

## Performance Briefing Fiscal Year March, 2016

TDK Corporation April 28, 2016



**◆**Consolidated Results for FY March 2016

Tetsuji Yamanishi, Corporate Officer

**◆**Consolidated Full Year Projections for FY March 2017 and Mid-Term Policy

Takehiro Kamigama, President and CEO



## Consolidated Results for FY March 2016

### Tetsuji Yamanishi Corporate Officer



#### Highlights of the Operating Results for FY March 2016

◆Net sales achieved a new record at 1,152.3 billion yen.

Record net sales in the Passive Components and Film Application Products segments. Magnetic Application Products segment recorded a much sharper decline in net sales than initially expected, due to a significant drop in HDD demand.

**◆**Operating income increased 29% year on year to 93.4 billion yen.

Passive Components and Film Application Products achieved new record highs, absorbing the downturn in HDD heads. The Company conducted restructuring in HDD heads in 4Q to prepare for a further slump in HDD demand.

**Executing growth investment in line with Medium-Term Management Plan.** Expanding from ICT to the automotive and industrial businesses.

Conducted various M&As to accelerate growth.

Formed business alliance and established joint venture with Qualcomm.

Aggressively invested in strategic growth product expansion.

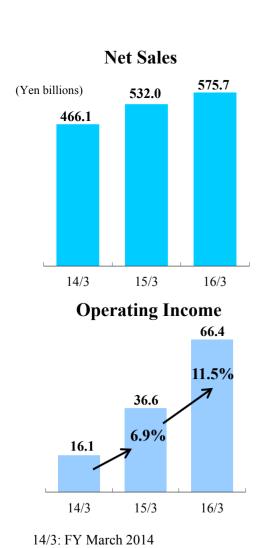


#### Consolidated Full Year Results for FY March 2016

	FY March 2015	FY March 2016	Change		
(Yen billions)	Full Year Results	Full Year Results	Yen billions	%	
Net sales	1,082.6	1,152.3	69.7	6.4	
Operating income	72.5	93.4	20.9	28.8	
Operating income margin	6.7%	8.1%		_	
Income before Income Taxes	74.5	91.8	17.3	23.2	
Net income	49.4	64.8	15.4 31		
Earning per share (JPY)	392.78	514.23	_		
US\$ (JPY) EURO (JPY)	109.84 138.88	120.13 132.67	Depreciated by 9.4% Appreciated by 4.5%		
Ex-rate impact to Net sales & Operating income	Net sales: Increased by about 85.3 billion Yen Operating income: Increased by about 17.3 billion Yen				



#### FY March 2016 Results - Passive Components Segment



Net Sales 575.7 billion yen (up 8.2% year on year)
Operating Income 66.4 billion yen (up 81.4% year on year)

#### **Output** Capacitors

• Both sales and profits increased year on year, particularly due to increased sales for automobile market.

#### Inductive Devices

• Both sales and profits increased year on year, particularly due to increased sales for automobile market.

#### ●High-frequency Components

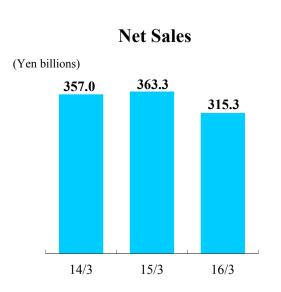
- Both sales and profits increased year on year due to strong sales for the ICT market
- Profit margins also improved significantly due to increased productivity and improved product mix.

#### Piezoelectric Material Products

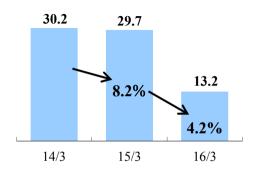
• Both sales and profits increased year on year due to increased sales of OISs for camera modules.



#### FY March 2016 Results - Magnetic Application Segment



#### **Operating Income**



14/3: FY March 2014

Net sales 315.3 billion yen (down 13.2% year on year)

Operating income 13.2 billion yen (down 55.6% year on year)

#### **Recording Devices**

• HDD head shipment volume declined significantly due to contraction of the HDD market (PC demand slowdown and acceleration of switch to SSDs in PCs). Significant decline in sales and profit year on year.

#### **●**Magnets

• Sales for the HDD market declined, and also declined for the automotive (xEV\*) and industrial machinery markets due to the decline in oil prices and the economic slowdown in China.

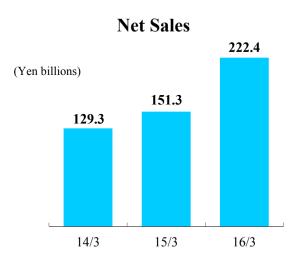
#### Power Supplies

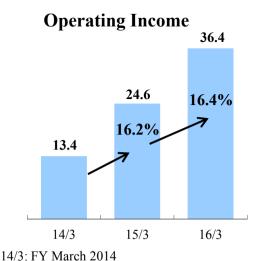
 Sales to the industrial equipment market of products such as semiconductor manufacturing equipment and measuring equipment remained strong.

\*xEV: EV, HEV, PHEV



#### FY March 2016 Results - Film Application Segment





Net sales 222.4 billion yen (up 47.0% year on year)

Operating income 36.4 billion yen (up 48.0% year on year)

#### ●Energy Devices (Rechargeable Batteries)

- Sales and profits increased significantly year on year.
- Increased share among major customers and expanded customer portfolio.
- Expanded applications beyond smartphones to include drones, etc.



#### FY March 2016 results by Segment

		FY March 2015 Full Year Results		FY March 2016 Full Year Results		Change	
		Yen billion	%	Yen billion	%	Yen billion	%
	Capacitors	149.0	13.8	150.4	13.1	1.4	0.9
	Inductive devices	147.3	13.6	149.2	12.9	1.9	1.3
	Other Passive Components	235.8	21.8	276.1	24.0	40.3	17.1
	Passive Components	532.0	49.1	575.7	50.0	43.7	8.2
Net Sales	Recording devices	260.5	24.1	219.8	19.1	(40.7)	-15.6
Sale	Other Magnetic Application Products	102.8	9.5	95.5	8.3	(7.3)	-7.1
	<b>Magnetic Application Products</b>	363.3	33.6	315.3	27.4	(48.0)	-13.2
	Film Application Products	151.3	14.0	222.4	19.3	71.1	47.0
	Other	35.9	3.3	38.8	3.4	2.9	8.1
	Total	1,082.6	100.0	1,152.3	100.0	69.7	6.4
	Passive Components	36.6	6.9	66.4	11.5	29.8	81.4
Op	<b>Magnetic Application Products</b>	29.7	8.2	13.2	4.2	(16.5)	-55.6
Operating	Film Application Products	24.6	16.2	36.4	16.4	11.8	48.0
	Other	0.6	1.6	1.9	4.8	1.3	-
Income	Sub total	91.4	8.4	117.8	10.2	26.4	28.9
me	Corporate and eliminations	(18.9)	-	(24.4)	-	(5.5)	-
	Total	72.5	6.7	93.4	8.1	20.9	28.8

