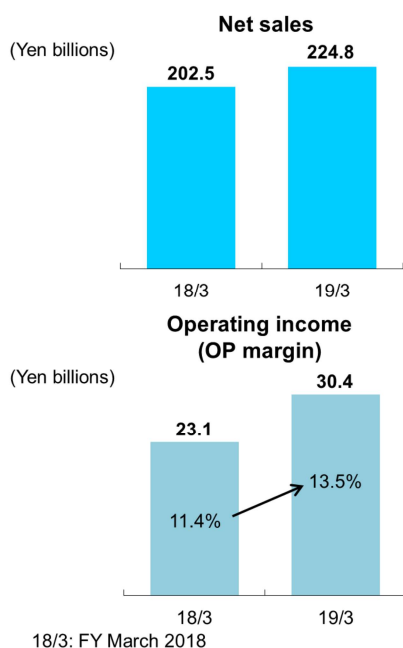
(Yen billions)	FY March 2018 Results through 2Q (2017.4.1-2017.9.30)	FY March 2019 Results through 2Q (2018.4.1-2018.9.30)	Change	
			Yen billions	%
Net sales	623.6	721.9	98.3	15.8
Operating income	44.2	62.2	18.0	40.7
Operating income margin	7.1%	8.6%	+1.5pt	-
Income before income taxes	44.3	57.8	13.5	30.5
Net income	30.7	41.1	10.4	33.9
Earning per share (JPY)	243.15	325.30	-	-
Ex-rate	US\$ (JPY)	111.08	110.30	Appreciated by 0.7%
	EURO (JPY)	126.16	129.90	Depreciated by 3.0%
Ex-rate impact to net sales & operating income	Net sales : Increased by about 2.1 billion Yen Operating income : Increased by about 1.5 billion Yen			

Moving along, I would like to present an overview of our results. Net sales were 721.9 billion yen, an increase of 98.3 billion yen, or 15.8%, year on year. Operating income, including impairment losses of around 4.7 billion yen, was 62.2 billion yen, up 18.0 billion yen, or 40.7%, year on year. Income before income taxes was 57.8 billion yen, net income was 41.1 billion yen, and earnings per share were 325.30 yen. In accordance with changes in U.S. accounting standards related to retirement benefit cost, a 1.9 billion yen portion of the net benefit cost included in operating expense in profit/loss in the previous fiscal year was reclassified to other deductions. From the first quarter of the fiscal year ending March 2019, the amounts pertaining to the change in accounting standards have been recorded as other deductions.

The average exchange rates for the first half of the fiscal year ending March 2019 were 110.30 yen against the U.S. dollar, an appreciation of 0.7%, and 129.90 yen against the euro, a depreciation of 3.0%. In terms of the impact of these exchange rate movements, net sales and operating income were pushed up by around 2.1 billion yen and around 1.5 billion yen, respectively.

With regard to exchange rate sensitivity, as with our previous estimate, we estimate that a change of 1 yen against the U.S. dollar would have an impact of around 1.2 billion yen on full-year operating income, while a change against the euro would have an impact of around 0.2 billion yen.

First half results - Passive Components segment



Net sales 224.8 billion yen (up 11.0% year on year)
Operating income 30.4 billion yen (up 31.6% year on year)

- **Ceramic Capacitors**
 - Sales and earnings increased year on year as strong demand continued.
 - Sales mainly to the automotive market increased.
- **Aluminum Electrolytic Capacitors and Film Capacitors**
 - Sales and profit increased year on year.
 - Sales to the industrial equipment and the automotive markets increased.
- **Inductive Devices**
 - Sales and profit increased year on year.
 - Sales to the automotive and the ICT markets were firm.
- **High-Frequency Components**
 - Sales increased year on year.
 - Sales to the ICT market increased.
- **Piezoelectric Material Products and Circuit Protection Components**
 - Sales and profit increased year on year.
 - Sales to the industrial equipment market increased.

