



Annual Report 2016

Year Ended March 31, 2016

***Technologies
that Change
the World***

Semiconductor Process Rules: Helping to Make Line Width 1/1,000 of its Former Size

TOK has made a tremendous contribution to the miniaturization of semiconductors by driving the evolution of photoresists. TOK is also honing its strengths in new fields, including high-density integration and 3D packaging of semiconductors.

TOK's track record of involvement in semiconductor miniaturization (1970–2015):

Line width → **1/1,000**

Processing speed → **1,000 times**

Power consumption → **1/1,000²**

*A rough estimate for two-dimensional semiconductors based on scaling laws

Origin



Shigemasa Mukai

TOK founder

“We shall conduct manufacturing to create products that others cannot imitate, to be original, to focus on high purity products, and to support manufacturing with advanced technological capabilities.”

—Management Principle at the time of founding

Over the 75 years since its founding, TOK has developed many of its core competencies based on the foundation of its unique high purity processing and microprocessing technologies.

The Birth of Transistors and Integrated Circuits (ICs)

Computers and calculators emerged in the early development stage of the semiconductor industry

Founding to 1969

Founded as a high purity chemicals business

1936

- Founded. Started domestic production of potassium hydroxide (high purity caustic potash)

1943

- Obtained first patent, for chlorinated naphthalene

1956

- **Became a world-leading manufacturer of high purity cinnamate**

1962

- First manufacture of TPR photoresist for printed circuit boards. Established a foundation for photoresist technology



1964

- Began manufacturing and exporting the world's highest purity potassium hydroxide

1968

- First manufacture of OMR-81, a negative photoresist for semiconductors, marking the start of **full-scale development of the photoresist business**



From the Era of LSIs to VLSIs

Evolution of semiconductors led to rapid miniaturization and higher performance of electronic devices

1970 to 1989

Line width: 10,000 to 700nm

Leading position established in photoresists based on “Japan’s first” and “World’s first” products

1971

- **First Japanese production** of plasma ashing and stripping machine. Started a semiconductor manufacturing equipment business



- First manufacture of OMR-83, an eco-friendly synthetic rubber photoresist. OMR-83 **became a mainstream photoresist for IC manufacturing**

1972

- Developed **Japan's first** positive photoresist for semiconductors

1977

- First manufacture of world's first fully automatic sheet plasma etching machine



1978

- Developed an electron beam photoresist for LSIs
- Developed a deep UV photoresist

1981

- Developed photoresist coater

1985

- First manufacture of a high resolution positive photoresist for VLSI production, enabling resolutions of 1,000nm or below

1987

- Developed vacuum UV hardening machine
- Established OHKA AMERICA, INC.

1989

- Established TOK INTERNATIONAL INC. in the United States
- Developed a large circuit board coater line



The Era of ULSIs

Emergence of mobile phones and hybrid vehicles, along with production of large-size, high-resolution LCDs

1990 to 1999

Line width: 700 to 200nm

The de facto standard for photoresists created through an upgraded production and development system

1991

- Developed LCD color filter manufacturing pigment dispersion-type negative photoresist

1992

- TOK INTERNATIONAL, INC. merged with OHKA AMERICA INC. and changed its name to OHKA AMERICA, INC.



Oregon Plant of OHKA AMERICA, INC. (1993)

1995

- Developed a high-resolution positive photoresist for KrF excimer lasers
- Developed an LCD color filter manufacturing pigment dispersion-type negative photoresist for black matrix



Black matrix

1997

- First manufacture of positive, chemically-amplified photoresists for use in KrF lithography. This photoresist attained a line width of 250 nm, becoming the global de facto standard



The Koriyama Plant became a production base for positive, chemically-amplified photoresists for KrF lithography (opened in 1994)

1998

- Established TOK TAIWAN CO., LTD.

The Era of Memory and Logic Semiconductors

Smaller and more sophisticated PCs, with continuing evolution in smartphones and tablet devices

2000 to 2015

Line width: 200 to 10nm node

Strengthening our strategy of building close relationships with customers, while focusing on non-miniaturization fields

2001

- Developed a positive type photoresist for OEL

2002

- Developed a negative photoresist for electron beams
- Established the Singapore Office
- Established the Shanghai Representative Office

2003

- Developed high-density integration materials (permanent photoresists for MEMS)

2004

- Established TOK KOREA CO., LTD.
- Established CHANG CHUN TOK (CHANGSHU) CO., LTD.

2005

- Established TOKYO OHKA KOGYO EUROPE B.V.

2008

- Developed a through-silicon-via (TSV) system for 3D packaging

2009

- Developed a diffusing agent for manufacturing solar cells

2012

- Established TOK Advanced Materials Co., Ltd. (Korea). Began development, manufacturing, and sales of various photoresists from 2013



2014

- Established the Tongluo Plant of TOK TAIWAN CO., LTD.



2015

- Started producing KrF excimer laser photoresists for the 3D-NAND market

Towards the Internet of Things (IoT) era

Increasing demands for high-performance servers and various sensors with an eye on market expansion of autonomous vehicles and AI

From 2016 onward

Fulfilling our "overarching aspiration" for the fiscal year ending March 31, 2021, our 80th founding anniversary

Line width: 10nm node to the single-digit nm node

Multi-tracking strengths targeting all manner of performance-enhancing processes

2016

- Currently developing next-generation technologies in an expansive range of fields encompassing high-density integration, 3D packaging, and areas peripheral to semiconductors, in addition to microprocessing

Long-term Growth Strategy
 >> pages 20-51

TOK's Advancing Technological Development Capabilities

As a result of ceaseless R&D efforts over the past 75 years, TOK possesses world-leading technological capabilities in all manner of performance-enhancing processes for semiconductor devices.

High Added Value Unique to TOK

GNT Companies Selection 100*1



Photoresists

TOK supplies customers with photoresists for semiconductors that embody the company's world-leading microprocessing technologies centered on photolithography technology. TOK provides photoresists—materials essential to the miniaturization, high-density integration and 3D packaging of semiconductors—to customers worldwide.



High Purity Chemicals

In the development of cutting-edge semiconductors, it is becoming increasingly difficult not only to enhance semiconductor performance as a matter of course, but also to establish mass production technologies. TOK has earned solid trust from customers by pursuing the very highest level of purity in all of its chemicals, such as cleaning and developing solutions, which have a large impact on the production yield of cutting-edge semiconductors.



3D Packaging Equipment

TOK has honed its technological strengths through equipment development and the manufacturing business along with its material business, which includes photoresists and chemicals. From an early stage, TOK has been focusing on equipment development based on a strong belief in the market potential for this equipment. As a result, TOK has been supplying highly technologically superior processing equipment to numerous customers.

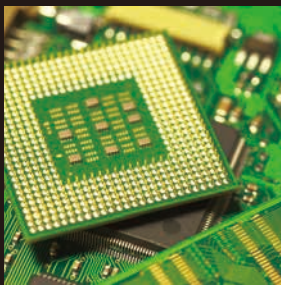
Customer-

Performance Enhancement of Semiconductor Devices



Miniaturization

As the line width of semiconductors is reduced to 1/1,000 of their former size, the density of IC chips increases by 1,000² times, processing speeds increase by 1,000 times, and power consumption is reduced to 1/1,000² *2. Most semiconductors currently on the market are manufactured through miniaturization processes using photolithography technology.



High-Density Integration

Evolution of technologies for packaging and integrating IC chips (i.e., connecting chips to printed circuit boards) enables high-density integration of various parts, ultimately making the end products smaller, lighter and thinner and enhancing their performance. Without relying on miniaturization, these technologies are expanding their markets.



3D Packaging

As semiconductor miniaturization is approaching its physical limits, 3D packaging enhances the performance per chip by vertically layering semiconductor chips. Currently, the 3D semiconductor market is moving to full-scale expansion.

*1 Global Niche Top Companies Selection 100 (Ministry of Economy, Trade and Industry)

*2 A rough estimate for two-dimensional semiconductors based on scaling laws.

* Each IC chip photo is an image.

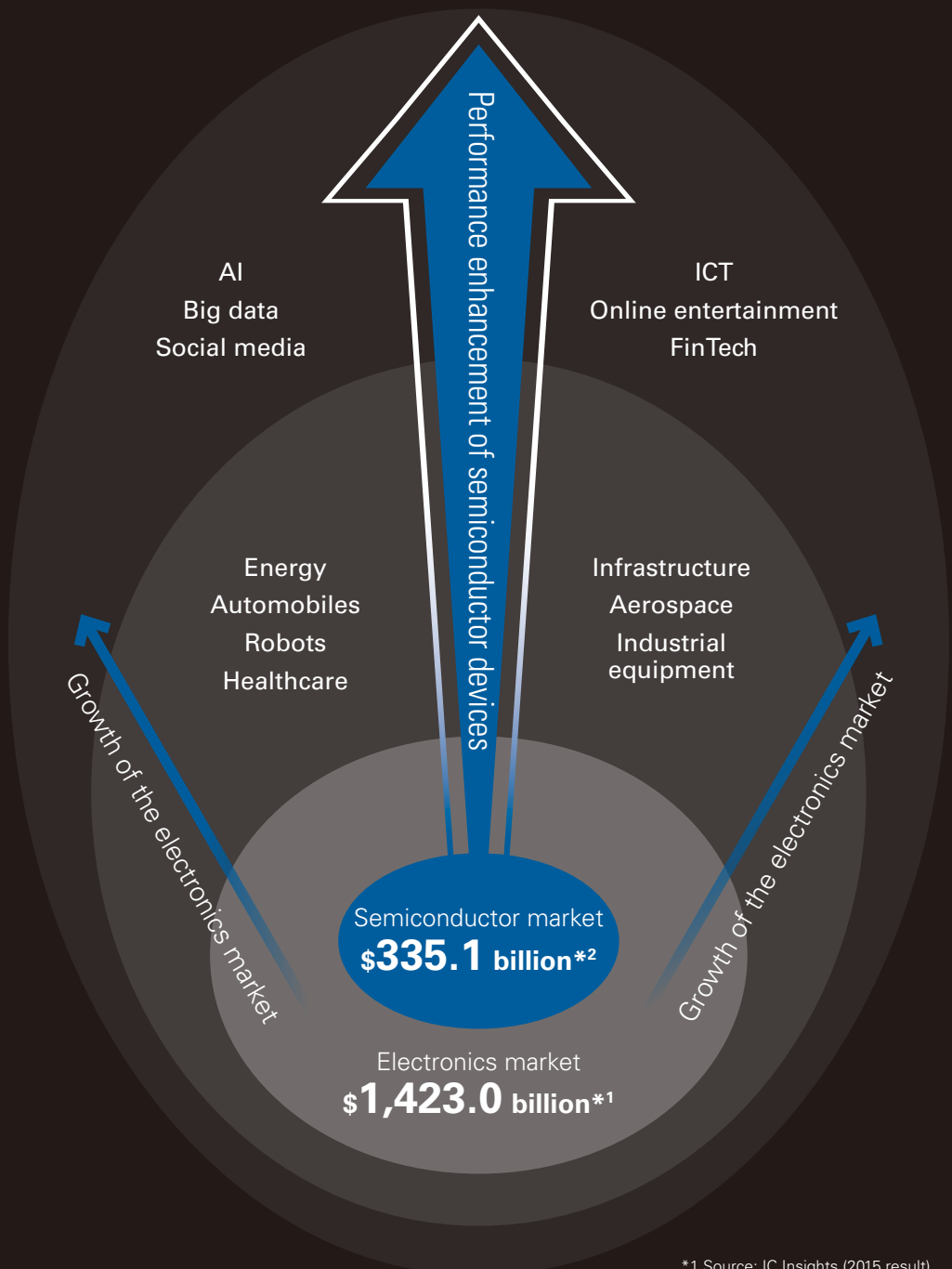


Creation by TOK and Its Customers

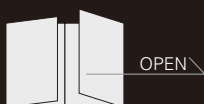
Ever-Expanding Customer Needs

Our customers, beginning with semiconductor manufacturers, are expanding the value they provide by enhancing the performance of semiconductor devices, which lie at the heart of a multitude of industries.

The Ability to Propagate Value:
A Feature Unique to the Semiconductor Industry



*1 Source: IC Insights (2015 result)
*2 Source: WSTS (2015 result)



Connecting People Around the World

The smartphone market offers tremendous scale and growth potential, despite experiencing a slower growth rate recently. Accordingly, smartphones will continue to have an impact on people's lives as a transformative force that makes society and daily life more convenient and comfortable and as a platform that connects people around the world. TOK is supplying many different products that help to enhance the performance of smartphones.



Market potential of semiconductors for mobile phones*

- \$94.3 billion (2019)
- CAGR: 6.7% (2015–2019)

* Source: IC Insights

TOK's products

- ArF excimer laser photoresists
- KrF excimer laser photoresists
- Photoresists for semiconductor package manufacturing
- Photoresists for use in image sensors and MEMS
- High purity chemicals
- 3D packaging equipment

→ See pages 14–15 for the functions and classifications of photoresists

Change the World

Safer and More Reliable Transportation

Demand for automotive discrete (analog) semiconductors is growing, supported by growth in the market for advanced driver assistance systems (ADAS) such as automated braking systems, and the accelerated development of autonomous driving systems. TOK holds the leading global market shares of g-Line and i-Line photoresists, which are essential to the manufacture of these semiconductors.