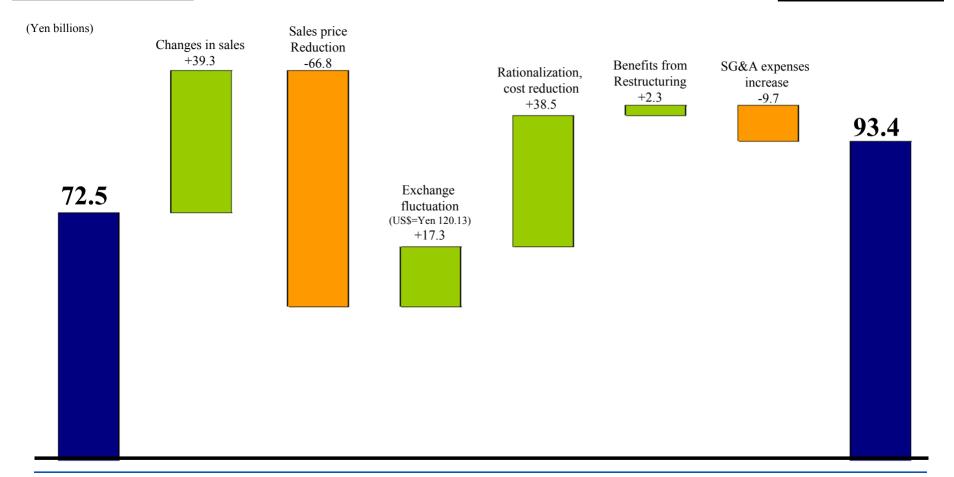


#### **Breakdown of Operating Income Changes**

FY March 2015 72.5 billion yen

Operating Income +20.9 billion yen

FY March 2016 93.4 billion yen





#### FY March 2016 Quarterly Results by Segment

		4Q of	3Q of FY March 2016	4Q of	YoY Change (C)-(A)		QoQ Change (C)-(B)	
	(Yen billions)	FY March 2015 (A)	(B)	FY March 2016 (C)	Yen billions	%	Yen billions	%
	Capacitors	37.6	36.4	35.4	(2.2)	-5.9	(1.0)	-2.7
	Inductive Devices	36.4	37.4	35.4	(1.0)	-2.7	(2.0)	-5.3
	Other Passive Components	62.8	67.7	65.5	2.7	4.3	(2.2)	-3.2
Z	Passive Components	136.9	141.5	136.3	(0.6)	-0.4	(5.2)	-3.7
Net Sales	Recording Devices	62.6	58.5	46.0	(16.6)	-26.5	(12.5)	-21.4
ıles	Other Magnetic Application Products	25.9	23.3	22.9	(3.0)	-11.6	(0.4)	-1.7
	Magnetic Application Products	88.5	81.8	68.9	(19.6)	-22.1	(12.9)	-15.8
	Film Application Products	44.1	68.5	46.6	2.5	5.7	(21.9)	-32.0
	Other	10.3	10.0	11.1	0.8	7.8	1.1	11.0
	Total	279.9	301.7	262.9	(17.0)	-6.1	(38.8)	-12.9
	Passive Components	8.0	17.5	16.5	8.5	106.3	(1.0)	-5.7
Op	Magnetic Application Products	6.3	4.7	0.2	(6.1)	-96.8	(4.5)	-95.7
erati	Film Application Products	9.4	14.6	5.4	(4.0)	-42.6	(9.2)	-63.0
Operating Income	Other	0.6	(0.1)	1.4	0.8	133.3	1.5	-
ncor	Sub total	24.3	36.7	23.5	(0.8)	-3.3	(13.2)	-36.0
ne	Corporate and Eliminations	(5.0)	(6.4)	(6.0)	(1.0)	-	0.4	-
	Total	19.4	30.3	17.5	(1.9)	-	(12.8)	-42.2
	Operating Income margin	6.9%	10.0%	6.7%	-0.2pt	-	-3.3pt	_
Ex-	- US\$(JPY)	119.21	121.41	115.46				
rate	EURO(JPY)	134.74	133.05	127.37				



# Consolidated Full Year Projections for FY March 2017 and Mid-Term Policy

Takehiro Kamigama President and CEO



## Consolidated Full Year Projections for FY March 2017



#### FY March 2017 Full Year / Dividend Projections

(Yen billions) Net sales		FY March 2016	FY March 2017	YoY Change		
		Full Year Results	Full Year Projections	Yen billions	%	
		1,152.3	1,160.0	7.7	0.7%	
Operating	income	93.4	74.0	(19.4) -20.		
Operatin	g income margin	8.1%	6.4%	-1.6 pt		
Income befo	re income taxes	91.8	73.0	(18.8) -20.5		
Net income	,	64.8	50.0	(14.8) -22.8		
Earning pe	r share (JPY)	514.23	396.00	0 -		
Dividends	Dividends (JPY)  1st ha 2nd ha Annua		1st half : 60 2nd half : 60 Annual : 120	-	-	
Ex-rate US\$(JPY) EURO(JPY)		120.13	110.00	-	-	
		132.67	125.00	-	-	
Capital exp	oenditure	160.7	200.0	.0 39.3 24.5		
Depreciation	and amortization	83.2	95.0	11.8 14.2		
Research a	nd development	84.9	90.0	<b>0</b> 5.1 6.0		



#### Projections for FY March 2017 - Image of changes in sales

(Yen billions)

Segment	FY March 2016 Full Year Results	FY March 2017 Full Year Projections (YoY Change)
Passive Components	575.7	+3~+6%
Magnetic Application Products	315.3	-11~-14%
Film Application Products	2,22.4	+12~+15%
Other	38.8	_
Total	1,152.3	1,160.0