18/3: FY March 2018

Performance Briefing First Half of Fiscal Year March 2019

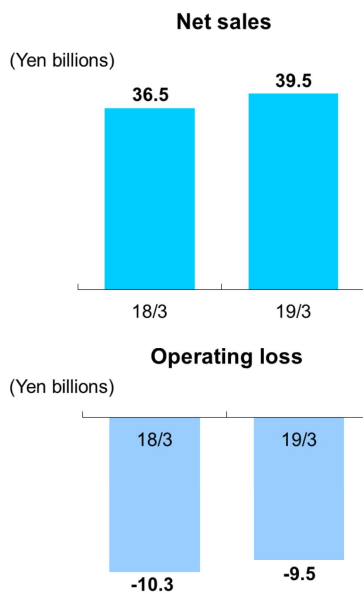
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Next, I would like to explain our business segment performance.

From the fiscal year ending March 2019, we reclassified certain products such as Camera Module Actuators and therefore we have regrouped results for the previous fiscal year. In the Passive Components segment, this change reduced net sales for the first half of the fiscal year ended March 2018 by 12.4 billion yen and decreased operating income by 0.8 billion yen.

In the first half of the fiscal year ending March 2019, net sales were 224.8 billion yen, an increase of 11.0% year on year, and operating income was 30.4 billion yen, an increase of 31.6% year on year. The operating income margin was 13.5%. We made progress on expanding sales and improving profitability. In Ceramic Capacitors, sales rose as we leveraged products with high reliability and redundancy characteristics to firmly capture surging demand in the automotive market. Substantial profit growth resulted from marked improvements in profitability driven by contributions from an improved product mix and productivity enhancements. In Aluminum Electrolytic Capacitors and Film Capacitors, sales and profit increased year on year, underpinned by growth in sales to the industrial equipment market as well as solid sales to the automotive market. In Inductive Devices, sales to the automotive market continued to increase firmly, along with sales for smartphones, to achieve steady earnings growth. In High-Frequency Components, sales increased year on year atop favorable sales of Ceramic Filters for use in Chinese smartphones. In Piezoelectric Material Products and Circuit Protection Components, sales to the automotive and the industrial equipment markets trended favorably, leading to higher sales and profits with improved profitability.

First half results - Sensor Application Products segment



18/3: FY March 2018

Net sales 39.5 billion yen (up 8.2% year on year)

Operating loss -9.5 billion yen (down —% year on year)

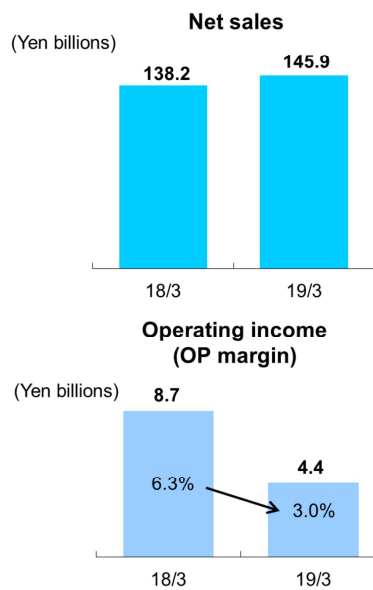
- **Sensors**

- Sales increased year on year.
- Sales of Temperature and Pressure Sensors and Magnetic Sensors increased to the automotive market.
- Sales of Magnetic Sensors also increased to the ICT market.

In the Sensor Application Products segment, the reclassification of certain products reduced net sales for the first half of the fiscal year ended March 2018 by 0.1 billion yen and increased operating income by 0.1 billion yen.

In the first half of the fiscal year ending March 2019, net sales were 39.5 billion yen, up 8.2% year on year. Operating loss was 9.5 billion yen, including 2.8 billion yen in acquisition-related costs for InvenSense.

Sales to the automotive market trended firmly, rising around 16% centered on sales of Temperature and Pressure Sensors and Magnetic Sensors to the European and Japanese markets. Sales of Magnetic Sensors to the ICT market increased steadily driving significant growth in net sales and improved profitability. MEMS Motion Sensors saw a larger operating loss, reflecting the impact of a decline in demand on sales for game consoles, an anticipated decline in sales to core customers in the ICT market, and cost burdens such as for development resources to accelerate commercialization of new models and initiatives to expand the customer base.