Market potential of automotive semiconductors*

- \$29.2 billion (2019)
- CAGR: 6.7% (2014–2019)

* Source: IC Insights

TOK's products

- g-Line and i-Line photoresists
- High purity chemicals

→ See pages 14–15 for the functions and classifications of photoresists

Changing the World by Max



Sales/Marketing

Customer-



**Human Resource
Development**

Optimizing the Value We Deliver



R&D

Customer-oriented



New Business Development



Environmental Management

Leaving a Pristine Global Environment for Future Generations

As a major performance factor, power savings have become a focal point for cutting-edge semiconductors to help reduce CO₂ emissions and realize an environmentally friendly society. In addition, power semiconductors for eco-friendly vehicles, transportation infrastructure, electric power systems and other applications continue to evolve. TOK is focusing on ensuring a steady supply of materials essential to the manufacturing of these semiconductors.

Market potential of power semiconductors*

- \$13.5 billion (2018)
- CAGR: 3.2% (2015–2018)

* Source: IC Insights

TOK's products

- ArF excimer laser photoresists
- KrF excimer laser photoresists
- g-Line and i-Line photoresists
- High purity chemicals

→ See pages 14–15 for the functions and classifications of photoresists



Change the World

IoT (Internet of Things)

With the arrival of the age of the Internet of Things (IoT), it is estimated that more than 1 trillion sensors will be required every year by 2023, over 100 times more than at present. Growth is projected particularly in the market for high-value-added MEMS sensors that employ semiconductor microprocessing technologies. TOK provides high-value-added photoresists essential to the manufacture of MEMS sensors.

Market potential of MEMS sensors*

- \$6.1 billion (2020)
- CAGR: 5.5% (2015–2020)

* Source: IC Insights

TOK's products

- Photoresists for image sensors
- MEMS photoresists

→ See pages 14–15 for the functions and classifications of photoresists



Technologies that Change the World

Management Principles

Continue efforts to enhance our technology; Raise the quality levels of our products; Contribute to society; and, Create a frank and open-minded business culture.

Management Vision

Aim to be a globally trusted corporate group by inspiring customers with high value-added products that have satisfying features, low cost and superior quality.

The Source of the Value We Create

—Microprocessing Technologies That Create Inspiration

TOK delivers value in a wide variety of fields, including the manufacture of semiconductors, by rolling out microprocessing and applied technologies for the nanoscale* domain, along with implementing our strategy of building close relationships with customers and developing high value-added technologies from new standpoints.

* Nanometer (1nm) = one millionth of a millimeter; one hundred-thousandth the width of a human hair

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Forward-looking statements

This annual report contains forward-looking statements that describe future prospects of TOKYO OHKA KOGYO CO., LTD. (the Company) in terms of business planning, earnings and management strategies. Such statements are based on management's judgment, derived from information available to it at the time such information was prepared. Readers are cautioned not to rely solely on these forward-looking statements, as actual results and strategies may differ substantially according to changes in the Company's business environment.

10-Year Financial and Non-Financial Highlights

Third "TOK Challenge 21" Medium-Term Plan

Strategies:

- Evolution of microprocessing technology
- Establishment of the TOK brand in the global market
- Enhancement of management structure
- Reform of corporate culture

Lehman Shock
(September 2008)

Fiscal years ended March 31	2007	2008	2009	2010
Results of operation:				
Net sales	101,955	102,482	83,850	70,645
Material Business	83,038	86,186	72,589	65,091
Equipment Business.....	18,991	16,363	11,350	5,632
Operating income (loss)	10,884	8,447	(1,367)	364
Income (loss) before income taxes	11,119	7,352	(5,325)	114
Profit (loss) attributable to owners of the parent.....	6,660	4,259	(4,656)	254
Free cash flow	(7,078)	(8,169)	8,493	6,504
Investment in plant and equipment.....	8,531	6,574	3,270	1,320
Depreciation and amortization.....	5,931	7,693	7,297	5,418
R&D costs	6,487	8,095	8,542	6,949
Per share data (Yen / U.S. Dollars):				
Basic profit (loss)	142.37	91.50	(102.00)	5.66
Cash dividends applicable to the year	36.00	36.00	35.00	30.00
Net assets	2,750.82	2,775.38	2,591.43	2,578.30
At the year-end:				
Total assets	166,610	159,633	139,338	138,122
Total long-term liabilities.....	2,108	2,198	2,205	2,350
Interest-bearing debt.....	463	449	458	57
Net assets	131,074	129,834	118,377	117,658
Key performance indicators (%):				
Operating margin	10.7	8.2	(1.6)	0.5
ROE.....	5.3	3.3	(3.8)	0.2
Ratio of R&D costs to net sales	6.4	7.9	10.2	9.8
Equity ratio	77.3	79.9	83.7	84.0
Debt-to-equity (Times).....	0.00	0.00	0.00	0.00
Payout ratio	25.3	39.3	—	530.0
Industry trend:				
Worldwide semiconductor market (\$ Million)* ¹ , (Year)....	255,645	248,603	226,313	298,315
Worldwide photoresists sales (Thousands of U.S. dollars)* ²	1,119,406	1,087,982	897,827	1,129,893
Exchange rate (¥ / \$)* ⁴	117	99	98	93
Non-financial data:				
Number of patents (in Japan and overseas).....	260	240	259	285
Number of employees.....	1,667	1,703	1,715	1,579

*1 Source: World Semiconductor Trade Statistics *2 Source: SEMI (Total sales of ArF and KrF excimer laser and g- and i-line photoresists)

*3 Forecast-based amount for 2016 *4 As of March 31

Urgent business profitability and structural reforms

Measures to cope with new business environment:

- Cost reduction
- Establishment of low-cost structure

Rebirth of TOK

Direction:

- Enhance marketing capabilities on a global basis
- Further speed up technology development
- Launch new business promptly
- Accelerate global strategy and expand worldwide market share

TOK Medium-Term Plan 2015

Long-term management vision for fiscal 2021:

Aim to be a globally trusted corporate group by inspiring customers with high value-added products

Objectives:

- Surpass record-high earnings
- Enhance business foundations that support sustainable growth

Strategies:

- Build close relationships with regional users
- Reform business portfolios
- Develop global personnel

Achievements of the "TOK Medium-Term Plan 2015"

P16-17
P20-23

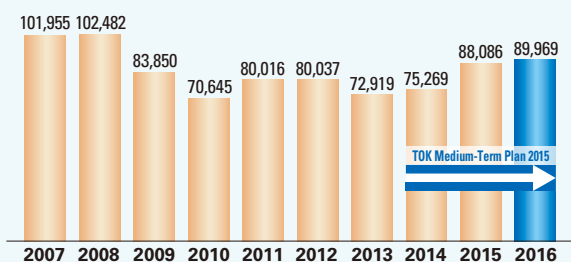
					Millions of yen	Thousands of U.S. dollars
2011	2012	2013	2014	2015	2016	2016
80,016	80,037	72,919	75,269	88,086	89,969	803,296
71,482	66,645	67,697	72,866	84,611	87,280	779,287
8,622	13,500	5,302	2,484	3,581	2,748	24,542
6,123	6,102	7,872	10,025	13,253	12,438	111,054
6,427	6,577	8,031	11,666	14,301	11,777	105,159
3,649	3,818	5,443	7,549	8,818	7,716	68,899
12,435	(6,641)	12,363	(2,610)	3,380	7,517	67,116
1,699	3,162	5,332	14,577	7,276	5,919	52,848
4,393	4,038	3,758	2,672	4,276	5,631	50,277
6,360	6,157	6,211	6,389	6,903	7,015	62,637
81.08	84.86	121.69	168.54	196.61	177.30	1.58
33.00	38.00	44.00	52.00	60.00	64.00	0.57
2,597.72	2,641.28	2,796.37	3,044.24	3,285.81	3,298.00	29.44
147,085	138,767	145,664	155,859	174,863	167,300	1,493,751
2,105	2,613	2,811	1,518	3,569	2,899	25,884
0	610	488	366	814	534	4,767
118,567	119,590	127,838	139,962	151,999	147,270	1,314,916
7.7	7.6	10.8	13.3	15.0	13.8	
3.1	3.3	4.5	5.8	6.2	5.3	
7.9	7.7	8.5	8.5	7.8	7.8	
79.5	85.1	85.9	87.5	84.3	85.1	
0.00	0.01	0.00	0.00	0.00	0.00	
40.7	44.8	36.2	30.9	30.5	36.1	
299,521	291,562	305,584	335,843	335,168	327,180*3	
1,220,078	1,279,706	1,152,306	1,288,713	1,230,022		
83	82	94	103	120	112	
247	253	271	378	293	332	
1,443	1,443	1,487	1,505	1,540	1,564	

Trend in Major Indicators

Fiscal years ended March 31

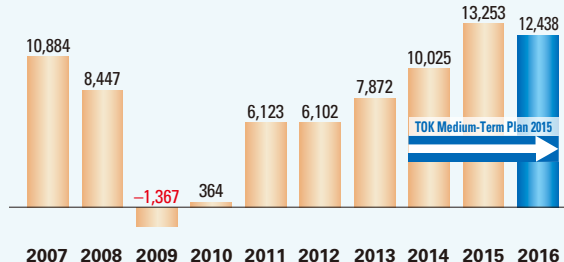
Net sales

(Millions of yen)



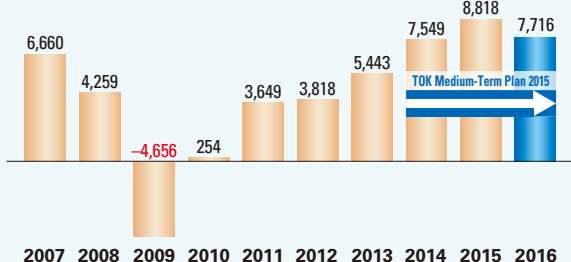
Operating income (loss)

(Millions of yen)



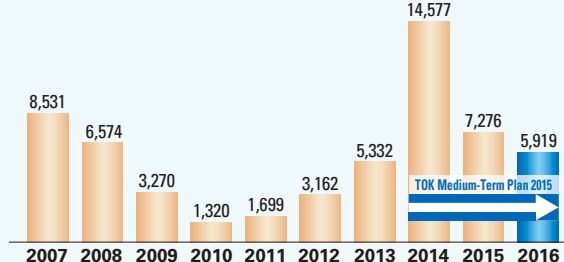
Profit (loss) attributable to owners of the parent

(Millions of yen)



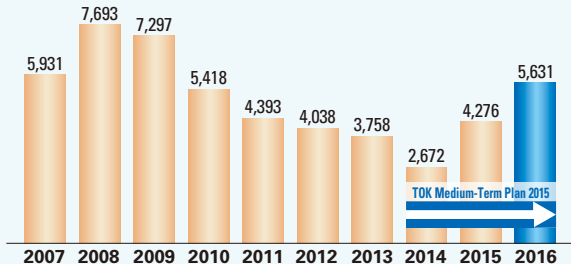
Investment in plant and equipment

(Millions of yen)



Depreciation and amortization

(Millions of yen)



R&D costs

(Millions of yen)



Basic profit (loss) per share

(Yen)



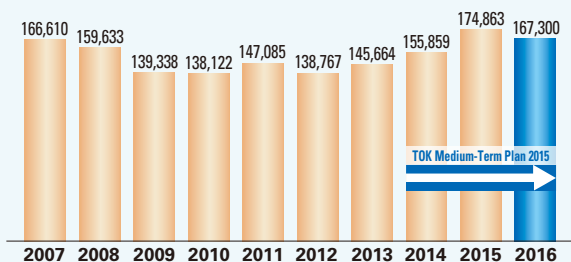
Dividends applicable to the year per share

(Yen)



Total assets

(Millions of yen)



Net assets

(Millions of yen)



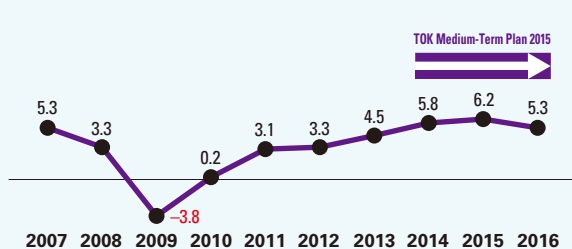
Operating margin

(%)



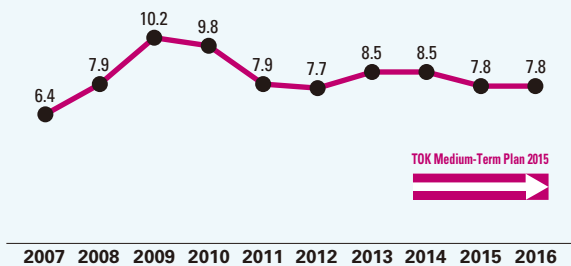
ROE

(%)



Ratio of R&D costs to net sales

(%)



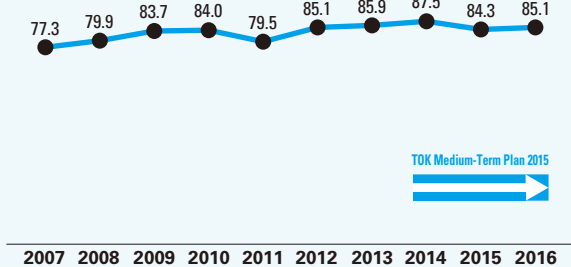
Debt-to-equity

(Times)



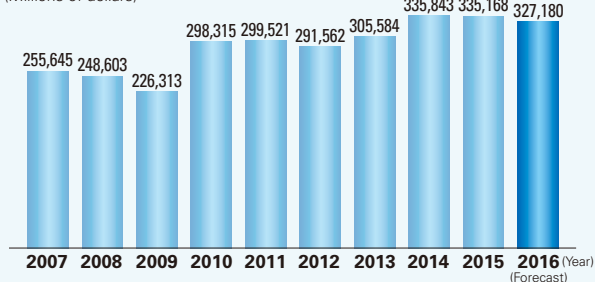
Equity ratio

(%)



Worldwide semiconductor market

(Millions of dollars)



Readers' Guide

Guidance

Semiconductor Photoresists

This section explains various aspects of TOK's flagship semiconductor photoresists.