Forex assumptions

US\$(JPY) 120.13 110.00 EURO(JPY) 132.67 125.00



#### **Points of FY March 2017**

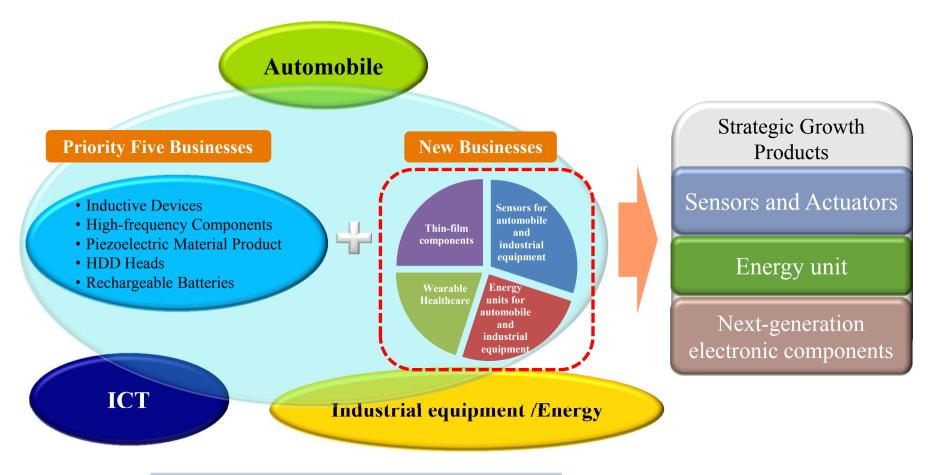
Segment	Outlook for Priority Businesses
Passive Components	<ul> <li>Inductors: Share expansion of thin-film and multi-layered products in the ICT and automotive markets</li> <li>High-frequency Components: Sales expansion for small, high-performance, discrete components and modules</li> <li>Piezoelectric Material Products: Expansion of the OIS business (increased usage rate among smartphones in China)</li> </ul>
Magnetic Application Products	<ul> <li>HDD heads:         Contraction in HDD market volume with decline in PC demand and acceleration in switch to SSDs         Approx. 444 million units in FY March 2016 ⇒ Approx. 400 million units (10% decrease) in FY March 2017     </li> <li>Sensors: Expansion in sensors for automotive market and contribution from Micronas</li> </ul>
Film Application Products (Rechargeable Batteries)	<ul> <li>Rechargeable batteries: Continued expansion in demand for polymer batteries as a result of thinner profile mobile devices     Expansion in new application demand</li> <li>Continuation of investment for production expansion and rationalization in line with demand</li> </ul>



## Mid-Term Policy



#### Priority Markets, Priority Businesses and New Businesses

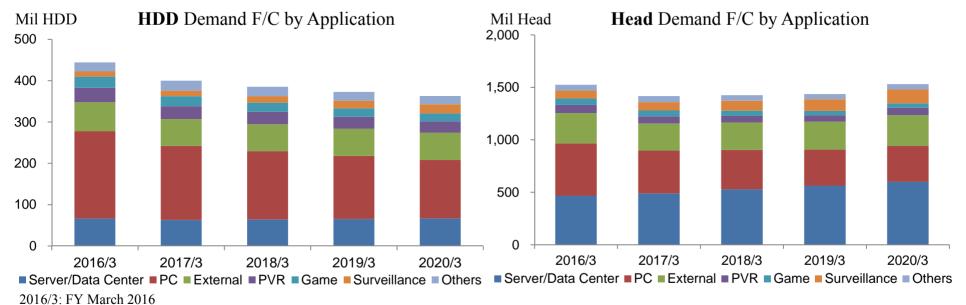


Performance briefing for FY March 2015 (held in April in 2015)



#### Regarding the Recording Devices Business (HDD Heads)

**♦**HDD market / HDD head demand trend (FY March 2016 – FY March 2020)



- HDD market contraction trend to continue (444 million units in FY March 2016 → 363 million units in FY March 2020
- Contraction of PC market and accelerated switch to SSDs in PCs
- High-end HDDs for high-speed processing also increasingly switched to SSDs
- Steady HDD demand for near-line, external, and surveillance camera applications to continue

- Despite contraction of the HDD market, HDD head demand to remain level
- Demand for HDDs in PCs to continue contracting
- The number of heads per HDD to continue increasing, mainly in near-line HDD heads (FY March 2016: 3.43 heads
  - → FY March 2020: 4.22 heads)

(TDK's estimation)



#### Regarding the Recording Devices Business (HDD Heads)

#### Rightsizing Internal Operations and Contributing to Rightsizing of the Industry

- (1) Internal right-sizing
  - Front-end processing plants: Consolidated two plants → one plant
  - Back-end processing plants: Restructure China operations and start production of passive components in the Philippines
- (2) Contribute to industry right-sizing
  - Non-captive: Strengthen vertical collaboration in development and manufacturing that transcends conventional frameworks
  - Captive : Horizontal labor division to avoid overlapping investment and cost increases Support development of advanced technologies that contribute to Time-To-Market
- (3) Provide products and services through advanced technology capabilities
  - Realize thermal assist head (TAMR: front- and back-end processes), two-dimension MR (TDMR), micro dual stage actuator (DSA)
  - Provide services leveraging back-end processing capability

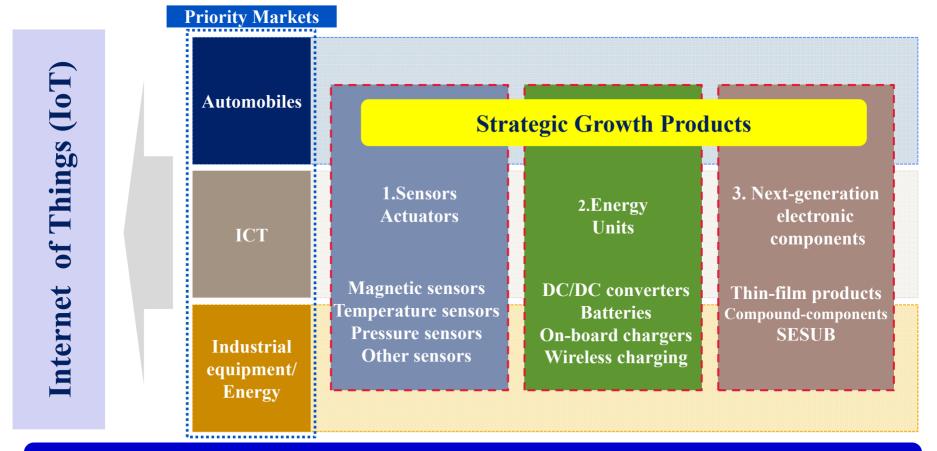
Continue to be "an entity that is relied upon by market" even in a contracting market



#### **TDK Growth Strategy (Strategic Growth Products for the IoT Market)**

Accelerate expansion of strategic growth products by strengthening of the business collaboration with Qualcomm

 $\rightarrow$ To land business opportunities in the IoT business through priority markets.