Net Sales 145.9 billion yen (up 5.6% year on year)
Operating income 4.4 billion yen (down 49.4% year on year)

- **HDD Heads**
 - Both sales and operating income of HDD Heads increased year on year due to an improved product mix and strong demand from data centers despite a decrease in sales volume.
- **HDD Suspension Assemblies**
 - Sales of HDD suspensions increased due to an increase in sales volume and an improved product mix.
 - Sales of Suspension Application Products (Additive Metal Deposition Components) increased to the ICT market.
- **Magnets**
 - Sales and profit decreased year on year.
 - The product mix worsened due to decreased sales for wind power generation.
 - Impairment loss recorded in 2Q.

18/3: FY March 2018

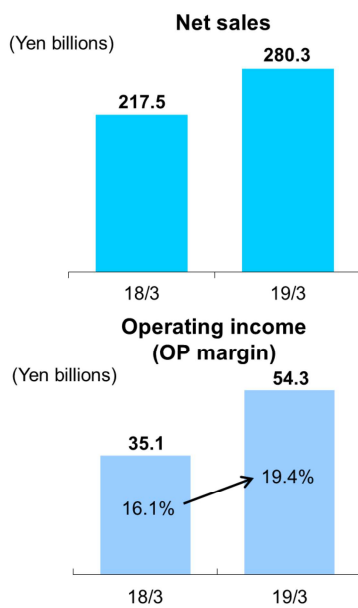
In the Magnetic Application Products segment, the reclassification of businesses in connection with a reorganization reduced net sales and operating income for the first half of the fiscal year ended March 2018 by 24.5 billion yen and 2.4 billion yen, respectively.

In the first half of the fiscal year ending March 2019, net sales rose 5.6% year on year to 145.9 billion yen, operating income decreased by 49.4% to 4.4 billion yen, and the operating income margin was 3.0%. In the second quarter, TDK recorded impairment losses of around 4.7 billion yen in Ferrite Magnets, weighing heavily on profits. On a real basis excluding one-time losses, operating income increased by 0.4 billion yen, or 4.6%.

Sales volume of HDD Heads decreased by around 6%. However, sales of Nearline HDD Heads increased due to higher HDD demand from data centers. As a result, sales increased by around 6%, along with an improvement in profitability, owing to the benefits of higher average sales prices in line with an improved product mix. Sales volume of HDD Suspensions increased, and the product mix improved with an increase in compact, high-value-added products, raising the average sale price. Moreover, sales of Suspension Application Products increased due to higher sales to the ICT market, leading to an increase in operating income as well.

In Magnets, sales and profits decreased, partly reflecting a worsening product mix due to decreased sales to the industrial equipment market, such as for wind power generation. Moreover, the Ferrite Magnet business saw losses worsen significantly due to the recording of impairment losses during the second quarter ahead of revitalizing the Magnet business amid short-term adversity for improving earnings.

First half results - Energy Application Products segment



18/3: FY March 2018

Net Sales 280.3 billion yen (up 28.9% year on year)
Operating income 54.3 billion yen (up 54.7% year on year)