Functions

Roles of photoresists in forming semiconductor circuits (pre-process of semiconductor manufacturing)



The basic principle of photolithography, which is essential to forming semiconductor circuits, is the same as taking a picture of a subject with a camera. The silicon wafer is equivalent to the film and photographic paper, whereas photoresist is equivalent to the photosensitizing agent.

Performance & Applications

Performance and end applications differ depending on the light source used.

Main Classifications of Semiconductor Photoresists

	g-Line and i-Line photoresists	KrF excimer laser photoresists	ArF excimer laser photoresists* ²
Added value of photoresists	High		
Light source for lithography	g-Line and i-Line	KrF (krypton fluoride) excimer laser	ArF (argon fluoride) excimer laser
Wavelength of light source	436nm (g-Line) / 365nm (i-Line)	248nm	193nm
	Long	Short	
Line width of semiconductors* ¹	≥250nm	250nm > ~ ≥130nm	130nm > ~ ≥10nm
	Wide	Narrow	
Main applications and end products, etc.	Automotive power semiconductors Sensors LEDs, etc.	High-performance servers Mass-market smartphones Game consoles, etc.	Next-generation smartphones Wearable devices Tablet devices, etc.

*¹ Only the round figures of primary ranges are shown *² ArF excimer laser photoresists and immersion ArF photoresists

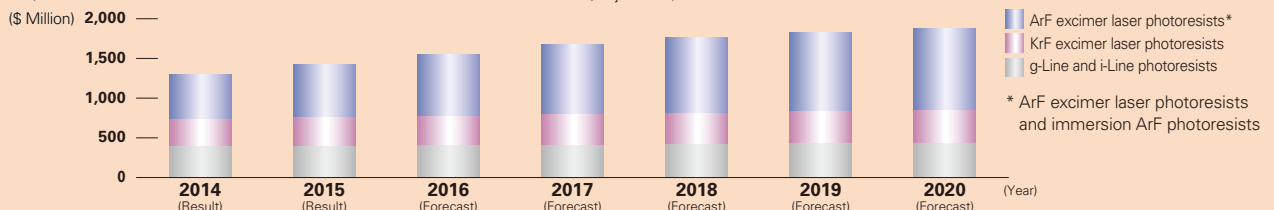
Most semiconductors currently available on the global market are manufactured through lithography using these photoresists.

Market Trends

Continuing high growth centered on high value-added fields

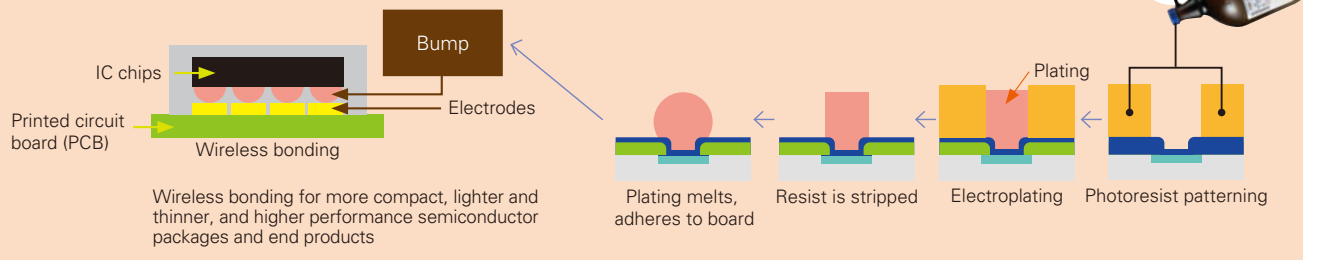
Global Market Projections for Semiconductor Photoresists

(Source: Overview of Photo-Functional Material and Product Market 2016/Fuji Keizai)



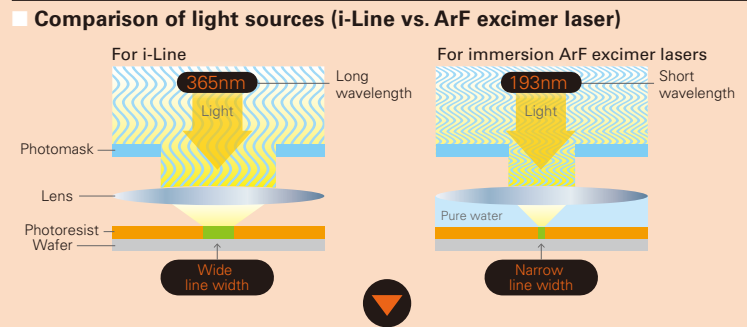
The markets for g-Line and i-Line photoresists, KrF excimer laser photoresists, and ArF excimer laser photoresists* are all following a growth trajectory. Notably, high value-added ArF excimer photoresists* are experiencing double-digit annual growth rates, thereby driving the growth of the entire market.

Roles of photoresists in semiconductor packaging (post-process of semiconductor manufacturing)



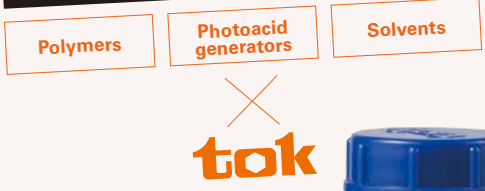
There are growing needs for photoresists not only for semiconductor manufacturing processes, but also for processing after manufacturing (i.e., the post-process of semiconductor manufacturing) to achieve more compact, lighter and thinner, and higher performance semiconductors.

Relationship between the wavelengths of lithography light sources and the semiconductor line width



The shorter the wavelength of the lithography light source (i.e., the narrower line width), the greater the possibilities for adding value to semiconductors by making them more compact, faster, and more power efficient.

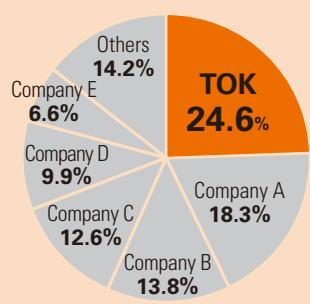
Raw materials



World-leading micro-processing technology

The ability to research, develop, and manufacture the world's highest quality photoresists

Worldwide share*



TOK has been selected as a Global Niche Top company in the electricity and electronics category by the Ministry of Economy, Trade and Industry based on a strong evaluation of TOK's semiconductor photoresists in terms of their strategic importance, market share, international appeal, and other aspects.



* Based on 2015 total sales volume of ArF, KrF excimer lasers and g-Line and i-Line photoresists (calculated based on data from Overview of Photo-Functional Material and Product Market 2016/Fuji Keizai)



At a Glance

Portfolio

Business Portfolio

We are leveraging our Material Business which develops high value-added products as

Business segment

Main products

Material Business

Develops high value-added products as an earnings driver

Electronic functional materials

Photoresists

Widely used materials indispensable for the microprocessing of devices including semiconductors, panels, and other electronic products

High-density integration materials

Packaging photoresists and photosensitive insulation film compatible with multi-layer stacking accompanying advances made in semiconductor microprocessing



High purity chemicals

High purity chemicals

Developing solutions, stripping solutions, rinsing solutions, thinners and other chemicals leveraging our advanced expertise in ultra-high purity processing and microprocessing

Inorganic and organic chemicals

Chemicals used in a wide range of industries



Equipment Business

Getting one step ahead of market needs in synergy with the Material Business

Process equipment

Semiconductor manufacturing equipment

Various types of equipment centered on TOK's Zero Newton wafer handling system that enables significant increases in efficiency and cost performance of the 3D packaging process of semiconductors

Process equipment for LCD panels

Various types of process equipment including coating machines that can achieve high-precision performance, UV curing machines, and coating machines for R&D



Portfolio

Highlight

Product Portfolio & "TOK Medium-Term Plan 2015" Highlights

In TOK Medium-Term Plan 2015,

Net Sales of KrF Excimer Laser Photoresists:

3 years growth

+30%

Net Sales of ArF Excimer Laser Photoresists:

3 years growth

+50%

Net Sales of High-Density Integration Field:

3 years growth

2.4 times

Semiconductor Manufacturing Field

g-Line Resists	ArF Excimer Laser Photoresists	Interlayer Insulating Film	Materials for Cover Coat
i-Line Resists	EUV Resists	Diffusing Agents	Directed Self-Assembly Materials (DSA)
KrF Excimer Laser Photoresists	Electron Beam Photoresists	Materials for Shrink Process	High Purity Chemicals

Semiconductor Packaging Manufacturing Field

Bump Photoresists
Lift-off Resists
High Purity Chemicals

Image Sensor MEMS Manufacturing Field

Materials for Photosensitive Permanent Films
Resists for Micro Lens
High Purity Chemicals

Main Target Markets, Applications, and End Products, etc.*

Smartphones, tablet devices, PCs, wearable devices Higher performance/more compact/energy saving

Automobiles Lower fuel consumption



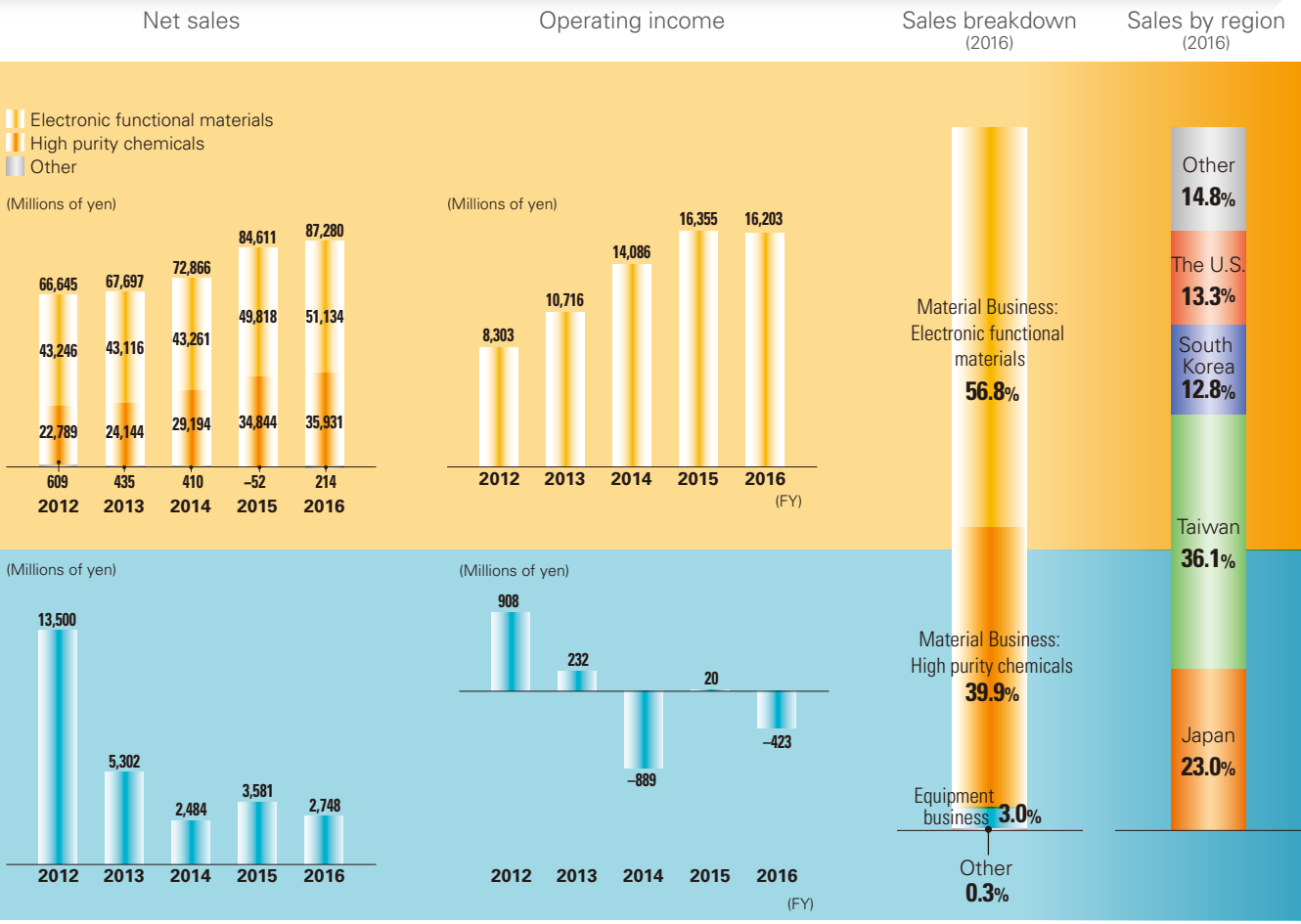
Cloud servers Higher performance/more compact/energy saving

Game machines, etc. Higher performance/more compact

Automobiles Driving assist

*TOK → Semiconductor manufacturers, etc. → Electronics manufacturers

an earnings driver and realizing synergy with our Equipment Business, getting one step ahead of market needs.