**Strengthened Business Collaboration with Qualcomm** 



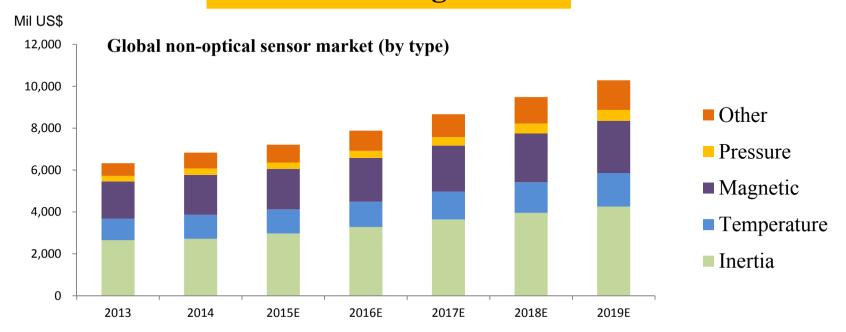
#### Sensors / Actuators

**Market forecast** 

## Non-optical sensor market : US\$6.8 billion in 2014 $\Rightarrow$ US\$10.6 billion in 2019



#### 9.1% annual growth



(TDK's estimation)



#### Sensors / Actuators

### **Expansion strategy of magnetic sensor business**

#### **Expand module sensor system business**

- Merge sensor assembly technologies
- Expand local business utilizing Chinese production bases

#### **Maximize synergies with Micronas**

- Hall and TMR-hybrid sensors for automotive market
- ASIC/ASSP technology development in TDK products

## **Expand business through initiatives to capture demand for consumer applications**

• Expand demand with high precision, energy saving characteristics

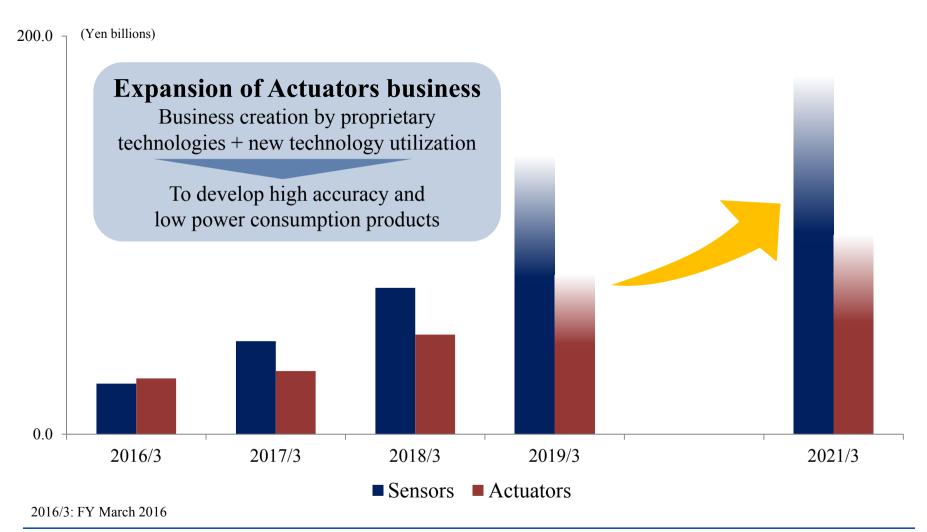
#### **Expand automotive TMR sensor business**

- Complete development of core product lineup (FY March 2017)
- Expand application and customer base



#### **Sensors / Actuators**

#### **Expand Sensors and Actuators businesses (Sales)**





#### **Energy units**

#### "From single products to systems"

Provide units that combine **hardware** and **software** with power transforming functions, energy storage functions, energy control functions

#### **Power Conversion Function**

- AC-DC & DC-DC convertors Invertors Chargers
- Two-way AD-DC and DC-DC converters (for regenerative energy applications)
- Wireless charging system

#### **Electricity Storage Function**

- Industrial lithium-ion batteries Automotive lithium-ion batteries
- Energy Storage System (ESS) lithium-ion batteries
- Electric Double Layer Capacitors (EDLCs)

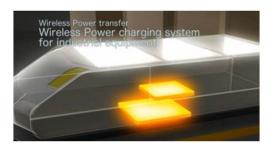
#### **Energy Management System Function**

- Battery Management Units (BMUs)
- Battery Management Systems (BMSs)
- Various sensors (Current sensors, Temperature sensors, etc.)



#### **Energy units**





Mobile Robot

AGV(Auto Guided Vehicle)