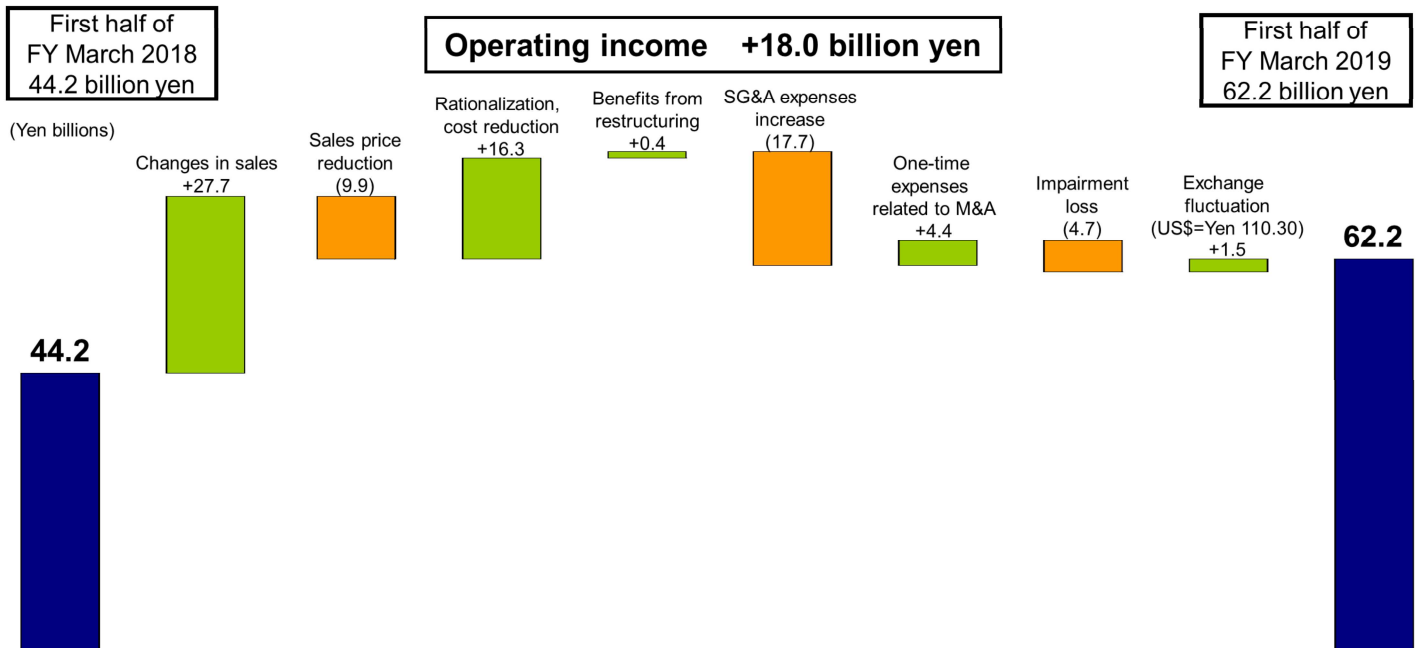
- **Energy Devices (Rechargeable Batteries)**
 - Sales and profit increased year on year.
 - In the ICT market, sales expanded for mobile device application such as smartphones, notebook PCs, tablets.
 - Sales also increased for new applications such as game consoles.
- **Power Supplies**
 - Sales and profit of Power Supplies for industrial equipment increased year on year due to strong demand.

In the Energy Application Products segment, a reorganization saw the businesses of Power Supplies for industrial equipment and Power Supplies for automobiles join the existing Rechargeable Battery business, causing net sales to increase by 34.2 billion yen and operating income to increase by 1.1 billion yen for the first half of the fiscal year ended March 2018.

In the first half of the fiscal year ending March 2019, net sales rose 28.9% year on year to 280.3 billion yen and operating income surged 54.7% to 54.3 billion yen. Profitability also improved significantly together with profit growth, with the operating income margin at 19.4%.

In Rechargeable Batteries, sales to the Chinese smartphone market increased sharply, and sales also increased steadily for applications other than smartphones, such as tablets, laptops, and game consoles. By capturing synergies between growth in sales volume and increased productivity, we have effectively enhanced profits. Power Supplies for industrial equipment achieved growth in sales and profits due to strong demand.