The Value TOK Creates

we developed the following product portfolio centered on the Material Business, and made significant progress in four fields.

3D Packaging Field

- Zero Newton Wafer Handling System
- Adhesive Material
- High Purity Chemicals

Panel Manufacturing Field

TFT Resists	Resists for Organic EL
Black Resists	High-reliability Transparent Materials
UV Curing Machines	High Purity Chemicals

TVs, various displays

Smartphones, tablet devices

High Purity Chemicals

Net Sales of High Purity Chemicals: 3 years growth **+50%**

Cleaning Solutions	Organic Chemicals
Thinner	Stripping Solutions
Developing Solutions	Inorganic Chemicals

Semiconductor manufacturing lines, etc.

Panel manufacturing lines, etc.

Management Resources

Introduction to the strengths and characteristics of the management resources TOK has cultivated over the past 75 years

Financial Capital

Building a foundation for long-term growth through a solid financial position and the pursuit of capital efficiency

Solid Financial Position

TOK has an equity ratio of 85.1% and a debt-to-equity ratio of less than 0.01 times as of March 31, 2016, making it one of the most financially sound enterprises in the chemicals sector.

Our strategy of building leadership in niche fields, part of our DNA since our founding, as well as our willingness to take aggressive risks as an R&D-driven company, and our competitiveness against much larger companies, are all supported by our solid financial position.

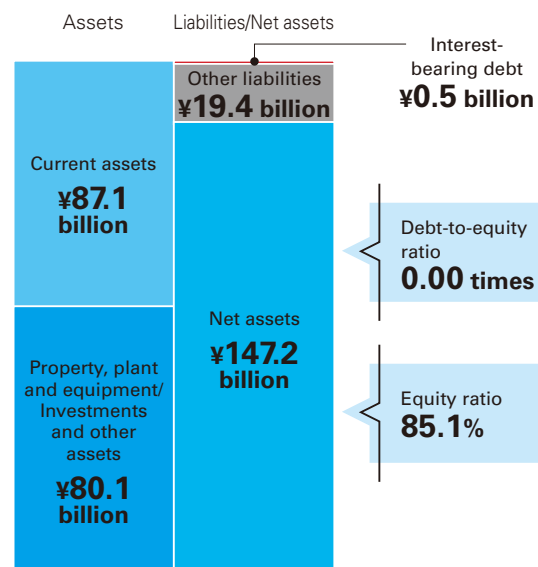
Pursuit of Capital Efficiency

We work to maintain financial soundness while engaging in a full-fledged pursuit of capital efficiency.

Currently, TOK is working to achieve a newly established ROE target figure by advancing an investment strategy that emphasizes efficiency indicators such as total asset turnover ratio, IRR and ROIC. At the same time, by continuing to pursue an ideal balance between investment, cash reserves and shareholder returns, we are focused on further strengthening our foundation for long-term growth from the perspective of financial capital.

→ See Message from the CFO on pages 28–29

Balance Sheets (As of March 31, 2016)



Intellectual Capital

Focus on R&D and strategic utilization of intellectual property rights

High Ratio of R&D Costs to Net Sales

As an R&D-driven company whose competitiveness derives from microprocessing and high purity processing technologies, TOK devotes approximately 8% of net sales to R&D, significantly above the 3.9%* average for all industries.

In addition to R&D in Japan and overseas in cutting-edge semiconductor-related fields, deeply rooted in our strategy of building close relationships with customers, TOK continues its founding focus on delivering first-in-the-world products and gaining leadership in niche fields, while also accelerating the move toward open innovation.

*Actual as of FY2015/Source: The Nikkei Business Daily, August 17, 2016

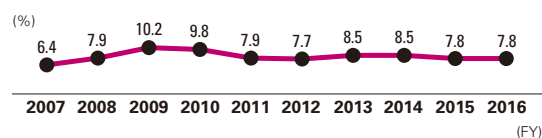
Strategic Patent Portfolio

To ensure flexibility in business development and a competitive advantage in the market through the intellectual property derived from our R&D efforts, TOK is focused on aggressively applying for, protecting, exercising and strategically licensing its patents.

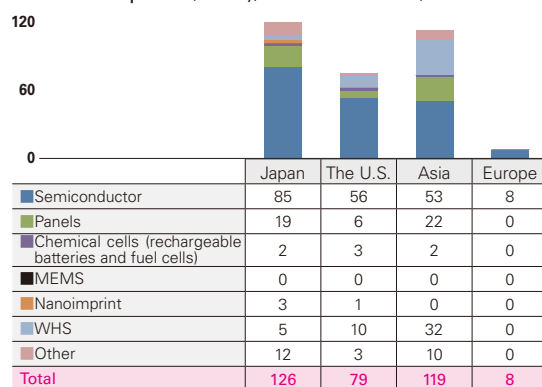
We also immediately deal with patent applications in South Korea, Taiwan and other overseas jurisdictions. Our patent portfolio is also designed to enable the stable pursuit of business development in new, promising technologies and to build barriers to entry.

→ See Special Feature (R&D and New Business Development) on pages 44–47

Ratio of R&D Costs to Net Sales



Patents Acquired (country, classification/FY2016)



Human Capital

Putting into practice worldwide the basic philosophy of regarding human resources as a company asset

Low Turnover Rate Among Younger Employees

TOK has established a consistent philosophy of regarding human resources as one asset of the company since our establishment and we view all employees as valuable assets, so have stipulated the items on the right in line with this belief.

As surety for our long-term growth capabilities and in line with one of our management principles, namely the creation of a frank and open-minded business culture, we are committed to developing a safe and sound working environment where each and every one of our employees can work in a motivated manner.

Partly thanks to these efforts, in recent years we have maintained a zero turnover rate among employees with three years or less in the Company.

Develop Global Personnel

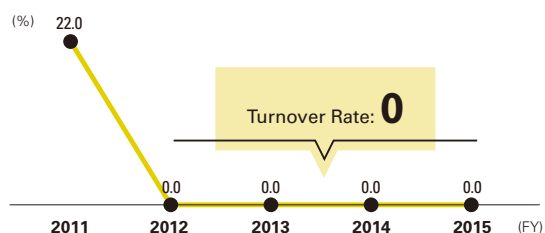
Given that sales overseas now represent just under 80% of net sales, primarily in cutting-edge semiconductor-related fields, TOK is focused on a medium- to long-term human resource development policy of global personnel development. We are currently advancing strategic human resource development under the TOK Global Practical Training for Selected Members and the TOK Group Core Human Resources Training Program.

→ See Special Feature (Human Resource Development) on pages 50-51

Policy on Utilizing Human Resources

- Never forget that business always starts with "people."
- Any discrimination within the Company and among employees is strictly prohibited.
- Ensure full compliance with applicable laws and regulations, as well as fair and equal compensation.
- Educate personnel and promote creativity to become a company that develops innovative technologies.
- Ensure personnel systems are based upon performance, emphasizing and ensuring transparency.

Turnover Rate among Employees with Three Years or Less in the Company



Social and Relationship Capital

Business evolution through ties to a wide range of stakeholders

Building Solid Trust Through a Strategy of Close Relationships with Customers

TOK has established manufacturing and development sites in South Korea, Taiwan, the U.S. and other places where many of our customers are located. By introducing prototype production lines equal to the customers' lines, we can quickly commercialize the results of development and in the fast-changing electronics industry, build solid trust relationships.

R&D as a Way Into Building Deep Social and Relationship Capital

As technical development in cutting-edge semiconductor fields grows increasingly difficult with each passing year, building ties with a variety of stakeholders aside from customers will become a key to achieving breakthroughs and innovation.

TOK is working to build deep social and relationship capital through R&D. These efforts include discovering and supporting venture companies with superior technological capabilities, participation in a variety of consortiums, and projects to subsidize R&D through the Tokyo Ohka Foundation for The Promotion of Science and Technology.

→ See Special Feature (R&D and New Business Development) on pages 44-47

Example of Customer Evaluation

Award	Customer	Year
Preferred Quality Supplier Award	Intel Corporation (U.S.)	2014 2015
Best Supplier Award	ASE Kaohsiung (Taiwan)	2014
Supplier Excellence Award	Texas Instruments Incorporated (U.S.)	2014

Key Examples of Consortium Participation

Consortium	Head Office	Description of Participation
Interuniversity Microelectronics Centre (IMEC)	Belgium	Development of next-generation photoresists, etc.
Institute of Microelectronics (IME)	Singapore	Development of next-generation semiconductor packaging materials, etc.

Achieving “Overarching Aspiration,” the TOK Management Vision for the Fiscal Year Ending March 31, 2021

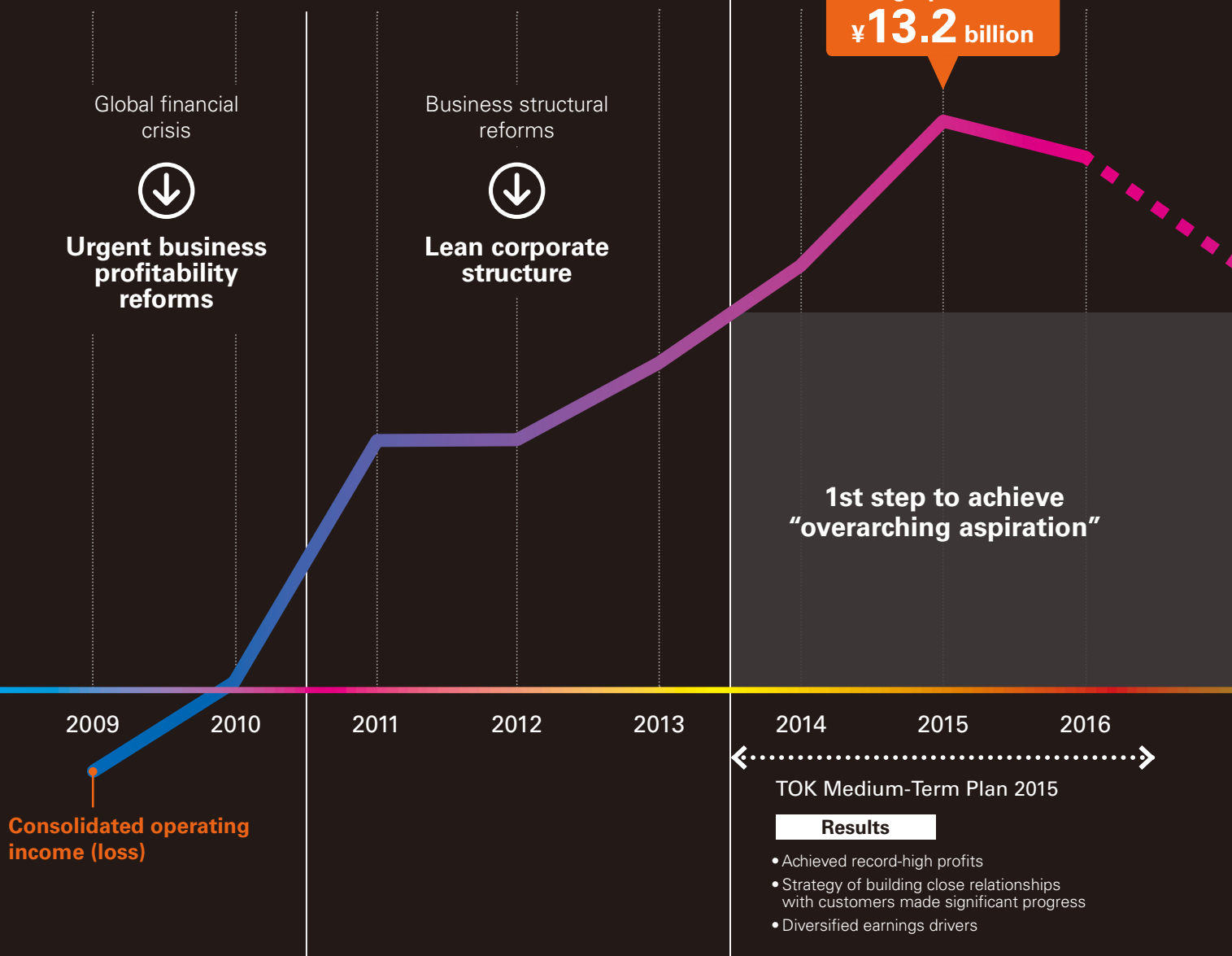
Based on the strengths and management resources we have built over our 75-year history, TOK aspires to further long-term growth.

Even as we are affected by the silicon cycle, TOK will maintain its upward trajectory, aiming to achieve operating income of ¥20.0 billion in the fiscal year ending March 31, 2021 and to become a 100-year company in the fiscal year ending March 31, 2041 by remaining a leader in niche fields and accelerating our high value-added strategy.