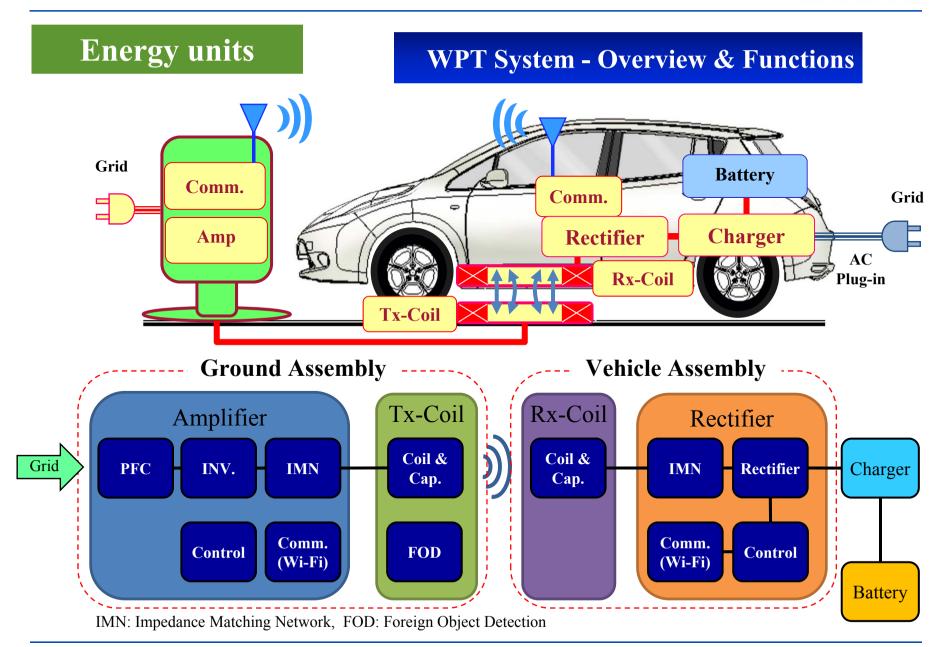


Hand of Robot



Pendant for CNC

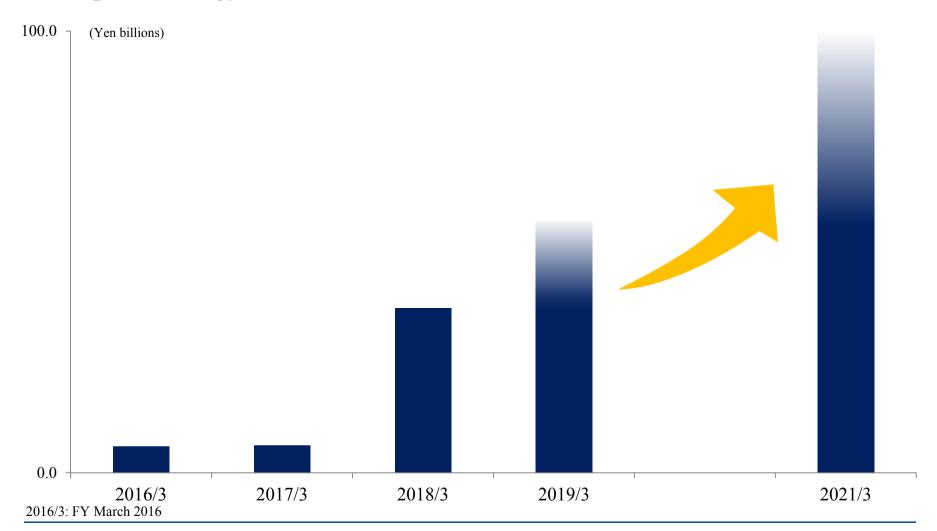






#### **Energy units**

#### **Expand Energy units business (Sales)**





Combine SESUB technology, thin-film technology, and materials technology to provide high value-added products that meet customers' diversifying needs going forward

## **SESUB** technology

Thin-film technology

Material technology

## Next-generation electronic components

- SESUB
- Compound products
- Thin-film high frequency filters
- Thin-film capacitors (sheet, discrete)
- MEMS
- Low profile inductors, etc.



Expand product lineup by introducing advanced technologies

Develop further thinner SESUB packages with embedded passive components

**SESUB** 

Power Systems

μDC/DC converter

Envelope tracker

L-ion battery chargers





Communication Systems

**BLE** modules

WiFi modules

PA/RF modules





**Thin-film devices** 

Power System
Communication System
Sensor Systems
Noise Systems
CPUs

Thin-film capacitors

Low-profile inductors

High-frequency filters

Thin-film common mode filters

MEMS microphone

Embedded capacitors











Full-scale expansion of SESUB business making maximum use of joint venture with Advanced Semiconductor Engineering Co., Ltd.



#### Transfer of Renesas Semiconductor Manufacturing's Tsuruoka factory

#### Background

- Establishment of thin-film passive components production base in Akita district
- Securing of the manufacturing and technical capabilities for thin-film product
- Securing of production space for future demand expansion of thin-film product

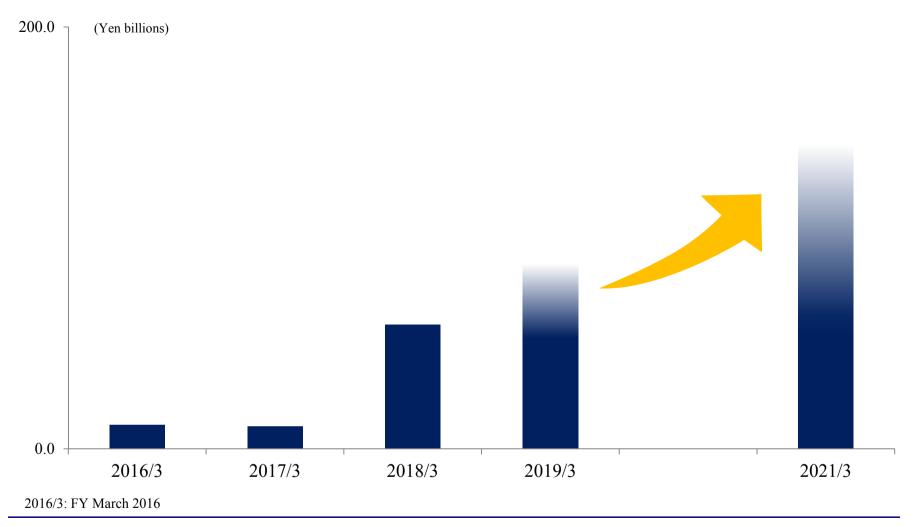
#### Tsuruoka Factory



Renesas Semiconductor
 Manufacturing Co., Ltd.