Breakdown of operating income changes



Next is the breakdown of the change in operating income. Let's take a look at the main factors behind the increase of 18.0 billion yen in operating income. First, there was a positive impact of around 27.7 billion yen from an increase in net sales centered on Capacitors, HDD Heads, and Rechargeable Batteries. Reductions in sales prices had a negative impact of around 9.9 billion yen, but this was absorbed by the positive impact of 16.3 billion yen from rationalization and cost reductions and around 0.4 billion yen in benefits from restructuring implemented in the fourth quarter of the previous fiscal year. However, SG&A expenses increased by 17.7 billion yen due to increases in administration and development expenses in connection with business expansion in Rechargeable Batteries, as well as higher costs arising from strengthening the development framework in the Sensor business. Excluding the impacts of exchange rate fluctuations and one-time changes in expenses, operating income on a real basis increased by 16.8 billion yen. The overall increase of 18.0 billion yen includes a decrease of 4.4 billion yen in one-time M&A-related expenses, impairment losses of 4.7 billion yen, and an increase of 1.5 billion yen from exchange rate fluctuations.

Consolidated results for 2Q of FY March 2019

(Yen billions)	FY March 2018 2Q results	FY March 2019 2Q results	Change	
			Yen billions	%
Net sales	334.0	378.9	44.9	13.4
Operating income	27.6	36.8	9.2	33.3
Operating income margin	8.3%	9.7%	+1.4 pt	-
Income before income taxes	27.3	34.1	6.8	24.9
Net income	19.7	24.9	5.2	26.4
Earning per share (JPY)	156.35	197.03	-	-
Ex-rate	US\$ (JPY)	111.01	111.50	Depreciated by 0.4%
	EURO (JPY)	130.26	129.63	Appreciated by 0.5%
Ex-rate impact to net sales & operating income	Net sales : Decreased by about 0.7 billion Yen Operating income : Increased by about 0.4 billion Yen			

Next, let's look at consolidated results for the second quarter of the fiscal year ending March 2019.

In the second quarter of the fiscal year ending March 2019, net sales rose 13.4% year on year to 378.9 billion yen and operating income increased by 33.3% to 36.8 billion yen, setting new record highs for both net sales and operating income on a quarterly basis. This result includes impairment losses of 4.7 billion yen recorded in the second quarter, and on a real basis, operating income was 41.5 billion yen, and the earnings structure improved markedly with an operating income margin of around 11%. Net income was 24.9 billion yen, up 26.4%.

Quarterly results by segment

	(Yen billions)	2Q of	1Q of	2Q of	YoY change		QoQ change	
		FY March 2018 (A)	FY March 2019 (B)	FY March 2019 (C)	(C/A)	(C/B)	(C/A)	(C/B)
					Yen billions	%	Yen billions	%
Net sales	Capacitors	39.2	44.5	43.9	4.7	12.0	(0.6)	-1.3
	Inductive Devices	40.5	41.3	41.6	1.1	2.7	0.3	0.7
	Other Passive Components	26.2	26.9	26.6	0.4	1.5	(0.3)	-1.1
	Passive Components	105.8	112.7	112.1	6.3	6.0	(0.6)	-0.5
	Sensor Application Products	20.2	18.9	20.6	0.4	2.0	1.7	9.0
	Magnetic Application Products	71.8	70.5	75.4	3.6	5.0	4.9	7.0
	Energy Application Products	122.2	125.6	154.8	32.6	26.7	29.2	23.2
	Other	14.1	15.4	16.0	1.9	13.5	0.6	3.9
	Total	334.0	343.1	378.9	44.9	13.4	35.8	10.4
Operating income	Passive Components	12.8	14.0	16.4	3.6	28.1	2.4	17.1
	Sensor Application Products	(5.8)	(4.9)	(4.6)	1.2	-	0.3	-
	Magnetic Application Products	5.0	3.5	0.9	(4.1)	-82.0	(2.6)	-74.3
	Energy Application Products	21.6	21.0	33.3	11.7	54.2	12.3	58.6
	Other	(0.2)	(1.0)	(1.7)	(1.5)	-	(0.7)	-
	Sub total	33.4	32.5	44.4	11.0	32.9	11.9	36.6
	Corporate and eliminations	(5.8)	(7.1)	(7.6)	(1.8)	-	(0.5)	-
	Total	27.6	25.4	36.8	9.2	33.3	11.4	44.9
Operating income margin	8.3%	7.4%	9.7%	+1.4pt	-	+2.3pt	-	
Ex-rate	US\$ (JPY)	111.01	109.09	111.50				
	EURO (JPY)	130.26	130.16	129.63				

Next, I would like to explain the factors behind the changes in segment net sales and operating income from the first quarter to the second quarter of the fiscal year ending March 2019.