TOK Medium-Term Plan 2015

CAGR: +16.5%*

* Based on operating income



1st step to achieve
“overarching aspiration”

TOK Medium-Term Plan 2015

Results

- Achieved record-high profits
- Strategy of building close relationships with customers made significant progress
- Diversified earnings drivers

TOK Medium-Term Plan 2018

CAGR: +6.4%*

Fiscal year ending March 31, 2019

TARGETS

Net sales	Over ¥120 billion
Operating income	Over ¥15 billion
Net income	Over ¥10 billion
ROE	Over 7%

TARGETS

Operating income target of ¥20 billion
ROE of over 8%

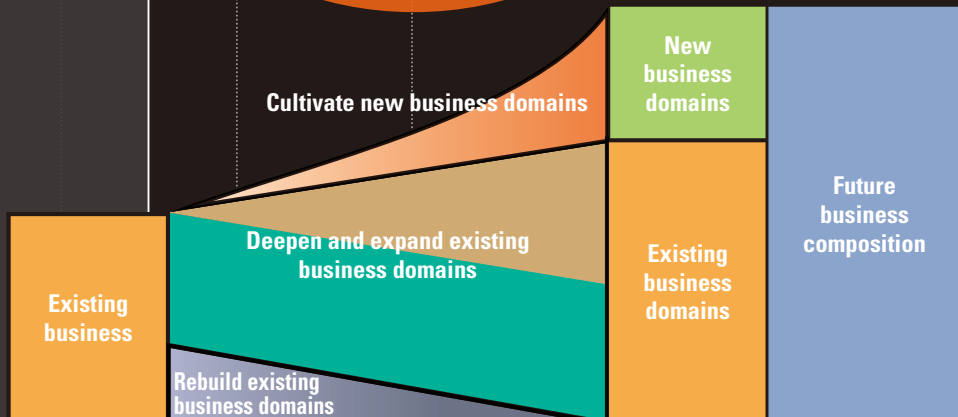


80th anniversary
Fiscal year ending March 31, 2021

"Overarching aspiration"

"Aim to be a globally trusted corporate group by inspiring customers with high value-added products that have satisfying features, low cost and superior quality"

2nd step



Growth Strategy

2017

2018

2019

2020

2021

(FY)

TOK Medium-Term Plan 2018

Strategy

1. Reform business portfolios
2. Evolve strategy of building close relationships with customers
3. Develop global personnel
4. Strengthen management foundation

To Our Stakeholders

We will work to strengthen our base for sustainable growth through a record level of aggressive investment.

Under the previous Medium-Term Plan 2015, we succeeded in achieving record-high profits, but performance faltered in the final year, missing the target.

While the recent business environment is challenging, our intention to achieve sustainable growth remains strong.

Under the new TOK Medium-Term Plan 2018, we will carry out historically record-high capital investment, building a solid base for sustainable growth into becoming a 100-year company.



Ikuo Akutsu

President & Chief Executive Officer

Summary of TOK Medium-Term Plan 2015:

The first step in achieving our “overarching aspiration,” a vision for the fiscal year ending March 31, 2021.

Record-High Profits, and a Certain Level of Quantitative Success

Based on our vision for our 80th anniversary of achieving an “overarching aspiration” by the fiscal year ending March 31, 2021, the TOK Group is working to achieve its “Aim to be a globally trusted corporate group by inspiring customers with high value-added products that have satisfying features, low cost and superior quality,” and to achieve a consolidated operating income of ¥20 billion.

Under this vision, in April 2013 we began a three-year TOK Medium-Term Plan 2015, with the goals of surpassing record-high profits, enhancing business foundations that support sustainable growth, and expanding new business domains. To accomplish this, we worked to build close relationships with regional users, reform our business portfolios and develop global personnel. Thanks to these efforts, we achieved a certain level of quantitative results, including record-high operating income in the fiscal year ended March 31, 2015—the second year of the plan. While we missed our earnings target for the final year of the plan, we set a new record for operating income for the first time in 30 years (the last being the fiscal year ended November 30, 1985), which will provide a solid foothold for achieving our goal of ¥20 billion in operating income in the fiscal year ending March 31, 2021.

Building a Powerful Bridgehead in Cutting-Edge Semiconductor Domains

On the qualitative side, in 2012 we established our South Korean subsidiary, TOK Advanced Materials Co., Ltd. (TOKAM), a customer-oriented site, and also strengthened our development frameworks in the U.S. and Taiwan. Communicating closely with leading customers in the global semiconductor industry, we succeeded in building a powerful development framework that allows us to interact daily with live feedback from customers in high value-added, cutting-edge semiconductor domains. This led to another major achievement on the qualitative side, giving us the ability to strengthen our advantage toward capturing the volume zone for ArF excimer laser photoresists, the main market for the semiconductor miniaturization process as it breaks through the 10nm level.

Reforming Our Business Portfolios

In TOK’s business portfolios, we were largely successful in achieving our targets in earnings drivers, with sales of ArF excimer laser photoresists growing by about 1.5 times in three years, KrF excimer laser photoresists by about 1.3 times, and high-density integration materials about 2.4 times. In high purity chemicals, we also generated new value by developing a high quality grade tailored to customer processes, and sales grew by about 1.5 times over three years, exceeding the target. As a result, we believe we have succeeded in making appropriate progress in the renewal of our existing businesses.

In contrast, one issue that remains is the creation of new business domains, a priority theme of the previous medium-term plan. Initial prospects for renewable energy (related to solar cells) fell through, and rechargeable battery field (rechargeable microbatteries, etc.) failed to reach commercialization, while in the Equipment Business, delays in the start-up of the market also had an impact. As a result, we failed to make progress in reforming our business portfolio through the creation of new businesses, and were unable to reduce our reliance on the Material Business (e.g. strengthen our tolerance for the negative aspects of the silicon cycle), centered on photoresists. These and other factors contributed to our having missed the targets for the final fiscal year of the plan.

Cultivating new businesses takes time, and success requires both enormous effort and persistence, something which the TOK Group has experienced for itself over the course of more than 75 years in business. Nevertheless, establishing new earning pillars is essential for TOK as we target sustainable, stable growth with a goal of reaching ¥20 billion in operating income in the fiscal year ending March 31, 2021, and eventually becoming a 100-year company. Thus, under the new medium-term plan, the TOK Group has placed the highest priority on a strategy for the “reform of its business portfolios,” with a strong focus on generating solid results from new businesses. While we cannot reveal the details due to customer contracts, during the previous medium-term plan, we were successful in cultivating the shoots of new businesses, including in the area of high-functional film, that we believe can indeed generate results. At this point, we can report that we are currently moving forward with building a production line in anticipation of mass production.

Our Take on the Business Environment

The Global Semiconductor Market Returns to a Growth Path Beginning in 2017

With slowing growth in the smartphone market and a shrinking market for PCs, the global market for semiconductors shrank 0.2% year-on-year in 2015, to \$335.1 billion, falling into minus growth territory for the first time since 2012. Negative growth is expected for 2016 as well, with a decline of 2.4% year-on-year.

Still, thanks to growth in automotive ICs and various types of sensors, growth in demand for servers used in analyzing big data, the launch of new high value-added smartphone models and the wider use of low-cost smartphones in emerging countries, the market is expected to return to a growth path in 2017, increasing 2.0% year-on-year. Growth will continue at about 2.2%, with the size of the global semiconductor market in 2018 forecast to surpass the record set in 2014, at \$340.9 billion. As a result, average annual growth in the market between 2015 and 2018 is projected to continue at a gradual rate of 0.6%.

(Source: World Semiconductor Trade Statistics, etc.)

Projected Growth Rates in Cutting-Edge Fields Will Significantly Outpace the Semiconductor Market as a Whole

Meanwhile, growth rates in the cutting-edge semiconductor fields in which TOK focuses are forecast to significantly outpace the semiconductor market as a whole.

The market for ArF excimer laser photoresists, which are used primarily in the cutting-edge semiconductor miniaturization process at the 10nm to 20nm level, is expected to grow at an annual average of more than 10% by 2018, with an annual growth rate of 8.9%*¹ by 2020, driven by growing demand primarily for semiconductors for next-generation, high added-value smartphones and tablet devices and for high-performance servers.

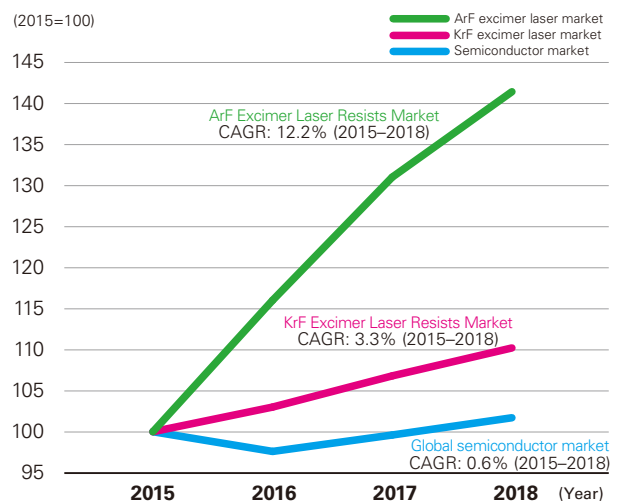
The market for KrF excimer laser photoresists, capable of handling the second level of miniaturization after ArF excimer laser photoresists, is expected to see average annual growth of more than 3%*² by 2020, largely fueled by solid growth in high-performance servers and game devices, 3D-NAND for high value-added smartphones and other applications.

The market for micro-electro mechanical systems (MEMS), which integrate micrometer-level 3D structures on circuit board, is projected to see an annual average growth rate of 13%*³ by 2021, with expansion in a variety of fields including smartphones and wearable devices, and the automotive and medical fields, among others.

(Source for *1 and *2: Overview of Photo-Functional Material and Product Market 2016/Fuji Keizai)

(Source for *3: YOLE DEVELOPPEMENT 'Status of the MEMS Industry Report, 2016 edition—May 2016')

Estimate of market growth rate: Global semiconductor market/ ArF Excimer Laser Photoresists Market and KrF Excimer Laser Photoresists Market



(Source: Collated by TOK from World Semiconductor Trade Statistics and Fuji Keizai 'Overview of Photo-Functional Material and Product Market 2016')

Cutting-Edge Photoresist Market Size and Competitive Environment

The markets for ArF excimer laser photoresists and KrF excimer laser photoresists, TOK's number one and two best-sellers by product, were \$673.4 million*¹ and \$358.8 million in 2015, respectively. Japanese companies represent the four top firms in terms of global market share*², with TOK in third place for ArF excimer laser photoresists (19.2%) and first place for KrF excimer laser photoresists (28.7%). The other three top firms with which we compete are all major chemical manufacturers with consolidated sales many times or many tens of times larger than ours.

*1 The sum total of ArF excimer laser photoresists and immersion ArF excimer laser photoresists

*2 Volume basis

(Source: Overview of Photo-Functional Material and Product Market 2016/Fuji Keizai)

The second step in achieving our “overarching aspiration,” a vision for the fiscal year ending March 31, 2021: **The TOK Medium-Term Plan 2018**

A Record Level of Capital Investment to Strengthen Base for Long-term Growth

The new three-year TOK Medium-Term Plan 2018, which began in the current fiscal year ending March 31, 2017, represents the second step toward achieving our “overarching aspiration,” and is positioned as an important three-year period that holds the key to achieving ¥20 billion in operating income in the fiscal year ending March 31, 2021.

Under the TOK Medium-Term Plan 2018, we will use our strategy of building close relationships with customers to further develop our world-leading microprocessing and high purification technologies, our core competencies, solidifying our advantage in cutting-edge semiconductor fields, and making concrete progress in reforming our business portfolio, a major issue left over from the previous medium-term plan. To do this, we will carry out a record ¥34 billion capital investment. As a milestone toward achieving our goal of ¥20 billion in operating income in the fiscal year ending March 31, 2021, we will also aim to achieve a new record for operating income of ¥15 billion in the fiscal year ending March 31, 2019, the final year of the medium-term plan.

Moving to the Harvesting Stage by Adding Even Greater Value to Earnings Drivers

In reforming our business portfolio, we will first focus on moving forward to add even higher value to our earnings drivers, shifting to the harvesting stage and ensuring a solid path to long-term growth.

In ArF excimer laser photoresists, demand is growing for products beyond the 10nm level, the cutting edge of miniaturization. Therefore, the success or lack thereof in capturing that demand will affect photoresist manufacturers’ future competitive power. By deploying a strategy of building close relationships with our customers, emphasizing the unique features and quality of our products and our responsiveness to customers, TOK has already captured a partial share of this market, including products adopted by major semiconductor manufacturers. Under the TOK Medium-Term Plan 2018, we will move forward with new capital investment, including deployment of inspection equipment similar to that of our customers, with the goal of achieving a global share of more than 30% of the ArF excimer laser photoresist market.

In KrF excimer laser photoresists, we have secured adoption of our product by a major customer working to mass produce 3D-NAND flash memory, and in the near

term, market expansion is beginning to accelerate. We will push ahead with a strategy to further solidify our top global position in the market for KrF excimer laser photoresists by further improving product features in line with the increase in integration layers.

In high-density integration materials, photoresists for packaging have become a new earnings driver for TOK, the result of more than 10 years of persistent research and development. Leveraging our competitive strength in high-resolution positive photoresists, an area of strength for TOK, we will work to expand sales in fields that demand even greater functionality and space savings. In the near term, demand for thick-film photoresists for new fan-out wafer level packages* for use in next-generation smartphones is beginning to grow, and through our strategy of building close relationships with our customers, we will work to turn this into a solid earner. In MEMS materials, demand is growing for use in IoT-related and smartphone sensors, and there is an increasing emphasis on performance, which represents an opportunity for TOK to increase its share in permanent photoresists. We will continue our wide-ranging sales and development activities as we work to further explore customer needs while also capturing new customers.