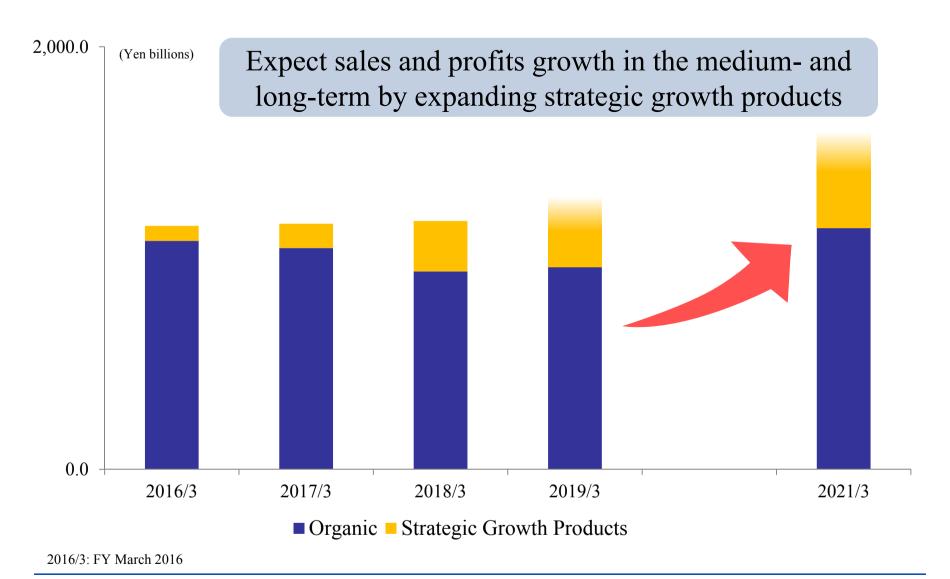


#### **Expand Next-generation electronic components business (Sales)**



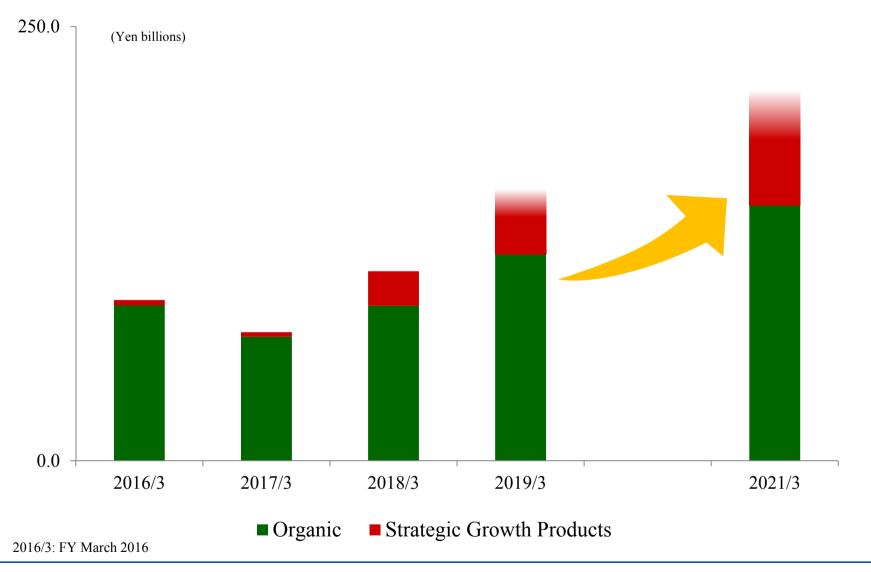


#### Consolidated sales projections





#### Consolidated operating income projections





#### **Management Target in Mid-Term**

## Growth Investment

- Investment in new products, new businesses, and M&A
- Increase production capacity of existing businesses

## Return to Shareholders

- Stabilize or increase dividends through EPS growth
- Target a 30% dividend payout ratio

	FY March 2015 Results	FY March 2018 Target
Operating Income Margin	6.7%	Over 10%
ROE	7.2%	Over 10%



#### **Growth Investment**

## **Capital Expenditure**

- ➤ Accelerate expansion of strategic growth products
- Accelerate expansion of existing priority businesses

#### R&D Investment

- > Strengthen overseas R&D bases
- > Accelerate "Monozukuri" innovation

Total investment over the Medium-Term Plan (FY March 2016 – FY March 2018)

350~400 billion yen

430~480 billion yen

About 230 billion yen

About 250 billion yen

**Medium-Term Management Plan (Original)** 

Latest forecast

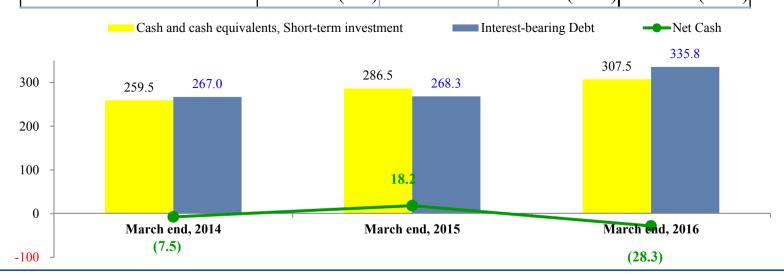


# Supplementary Data



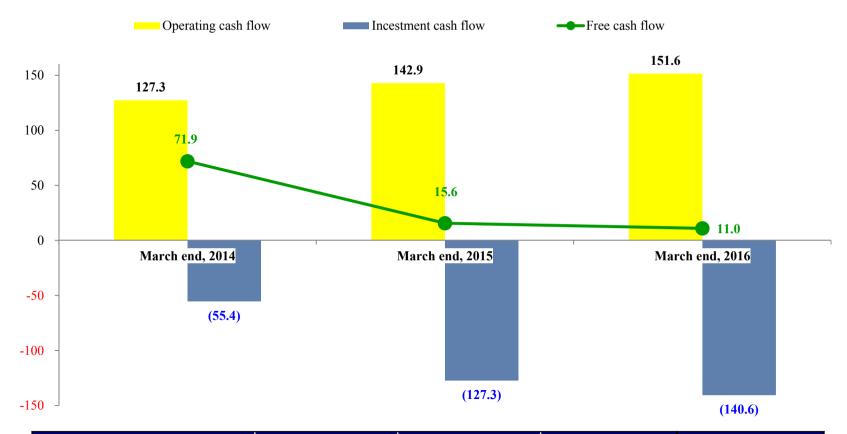
## **Financial Position**

(Yen billions)	March end, 2014	March end, 2015	March end, 2016	Change 2015-2016
Total Assets	1,239.6	1,404.3	1,450.6	46.3
Total Liabilities	587.3	646.3	766.0	119.7
Stockholder's equity	635.3	738.9	675.4	(63.5)
(comprehensive income)	(87.1)	(5.9)	(102.3)	(96.4)
Stockholder's equity ratio	51.3%	52.6%	46.6%	-6.0%
Cash and cash equivalents, Short-term investments	259.5	286.5	307.5	21.0
Interest-bearing Debt	267.0	268.3	335.8	67.5
Net Cash	(7.5)	18.2	(28.3)	(46.5)





## Free Cash Flow



(Yen billions)	FY March 2014	FY March 2015	FY March 2016	Change 2015-2016
Capital Expenditures	68.6	102.5	160.7	58.2
Depression and amortization	83.1	80.2	83.2	3.0



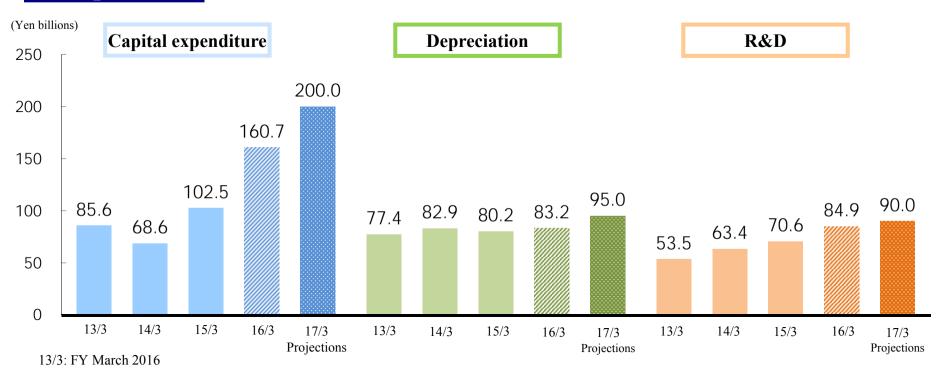
## Quarterly sales and operating income by segment