Let's begin with net sales in the Passive Components segment. Net sales in this segment decreased by 0.6 billion yen, or 0.5%, from the first quarter. Ceramic Capacitor sales were strong to the automotive market. On the other hand, sales of Aluminum Electrolytic Capacitors and Film Capacitors slipped by 0.6 billion yen, or 1.3%, from the first quarter as sales for use in renewable energy declined heavily due to changes in China's feed-in tariff (FIT) system. Net sales of Inductive Devices increased by 0.3 billion yen, or 0.7%, from the first quarter. Sales to the automotive market were firm, as with Ceramic Capacitors. In Other Passive Components, net sales declined by 0.3 billion yen, or 1.1%. In High Frequency Components, sales of Ceramic Filters for Chinese smartphones increased. Sales of Piezoelectric Material Products and Circuit Protection Components declined for the automotive market due to a temporary lull in orders in Europe due to the enactment of common global exhaust emissions testing legislation. Operating income in the Passive Components segment increased by 2.4 billion yen, or 17.1%, from the first quarter. The main factors were higher profits from improvements in the product mix and productivity in Ceramic Capacitors and the impact of higher sales and profits from Inductors and High Frequency Components.

In the Sensor Application Products segment, net sales rose by 1.7 billion yen, or 9.0%, from the first quarter. Sales of Temperature and Pressure Sensors were mainly level, affected by the aforementioned enactment of exhaust emissions testing legislation. Sales of Magnetic Sensors to the ICT market increased significantly, while sales of MEMS Sensors to the same market declined but increased for drones and game consoles. Operating income returned to profit due to higher profits atop the increase in sales of Magnetic Sensors. In MEMS Sensors, the acquisition-related costs for InvenSense remained the same as the first quarter at 1.4 billion yen; however, operating loss widened slightly as we increased development resources from the first quarter in a bid to accelerate new product development. Overall operating loss for the Sensor Application Products segment decreased by about 0.3 billion yen.

In the Magnetic Application Products segment, net sales increased by 4.9 billion yen, or 7.0%, from the first quarter. HDD Head sales rose by 5% as the shipment index increased by 4% from the first quarter, from 93 to 97. HDD Suspension Assembly sales increased significantly due to an increase in sales volume of Suspension Assemblies and the peak season for customers in Suspension Application Product sales. Overall, HDD Heads and HDD Suspension Assemblies recorded a marked increase in sales. Sales of Magnets increased slightly overall as sales of Metal Magnets to the automotive market grew, despite a drop in sales for the industrial equipment market led by a decline in sales of magnets for wind power generation. Operating income in the Magnetic Application Products segment declined by 2.6 billion yen from the first quarter, but increased by 2.1 billion yen on a real basis excluding impairment losses of 4.7 billion yen recorded in the second quarter. Both HDD Heads and HDD Suspension Assemblies saw growth in profit, while Magnets saw losses worsen on a real basis, reflecting a deterioration in the mix of products sold and a slide in productivity.

In the Energy Application Products segment, net sales increased by 29.2 billion yen, or 23.2%, from the first quarter. In Rechargeable Batteries, sales increased as sales for use in Chinese smartphones grew steadily, and sales increased in North America and for tablets, laptops and other products. Sales of Power Supplies for industrial equipment were steady. Operating income in the Energy Application Products segment was 33.3 billion yen, an increase of 12.3 billion yen from 21.0 billion yen in the first quarter. In Rechargeable Batteries, an increase in marginal profit due to an increase in sales volume and progress in cost improvement contributed significantly. Profitability also increased for Power Supplies for industrial equipment following progress in rationalization.

That concludes my presentation. Thank you very much for your attention.

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