In high purity chemicals (stripping solutions, thinners, developing fluids, etc.), we will further refine our product quality using our high purification technology, one of our core technologies, and by further elaborating our strategy of building close relationships with customers, work to build long-term stable growth and an expanded market share in this field.

*Fan-out Wafer Level Package (FOWL):

A packaging technology to form a redistribution layer in a wide field that exceeds the chip area, thereby enabling us to respond to multi-pin packages, such as processors.



Efforts Toward Open Innovation, Keeping in Mind the Goal of Becoming a 100-Year Company

Another priority strategy in reforming our business portfolio is the creation of new businesses and new materials. Our goal is to reach ¥5 billion in sales from new businesses in the fiscal year ending March 31, 2019. By diversifying our microprocessing technology, and leveraging collaboration and alliances with outside institutions including consortiums and university research laboratories, we will work to expand our business domains, and to commercialize themes we have previously focused on, including high-functional films and nanoimprint materials.

We have also started an “open innovation” initiative, a new concept under the TOK Medium-Term Plan 2018. As the TOK Group aims at becoming a 100-year company, we will continue to specialize in high value-added fields while achieving long-term growth. This requires an even greater degree of cooperation with our customers, of course, but also with suppliers, business partners, outside research institutes and so on. By incorporating a wide range of seeds of technologies, needs, ideas, and concepts from outside the Company, we will accelerate the reform of the TOK Group’s business portfolios.

To get a head start on this open innovation effort, in October 2015 we established a new organization, the Corporate Venturing Div., within the New Business Development Dept. The objective of this organization is to discover and support ventures both inside and outside Japan that represent potential synergies with the TOK Group, with the aim of creating business in new fields through investment stakes and business partnerships designed to build cooperative relationships. The organization has already established several deals, and in March 2016, we invested about ¥180 million in Inpria Corporation in the U.S., which has an excellent track record in research in the EUV resist field, which is expected to have applications for semiconductor ultra-microprocessing (at the single-digit nm level). This investment will not only support Inpria’s R&D, but will help them

enlarge the scale of their resist production and prepare to provide peripheral materials. While some are of the opinion that the EUV resist market will take time to ramp up, we are promoting this initiative with an eye on the future and in anticipation of long-term, stable growth for the TOK Group.

Continuing Investment in the Equipment Business as a Future Core Business

3D packaging, on which we have been focusing for some time, is a technology that entails stacking thinned semiconductor chips in layers. In addition to being 3D, it realizes higher density and miniaturization of devices. The 3D semiconductor market is gradually taking shape, chiefly for cutting-edge smartphones and high-end servers. TOK is also developing its “Zero Newton” (TSV: Through Silicon Via equipment) wafer handling system that helps make this packaging process more efficient, and in light of the previous medium-term plan, sales were sluggish, partly due to a delay in the market launch.

Still, the 3D packaging equipment market is seen as having significant growth potential, and the Materials & Equipment (M&E) strategy of generating synergies through collaboration between the Material Business and Equipment Business has contributed to creating unique value for TOK. We thus plan to continue persistent investment in this area with the goal of developing it into a core business for the TOK Group. Under the new medium-term plan, we will work to expand earnings by moving forward with further concentration within the Equipment Business segment, narrowing our target fields to TSV equipment, UV cure equipment and next-generation flexible display manufacturing equipment, and focusing management resources on (1) development and sales of new equipment; (2) sales of components and related materials; and (3) after-sales service (repair and remodeling). We are also approaching customers about deploying applications for TSV technology in fan-out processing for next-generation smartphones, a market which is expected to grow.

Heading for Greater Capital Efficiency and Shareholder Value

Roadmap to Reach Our ROE Target

Through our dialogue with shareholders and investors, the TOK Group is strongly aware that improving our ROE is essential, and in our new TOK Medium-Term Plan 2018, we have established a numerical target for ROE. Our goal for

the fiscal year ending March 31, 2021 is to achieve a solid financial position and ROE of 8%. A “solid financial position” is specified because R&D in the cutting-edge fields in which TOK focuses requires large capital investments, and also because production technology, including technology

for mass production, is growing more complex each year. This requires a solid financial base that allows for risk-taking even with highly uncertain business investments, and that protects other projects from being affected even in the event an investment is not successful.

As a path to improving ROE, TOK will prioritize growth of high quality operating income through business portfolio reforms focused on high added value. At the same time, also taking the enhancement of shareholder returns into consideration will lead to greater capital efficiency and improved corporate value. Under the medium-term plan, we will also focus on prior investment, and as a preliminary step, we have set a target ROE of 7% in the fiscal year ending March 31, 2019, the final year of the plan.

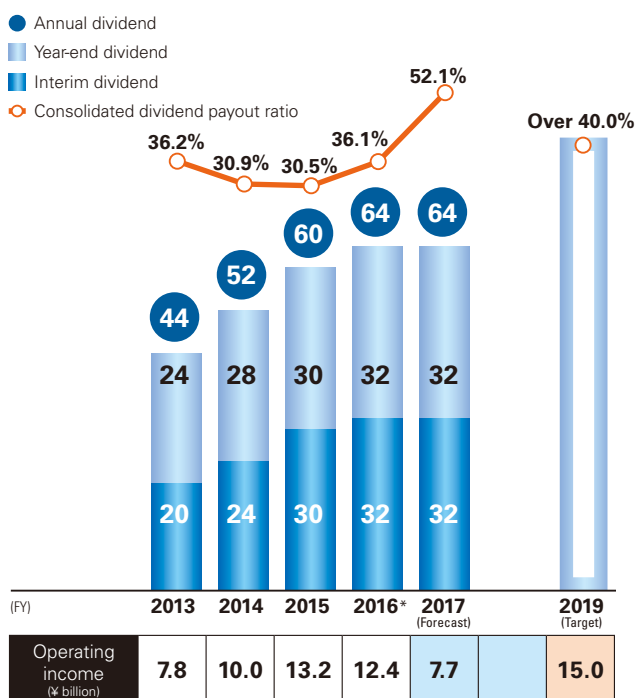


Enhance Returns to Shareholders With Emphasis on Dividends

To date, TOK's basic policy regarding dividends has been to target a consolidated dividend payout ratio of over 30%. However, in the hopes of clarifying our approach to enhancing shareholder returns, both in terms of profit recovery and growth, we have raised our payout ratio guideline

beginning in the fiscal year ending March 31, 2017, changing our policy to read "Considering the current level of dividends, continuously distribute dividends with a consolidated dividend payout ratio of over 40%." With regard to purchase of treasury stock, we will continue to implement such purchases flexibly from a long-term perspective.

Dividends per share (¥)



*FY2016: Including a commemorative dividend of 4 yen for the 75th anniversary.

Enhancing Corporate Governance to Become a 100-Year Company

Full Compliance with the Corporate Governance Code

The TOK Group is striving to achieve its "overarching aspiration" for the 80th anniversary of the company's founding, in the fiscal year ending March 31, 2021. We have also begun engaging in activities toward the more distant goal of becoming a 100-year company. We believe that, in these efforts aimed at long-term growth, it is essential that we enhance corporate governance with the goal of ensuring efficiency through management transparency, soundness and more rapid decision-making. The TOK Group has already implemented all of the principles of the Corporate Governance Code, and as of June 2016, independent officers represent 41.7% of our Board of Directors, an increase of 5.3 points

compared to three years ago. We have also established a regular meeting consisting solely of the independent officers, with the addition of our standing statutory auditor, and together they focus on their own efforts with regard to the Corporate Governance Code, as they see fit. At Board of Director's meetings in preparation for formulating the TOK Medium-Term Plan 2018, we had multi-faceted, in-depth discussions, thanks to which I myself was able to bring a deep sense of conviction and purpose to the decision to carry out a record level of capital investment. TOK will continue to work to strengthen its corporate governance structure, and strive to maximize corporate value.

We kindly request the ongoing support and understanding of all our stakeholders.

Message from the CFO

By continuing to seek the optimal balance between investment, cash reserves and shareholder returns, we will strengthen our foundation for long-term growth from a financial perspective.

Yoichi Shibamura

Executive Officer, Department Manager, Accounting Dept.



■ An intensifying development race will require more protracted investment, but we will pursue steady returns.

As the executive in charge of finance, I am focused on pursuing the optimal balance between investment, cash reserves and shareholder returns under the TOK Medium-Term Plan 2018, and on strengthening our foundation for long-term growth from a financial perspective.

Our understanding of the business environment for the time being is that the development race is intensifying in cutting-edge fields in semiconductors, and we are strongly aware of the fact that as the degree of difficulty rises, customer-side development cycles and the time needed to launch mass production are growing more protracted. This is why the profit plan under the TOK Medium-Term Plan 2018 is calculated with consideration for such a trend of protracted development cycles, centered on reaping returns from investments we have worked on in the past.

Specifically, in ArF excimer laser photoresists, we have assumed returns on products for which we have already obtained a Process of Record (POR) of major customers, and in KrF excimer laser photoresists, we have included increased demand for major customers' 3D-NAND product, shipping of which has already begun. We also expect to see growth in high-density integration materials, where demand is growing for use in next-generation smartphones.

At the same time, the ¥22.0 billion in depreciation and amortization included over the three years of the medium-term plan is the maximum amount we expect, and we do not foresee it increasing beyond that level. Our targets for the fiscal year ending March 31, 2019 of ¥120.0 billion in net sales and ¥15.0 billion in operating income were set after going through the above process, and we believe they carry sufficient certainty to be both achievable and to meet the expectations of our shareholders and investors.

■ Reasons for making a record level of upfront investments

Let me explain three reasons why, under the current medium-term plan, we plan to make a record ¥34.0 billion in upfront investments, while we are steadily progressing with returns (= profit growth) on existing investments.

First, under the strategy of building close relationships with customers which began with the previous medium-term plan, we are focused on developing and providing cutting-edge materials. As noted earlier, however, to succeed in a competition that is beginning to grow both more difficult and more protracted, it is essential that we invest in further developing that strategy by strengthening our overseas development infrastructure and investing in additional production capacity.

The next reason is the launch of new business. While we can't go into detail due to customer contracts, as

the president noted in his message, during the previous medium-term plan we were successful in cultivating the shoots of new business, and we will invest in moving toward mass production. While returns on that investment will basically come during the course of the next medium-term plan, we expect it to make a solid earnings contribution toward our goal of reaching operating income of more than ¥20.0 billion in the fiscal year ending March 31, 2021.

The last reason is reforms we are making in our approach to development. To win the status of a global industry standard, we must of course continue to develop high-performing products. Beyond that, the technical capability to stably mass produce defect-free products is also essential. To accomplish this, we need to work not only with our customers, but coordinate and strengthen collaboration with manufacturers of raw materials and other business partners, and as part of open innovation, strengthen cooperation and joint development efforts with outside research institutions and venture companies. We plan to ramp up investment to ensure solid progress in this area.

■ Continuing to ensure appropriate cash reserves

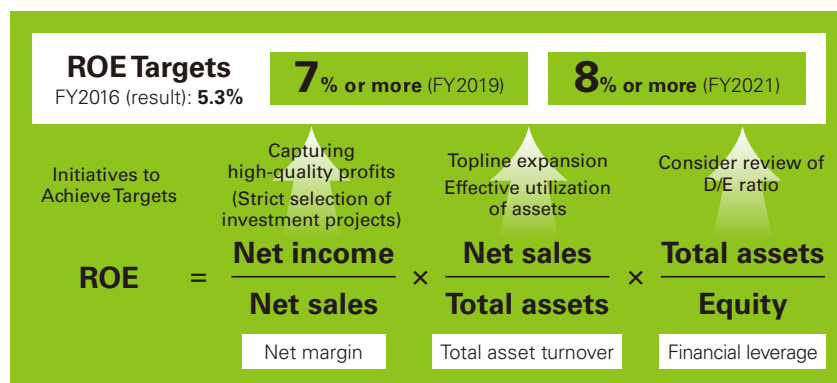
With an equity ratio of 85.1% and a debt-to-equity ratio of less than 0.01 as of March 31, 2016, the TOK Group is one of the most financially sound enterprises in the chemicals sector.

As we have communicated in the past, the main reason we have focused on maintaining a solid financial position is that we are an R&D-driven company whose primary markets are niche business fields shaped by extremely disruptive and rapid cycles of technological change. This means that our business model requires us to maintain our lead in global niche markets by continuously launching a steady string of newly developed products. In addition, competitors in our main business generate many times larger sales than us, and are able to develop cutting-edge domains in tandem with retaining their mass-produced commodity business models, such as bulk chemicals, as part of their existing business domains. To continue succeeding in this unique competitive environment, the TOK Group must anticipate technical innovations in making R&D investments, and invest swiftly and flexibly regardless of our asset size; it is thus imperative that we hold an appropriate amount of cash reserves. Given that R&D itself is the value our customers most seek, we will ensure we are prepared to maintain both offensive and defensive positions by continuing to hold appropriate cash reserves, even as development grows more protracted and the time lag through investment recovery tends to lengthen.

■ Emphasizing the numerator and total asset turnover ratio to improve ROE

The ROE target in the TOK Medium-Term Plan 2018 is based primarily on working to increase the numerator—in other words, capturing high-quality profits by maintaining and improving net margin—as well as giving sufficient consideration to other factors, particularly our total asset turnover ratio.