		FY March 2015				FY March 2016						
		Yen billions	1Q	2Q	3Q	4Q	Total	1Q	2Q	3Q	4Q	Total
		Capacitors	36.5	37.3	37.5	37.6	149.0	39.1	39.5	36.4	35.4	150.4
		Inductive Devices	35.7	37.1	38.1	36.4	147.3	37.9	38.6	37.4	35.4	149.2
		Other Passive Components	49.7	55.5	67.6	62.8	235.8	70.8	72.1	67.7	65.5	276.1
-	•	Passive Components	121.9	129.9	143.2	136.9	532.0	147.8	150.2	141.5	136.3	575.7
let ?		Recording Devices	59.1	63.7	75.1	62.6	260.5	54.6	60.7	58.5	46.0	219.8
<b>Net Sales</b>		Other Magnetic Application Products	26.2	25.5	25.3	25.9	102.8	24.8	24.6	23.3	22.9	95.5
Ö	•	Magnetic Application Products	85.2	89.2	100.4	88.5	363.3	79.4	85.3	81.8	68.9	315.3
		Film Application Products	22.5	37.2	47.4	44.1	151.3	43.2	64.1	68.5	46.6	222.4
		Other	7.8	8.5	9.4	10.3	35.9	9.2	8.6	10.0	11.1	38.8
		Total	237.5	264.8	300.4	279.9	1,082.6	279.6	308.1	301.7	262.9	1,152.3
		Passive Components	7.8	9.4	11.4	8.0	36.6	15.0	17.4	17.5	16.5	66.4
0p(		Magnetic Application Products	7.3	8.5	7.7	6.3	29.7	3.8	4.5	4.7	0.2	13.2
Operating		Film Application Products	0.3	5.2	9.6	9.4	24.6	4.7	11.6	14.6	5.4	36.4
		Other	(0.5)	0.2	0.2	0.6	0.6	0.4	0.2	(0.1)	1.4	1.9
Income		Sub total	14.8	23.3	29.0	24.3	91.4	23.9	33.7	36.7	23.5	117.8
)me		Corporate and Eliminations	(5.2)	(4.9)	(3.8)	(5.0)	(19.0)	(5.8)	(6.3)	(6.4)	(6.0)	(24.4)
		Total	9.6	18.3	25.2	19.4	72.5	18.1	27.4	30.3	17.5	93.4
Ex-rate	US	\$(JPY)	102.17	103.86	114.25	119.21	109.84	121.29	122.31	121.41	115.46	120.13
	EU	RO(JPY)	140.17	137.77	142.79	134.74	138.88	134.15	136.06	133.05	127.37	132.67



## FY March 2017 Projections and Forex sensitivity

### **Expenses**

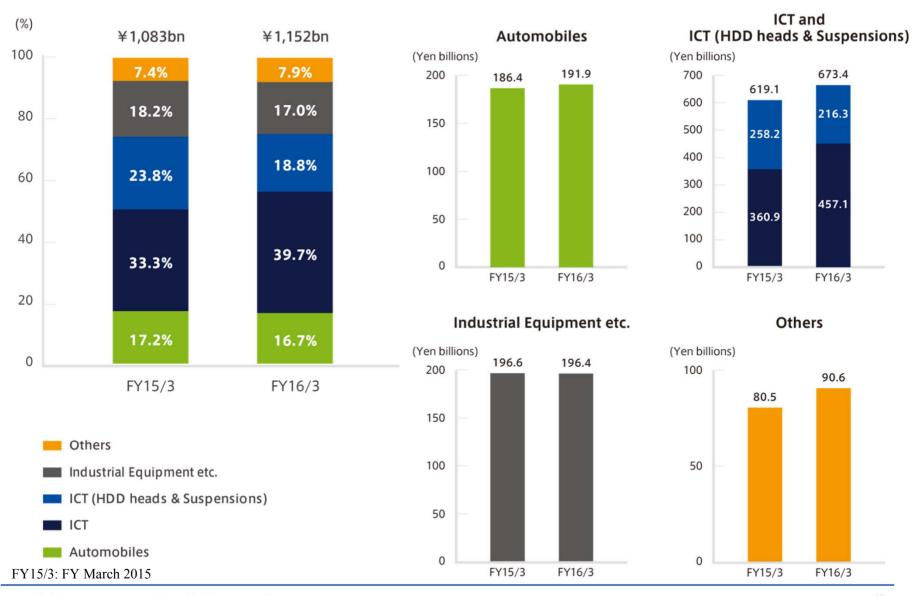


Forex Sensitivity (impact by 1 (one) yen change)

**OUS\$**: Sales 5.0 billion yen, Operating Income 1.4 billion yen

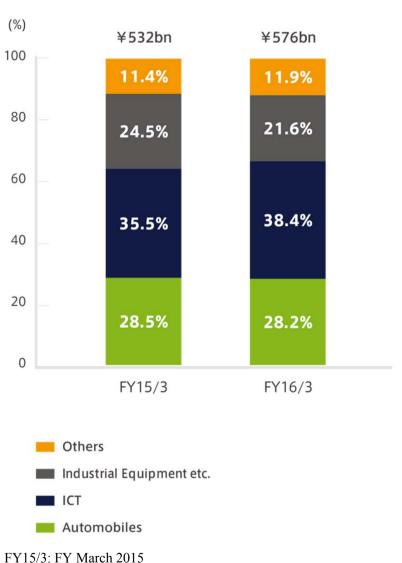


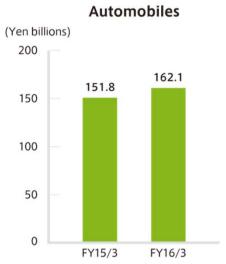
## Annual Sales by applications (FY March 2013 – FY March 2016)

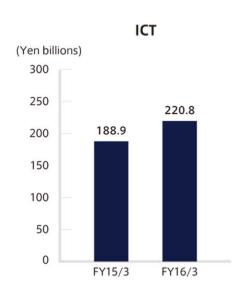




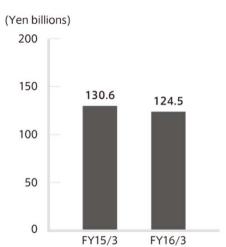
# Passive Components Business Annual sales by applications (FY March 2013– FY March 2016)