Specifically, we decide whether to move forward with large-scale investment projects after vigorous discussion at our Management Strategy Meeting, in which every relevant officer from the president down participates. During



those meetings, we discuss the future of market and technology trends, while using various indicators, including IRR and ROIC, to conduct a thorough review of each project from the perspective of potential return on investment, profitability and investment efficiency. We also consider the subject of D/E ratio as part of that reevaluation.

■ Enhance shareholder returns

As upfront investments increase during the term of the TOK Medium-Term Plan 2018, and the yen appreciation continues, we expect a slight slowing in the rise of ROE for the time being. That said, in the profit growth momentum, we will enhance shareholder returns. As mentioned in the president's message, we have raised our consolidated dividend payout ratio to over 40%, and if profit moves forward as planned, we expect an annual dividend for the fiscal year ending March 31, 2019 of more than ¥90 per share, amounting to 1.4 times that of the fiscal year ended March 31, 2016. This represents a dividend growth rate equivalent to that of the previous medium-term plan (1.45 times over three years), which itself represented a record level of profits. In discussions at Board of Directors meetings, an independent director suggested that, given our aggressive investment plans, a dividend payout ratio of over 40% might be somewhat too high, but because we expect the total dividend amount over three years to balance with our assumed cash flow, financially this does not present a problem.

With regard to share buybacks, we

will continue to consider a flexible approach to buybacks in part as a supplementary step in enhancing shareholder returns and improving ROE. In doing so, we will consider the balance between buybacks and other issues, including investment forecasts for the medium term and the level of cash reserves we wish to maintain, and will work to remain flexible in our judgment.

■ Intensifying measures against exchange rate risk

As of the fiscal year ended March 31, 2016, net sales overseas represented a record 77% of total net sales, and we expect that ratio to rise further going forward. As a result, the scale of business and assets at overseas subsidiaries is also expanding, and we will be deepening cash management, as currency hedges alone are increasingly insufficient against foreign currency-denominated trade notes and accounts receivable and payable.

Specifically, measures to reduce risk have already been placed on the agenda of the Board of Directors. These measures are based on the results of stress tests, including foreign currency risk, liquidity risk and stock price risk on a consolidated basis, which are based on our Financial Risk Management Rules. We will deepen global cash management, with an eye to correcting the balance of the cash position between our overseas sites, and in that process, will work to further minimize the risks arising from a strong yen.

Dialogue between the President and an Analyst about the TOK Medium-Term Plan 2018

We invited Hidemitsu Umebayashi, chemical sector analyst at Daiwa Securities Co., Ltd., to interview President & CEO Ikuo Akutsu about new TOK Medium-Term Plan 2018.



President & Chief Executive Officer
TOKYO OHKA KOGYO CO., LTD.

Ikuo
Akutsu

Investment Plan

Umebayashi Under your new TOK Medium-Term Plan 2018, you are targeting record profits for the fiscal year ending March 31, 2019, the final year of the plan. At the same time, in the fiscal year ending March 31, 2017, the first year of the plan, you expect profits to decline due to the impact of a strong yen, as well as expanded capital investment and investment in R&D. What was behind your decision to further strengthen capital investment and R&D at this particular time?



Akutsu While some of our investment under the TOK Medium-Term Plan 2018 targets the final year of the plan, ending March 2019, much of it looks further out, and the contribution of that investment to earnings during the plan period will be limited. In addition to expanding R&D and our strategy of building close relationships with our customers, which we began under the previous plan, we will also work to enhance open innovation through our domestic R&D facilities as a way of positioning R&D for the future. As we did last year, we will also continue our efforts to strengthen competitiveness by moving forward with the renewal of our evaluation equipment, which is crucial to R&D. As we have expanded our R&D infrastructure in Taiwan, we have also seen a growing need for circuit board cleaning solutions and other products outside of our photoresist line, and are responding by enhancing our production equipment.

Umebayashi So in addition to South Korea, you are also accelerating this customer-oriented development model in Taiwan. What about the U.S. and Europe?

Akutsu We are working to enhance our R&D infrastructure in the U.S. as well. While we have no immediate

investments planned for Europe, we are collaborating with a Belgian consortium to develop photoresists for EUV lithography.

Umebayashi How is your subsidiary in China, CHANG CHUN TOK (CCOK), structured?

Akutsu At CCOK, we produce high-purity chemicals such as developing solutions and thinners for semiconductor manufacturers. We are aware of the growing importance of the Chinese market, and we may increase production capacity to meet the needs of customers from South Korea, Taiwan and the U.S. who have already entered business in China. That would involve beefing up existing facilities, however, and at this point we do not expect to establish any new sites.

New Business Fields

Umebayashi You have established a variety of themes in new business fields, including nanoprint and high-functional films. Nanoprint technology uses photosensitive materials and thus fits comfortably with your general technical direction. High-functional films, however, require processing, which would seem to make them an outlier in terms of your business, and I get a sense that they may not work out well for you.

Akutsu In fact, we have been accumulating film technology for some time. Following the collapse of Lehman Brothers, we exited the business of dry film for printing, printed circuit boards, PDP and so forth, but we did retain a small manufacturing line. The high-functional film we have decided to launch will utilize that technology, so it is not a complete outlier for us. In fact, as a new business I think it is typical for us, in the sense that it involves a high added-value product in a niche field, and one that major companies are not dealing with.

Umebayashi As an analyst it can be difficult to put a figure to any forecast of the potential success or failure of a new business, but how are you feeling in terms of the response thus far, and how confident are you?



Hidemitsu Umebayashi

Senior Analyst, Chemicals
Corporate Research Division
Daiwa Securities Co., Ltd.

Akutsu In high-functional film, we have reached the point of putting mass production facilities in place, so I think we have a suitable level of response. Frequently with new chemical materials, we find that once you establish the technology for one use, it can be extended to other uses. By expanding those applications we hope to push sales above our initial estimates for the market.

Umebayashi Under your previous medium-term plan, new business did not really deliver results in terms of actual sales. What is different about the coming three years compared to the previous three years?

Akutsu In the previous three-year period, our numerical plan also incorporated factors such as the various seeds of new business we were sowing and our interactions with our customers. This time, the plan includes deals for specific customers with mass production facilities already in place, so really, the expectations are completely different.

Umebayashi If you really succeed in building new business to a scale of ¥5.0 billion over the next three years, the years beyond 2019 should be something to look forward to.

Flagship Product: ArF Excimer Laser Photoresists

Umebayashi In your mainstay ArF excimer laser photoresists, you are aiming for a 30% share of the global market. Given your customers' development stage, do you feel this is an achievable target?

Akutsu I think it is a target we *must* achieve. Development has already progressed for processes beyond 10nm, and we sense a solid response from some customers. At the same time, the fact that the timing of mass production continues to fluctuate is a risk factor. For various reasons, including customer intent, miniaturization—including commercialization of photoresists for EUV—is falling behind, and we believe there could be a two to three year delay in the generally accepted schedule.

Equipment Business

Umebayashi Given your results over the past three years, your target for the Equipment Business under the new medium-term plan seems aggressive. Your goal is for net sales of ¥10.0 billion, along with a substantial increase of about ¥2.0 billion in profit, significantly greater growth than in the Material Business. As an analyst, I feel there is some risk that you will miss these targets.

Akutsu Performance in the Equipment Business has been sluggish for the last several years, and investors have questioned the viability of the business to continue. Our primary proposition is to find a way out of the current situation, and under the current medium-term plan, that effort will focus on three drivers: TSV equipment, UV curing machines, and flexible display manufacturing equipment. We have also seen a good response to the potential for extending applications for TSV equipment to the fan-out market, and we expect to adopt it for use starting at the wafer level, then moving to the panel level by about 2020. Our Materials & Equipment (M&E) strategy also anticipates growth in TSV materials, including for fan-out applications, which is why we are targeting net sales of ¥10.0 billion for equipment and materials combined.



Vision for the Fiscal Year Ending March, 2021: ¥20.0 billion in Operating Income

Umebayashi In terms of your profit plan for the company as a whole, under the TOK Medium-Term Plan 2018, operating income will decrease significantly in the first year, growing by about ¥7.3 billion in the remaining two years, before reaching ¥15.0 billion in the fiscal year ending March, 2019. In addition, to achieve your vision for the fiscal year ending March 31, 2021 of ¥20.0 billion in operating income, you assume growth of about ¥5.0 billion over two years. Given the impression that you are moving ahead with large-scale investments targeting results for the fiscal year ending March 31, 2021, I can't help but feel that in terms of profit growth, your goals are less than challenging. What do you think?

Akutsu The ¥20.0 billion target for operating income in the fiscal year ending March 31, 2021, is a figure that was set back in 2010, as part of our vision for the Company 10 years hence. I think that may be why it has diverged somewhat from the numerical targets of the new medium-term plan, which reflects actual performance since then. In that sense, it may come across to analysts and investors as slightly conservative. Over the next three years, we hope to build a solid foundation for further growth.

Hidemitsu Umebayashi

Profile

Joined the Daiwa Institute of Research Ltd. in 1998, assuming his current post following a reorganization. Responsible for the Chemical Sector since 2011.

Review of Operations



TOK Advanced Materials Co., Ltd.

Material Business

Manufacturing and sales of electronic functional materials and high purity chemicals

Material Business Performance and Target

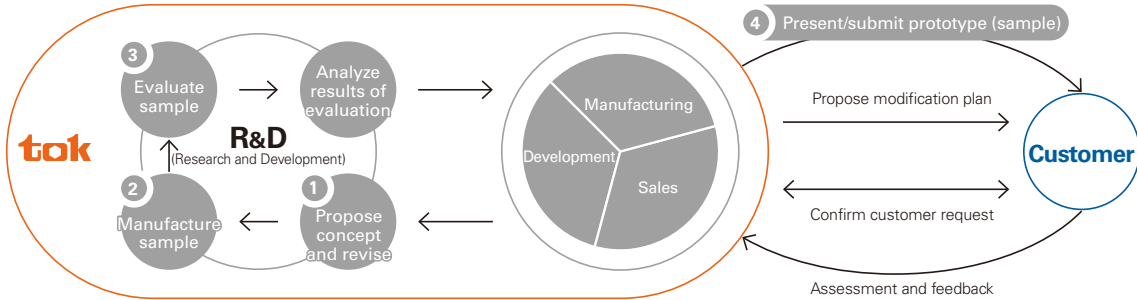
(Millions of yen)

	FY2012	FY2013	FY2014	FY2015	FY2016 (result)			FY2019 (target)		
					Change	%		Change*	CAGR*	
Net sales	66,645	67,697	72,866	84,611	87,280	+2,668	+3.2%	110,000	+22,719	+8.0%
Electronic functional materials	43,246	43,116	43,261	49,818	51,134	+1,315	+2.6%	68,000	+16,865	+10.0%
High purity chemicals	22,789	24,144	29,194	34,844	35,931	+1,086	+3.1%	37,000	+1,068	+1.0%
Other	609	435	410	(52)	214	+266	—	5,000	+4,785	2.9 times/year
Segment income	8,303	10,716	14,086	16,355	16,203	(152)	(0.9%)	17,000	+796	+1.6%
Segment income margin	12.5%	15.8%	19.3%	19.3%	18.6%			15.5%		
Segment assets	57,798	68,686	79,147	92,440	90,734					
Depreciation	3,526	3,221	2,241	3,894	5,220					

* Changes or CAGR in the numerical target for FY2019 are versus FY2016.



Customer-oriented business model



In the Material Business, we seek to accurately identify and fulfill increasingly sophisticated and diverse customer needs. To this end, we are focused on implementing a strategy of building close relationships with customers that is designed to deliver speedy results by harnessing our collective capabilities spanning development, manufacturing (technologies and production) and sales (marketing).

Market Conditions

Process diversification toward further advances in chip performance

The electronics industry, which is the primary customer for TOK, saw a marked slowdown from the fourth quarter of the year ended March 31, 2016 due to sluggish growth in the smartphone market. However, signs of a turnaround are already emerging with the growth of markets for smartphones in China and next-generation models, along with growing demand for high-performance servers for handling big data. In the semiconductor field, 3D-NAND is one of the major drivers of market development, reflecting the increased need for chips used in high-performance server and smartphone applications.

Based on the strategy of building close relationships with customers, we are responding to the indications of a gradual market turnaround by focusing efforts in the Material Business on expanding our market share in ArF and KrF excimer laser photoresists, which are key earnings drivers, while also expanding sales of high-density integration materials and high purity chemicals.

Besides the move to higher miniaturization in line with the traditional roadmap (based on Moore's Law), we are seeing process diversification aimed at building semiconductors with higher performance, including 3D-NAND and other packaging technologies such as MEMS and high-density integration. At TOK, we aim to maintain and reinforce our business portfolio so that we are strong across all sectors.

Growth Strategy

Reinforcing competitiveness in the emerging fan-out technology market

High-density integration materials are one of TOK's main earnings drivers at the moment. We are focused on growing sales of materials for Fan-out Wafer Level Packaging (FOWLP).