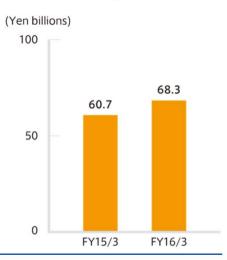




#### Industrial Equipment etc.

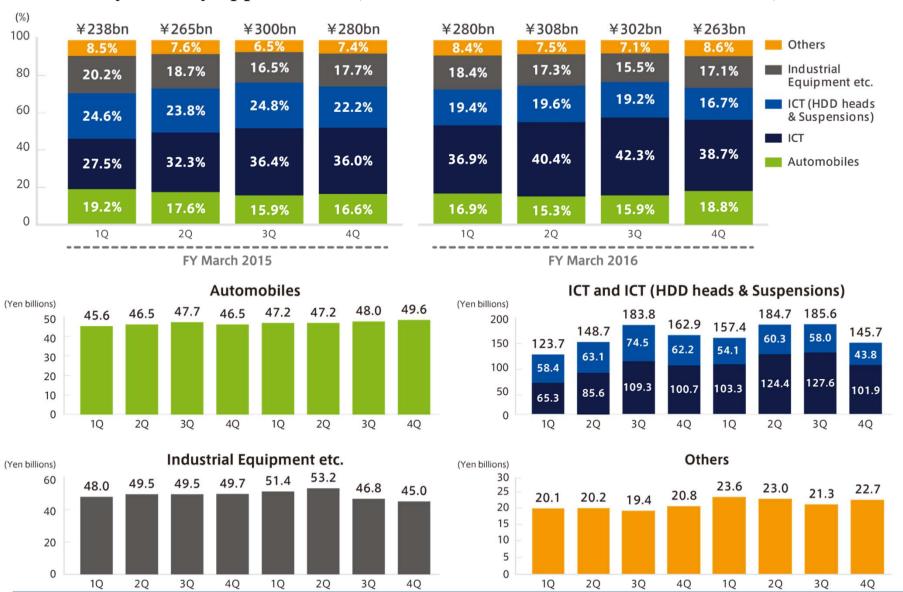








### Quarterly sales by applications (1Q of FY March 2015 –4Q of FY March 2016)

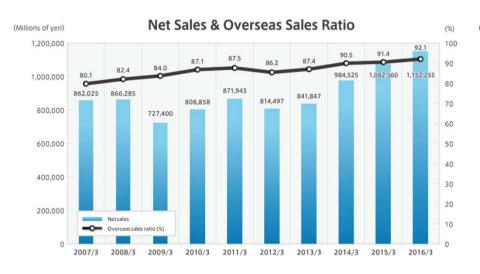


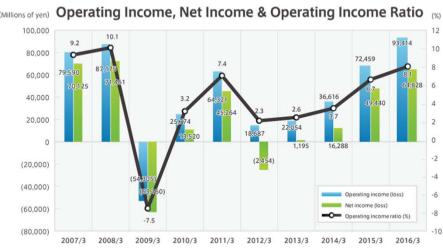


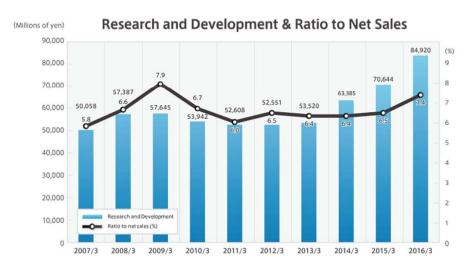
# Passive Components Business quarterly sales by applications (1Q of FY March 2015 –4Q of FY March 2016)

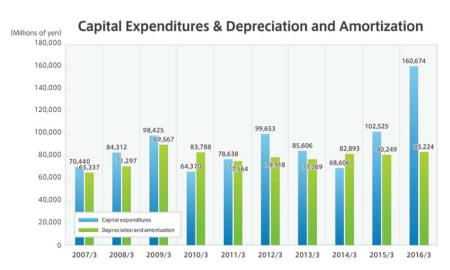






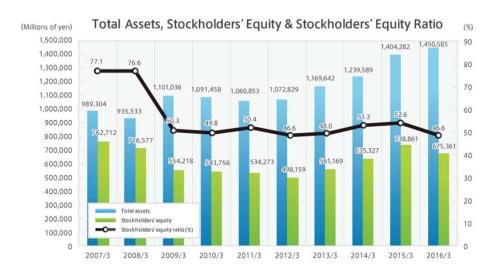


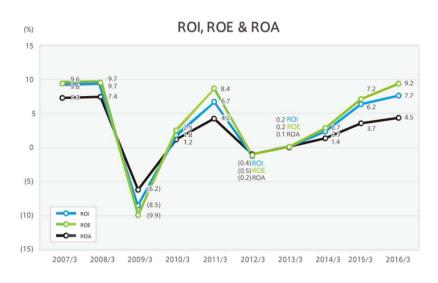


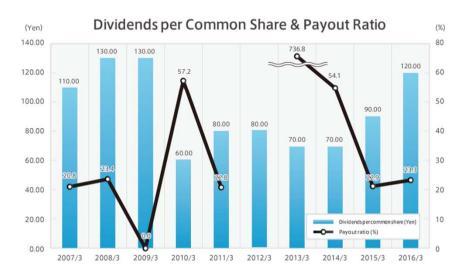


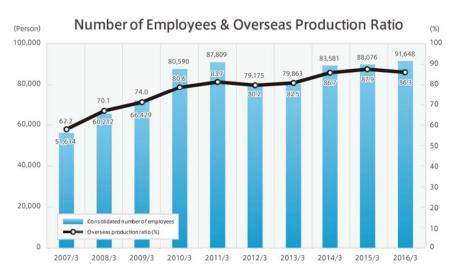
#### 2007/3: FY March 2007











#### 2007/3: FY March 2007



### Cautionary Statements with Respect to Forward-Looking Statements

This material contains forward-looking statements, including projections, plans, policies, management strategies, targets, schedules, understandings, and evaluations about TDK, or its group companies (TDK Group). These forward-looking statements are based on the current forecasts, estimates, assumptions, plans, beliefs, and evaluations of the TDK Group in light of the information currently available to it, and contain known and unknown risks, uncertainties, and other factors. The TDK Group therefore wishes to caution readers that, being subject to risks, uncertainties, and other factors, the TDK Group's actual results, performance, achievements, or financial position could be materially different from any future results, and the TDK Group undertakes no obligation to publicly update or revise any forward-looking statements after the issue of this material except as provided for in laws and ordinances.

The electronics markets in which the TDK Group operates are highly susceptible to rapid changes, risks, uncertainties, and other factors that can have significant effects on the TDK Group including, but not limited to, shifts in technology, fluctuations in demand, prices, interest and foreign exchange rates, and changes in economic environments, conditions of competition, laws and regulations. Also, since the purpose of these materials is only to give readers a general outline of business performance, many numerical values are shown in units of a billion yen. Because original values, which are managed in units of a million yen, are rounded off, the totals, differences, etc. shown in these materials may appear inaccurate. If detailed figures are necessary, please refer to our financial statements and supplementary materials.





Text data including Q&A of performance briefing will be uploaded on following site http://www.global.tdk.com/ir/ir\_events/conference/2016/4q\_1.htm