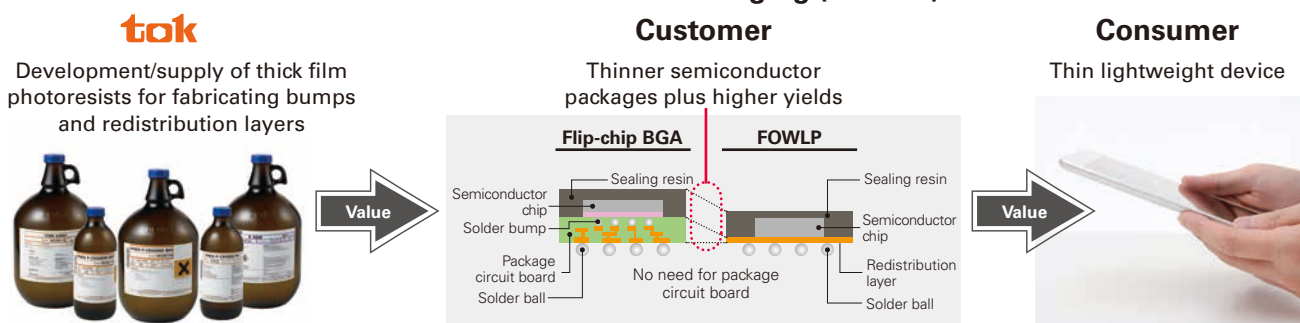
FOWLP is a technology that enables thinner semiconductor packages and end-products by making a redistribution layer (RDL) to link the semiconductor chip to the printed circuit board (PCB). This obviates the need for package circuit boards and saves space compared with conventional flip-chip packaging solutions with a ball grid array (BGA) (solder bump) connections.

TOK already supplies thick film photoresists for RDL fabrication to major customers that have started mass-producing processors for new high-value-added smartphone models using FOWLP technology. We also sell cover coating materials to manufacturers of dicers* for use in mass-production lines with this technology.

A technology for making thinner packages, FOWLP is also potentially a major turning point in semiconductor packaging technology. We aim to hone our competitive advantage within this expanding market by developing TOK's technical capabilities in this area.

* Machines that cut the silicon wafers

TOK value creation flow in Fan-out Wafer Level Packaging (FOWLP)



(Source: Nikkei Technology Online, February 19, 2016)

- Multiple earnings drivers (ArF and KrF excimer laser photoresists, high-density integration materials, high purity chemicals)
- Global structure of close relationships with customers (South Korea, Taiwan, North America, Japan)
- Ability to develop microprocessing technologies (photosensitive materials, films, coatings)
- High-purity chemicals technology/expertise, quality design capabilities

- The emergence of single-firm-based roadmaps has diversified miniaturization. It also creates rising demand for new packaging technology
- Technology prospects in the IoT field
- Growth of China's semiconductor market



- Fewer customers, with the same number of photoresist manufacturers
- Over-concentration of business domains in the electronics industry (lack of presence in growth sectors such as life sciences)
- Resistance to price hikes based on industry business practices

- Rising cost of development due to increasing technological difficulties
- Fewer customers due to industry consolidation
- Increased investment outlays for inspection and production equipment in connection with ultra-high purification
- Higher costs of next-generation exposure equipment

Common strategy based on value creation using three vectors

Our common strategy for strengthening the earnings drivers in the Material Business focuses on adding value via the three vectors of “advancing” (ultra-miniaturization and ultra-thick film for cutting-edge products), “honing” (increasing the grade of ultra-high purification of existing products) and “control” (integration of TOK’s global network).

In “advancing” and “honing,” we must rapidly establish better mass-production technologies for higher yields using an open innovation approach (→ See Special Feature on pages 44–47). In “control,” we are concentrating on “xECM” activities to reinforce cooperation and synergies among TOK’s sites around the world.

xECM activities for reinforcement of business links

“xECM” (Enhancement Chain Management) refers to efforts for horizontal expansion of business reinforcement by designating multiple “x” as themes.

For example, in Quality ECM (QECM), we share information across the entire supply chain, including raw materials suppliers, so all players thoroughly and mutually understand customer requirements and we can realize quality, cost, and production design demands quickly.

Under the TOK Medium-Term Plan 2018, we plan to expand the “x” themes sequentially from quality, production technology, and purchasing. This will help us to accelerate the reinforcement of business links across the TOK Group.

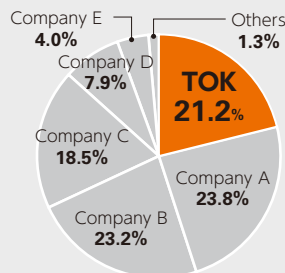
Production system geared to ensure the “highest quality”



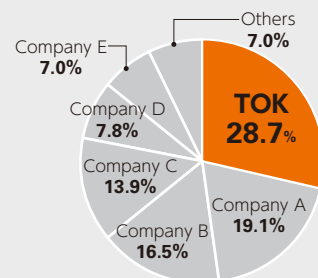
Earnings driver Worldwide Share of Immersion ArF Excimer Laser Photoresists and KrF Excimer Laser Photoresists

(2015 sales volume)

Immersion ArF excimer laser photoresists



KrF excimer laser photoresists



(Source: Overview of Photo-Functional Material and Product Market 2016/Fuji Keizai)

Toward a new roadmap for semiconductors

Existing roadmap (ITRS) ended in 2015

The International Technology Roadmap for Semiconductors (ITRS) compiled annually since 2001 with the cooperation of related parties in the semiconductor sector was updated for the final time in 2015.

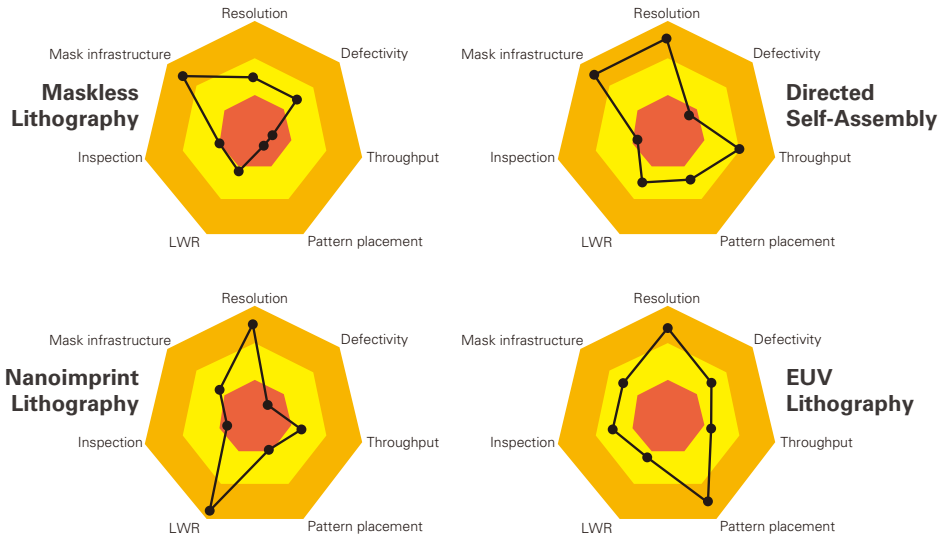
The ITRS identified the technological issues to be solved for miniaturization of semiconductors to continue evolving in line with Moore's Law, and provided various quantitative parameters projected up to 15 years ahead*. The ITRS has been a guide for researchers in the global semiconductor industry to follow.

In recent years, however, the physical limits of Moore's Law have become apparent. The ITRS 2.0 edition published in 2015 was the final update, reflecting the difficulty of any predictions from extrapolating into the future based on existing technology; the failure to predict emergence of non-miniaturization markets including 3D-NAND and other technologies; and the reduction in the significance of adhering to the roadmap amid intensifying competition among the major semiconductor manufacturers.

Radar charts comparing the alternatives to multiple patterning, as published in 2015 in ITRS 2.0

The charts indicate the relative strengths and weaknesses of each technology.

(Source: ITRS 2.0, 2015 Edition "More Moore," Figure MM15)



Moves to formulate new roadmap (IRDS)

The U.S.-based Institute of Electrical and Electronics Engineers (IEEE) has adopted the same approach as that used in compiling the ITRS for formulating the International Roadmap for Devices and Systems (IRDS). Based on the ITRS and taking it to a higher level, the IRDS will outline the vision for systems and devices over the next 15 years to help define the strategic direction for the semiconductor, communications, IoT, and

computer industry*. Details of IRDS activities, including overall frameworks, organizations and schedules, are not available as yet, but this initiative is expected to yield a comprehensive roadmap governing not only semiconductors, but devices, components, systems, architecture, and software as well*.

* Quoted from Mynavi News "End of ITRS—IEEE is formulating a new roadmap for semiconductors and computers" Takeshi Hattori

Equipment Business

Manufacturing, sales and maintenance of semiconductor manufacturing equipment and panel manufacturing equipment

Equipment Business Performance and Target

(Millions of yen)

	FY2012	FY2013	FY2014	FY2015	FY2016 (result)			FY2019 (target)		
					Change	%		Change*	CAGR*	
Net sales	13,500	5,302	2,484	3,581	2,748	(832)	(23.2%)	10,000	+7,310	+58.2%
Segment income (loss)	908	232	(889)	20	(423)	(443)	—	1,700	+2,123	—
Segment income margin	6.7%	4.4%	—	0.6%	—	—	—	17.0%	—	—
Segment assets	6,954	4,553	4,168	3,694	3,738					
Depreciation	203	254	204	167	169					

Note: Targeted net sales for FY2019 are the figure after elimination of inter-segment sales.

* Changes in net sales for FY2019 target figures are versus FY2016 (after elimination).

Materials & Equipment (M&E) strategy



We are driving forward our Materials & Equipment (M&E) strategy, which is designed to generate synergies by fostering close coordination between the Material Business and the Equipment Business in advanced technologies in the semiconductor and panel-related fields.

Market Conditions

3D packaging market ramps up

As the miniaturization of semiconductors under the traditional ITRS roadmap nears its physical limits, the 3D packaging market is beginning to expand. 3D-NAND technology, which increases the density per chip by vertically layering semiconductor chips, has already entered the growth phase, and the market for the through-silicon-via (TSV) process is gradually growing as well. TSV is a multilayering technology that layers thinned semiconductor wafers in 3D, using a through-silicon process to pass between the layers. It provides a number of benefits, including more compact, higher-density semiconductors with reduced power consumption, as well as higher signal transmission and processing speeds, and is one of the most highly anticipated areas of multilayering technology.

In addition to their applications in image sensors, cloud servers and high-end computer graphics, semiconductors using 3D packaging through TSV are also expected to find use in smartphones and tablet devices, where demands for reduction in size and weight are stringent.

Cost reduction measures implemented have started to chip away at the high cost structure that had impeded sales in the past. Therefore, TOK's strategy of building close relationships with customers will be fully brought to bear to expand sales in this field.

Growth Strategy

Focusing resources on three equipment fields

Because TOK fixed on the 3D packaging and display manufacturing fields from an early stage, and focused on R&D in those areas, we have accumulated a large number of technology advantages. To fully exploit those advantages, the TOK Medium-Term Plan 2018 calls for resources to be concentrated in three fields: TSV equipment, UV* curing machines, and next-generation flexible display manufacturing equipment.

In TSV equipment, we will focus on expanding sales of our Zero Newton wafer handling system, which offers significant streamlining of the carrier circuit board bonding/debonding process and high cost performance, to semiconductor manufacturers in Asia, Japan and the U.S., along with related process materials.

*Ultra Violet

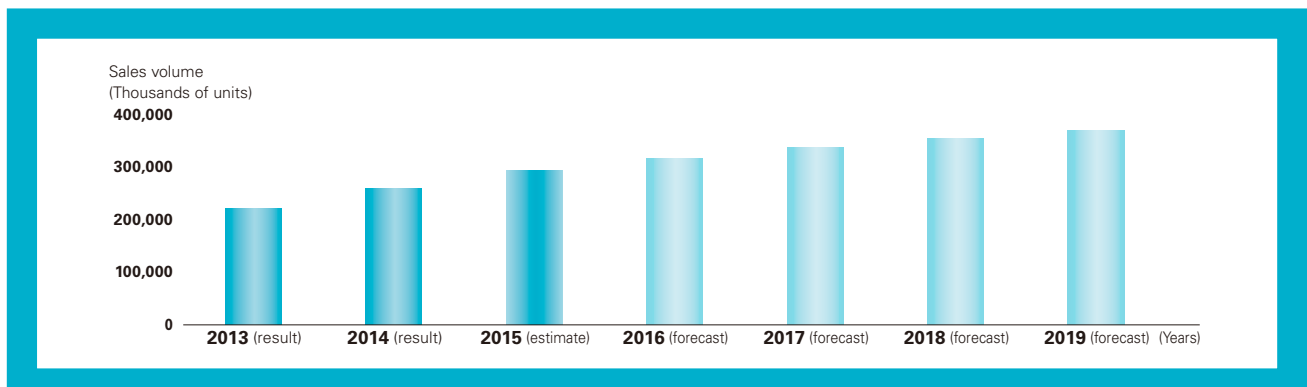


Zero Newton bonding machines
TWM series



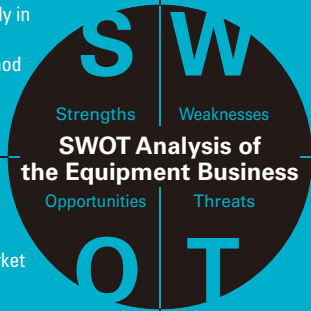
Zero Newton debonding machines
TWR series

Outlook for the TSV market (Number of packages)



(Source: Status and Outlook for Semiconductor Materials Market 2015/Fuji Keizai)

- Adoption of TSV equipment by various companies, primarily in the memory market
 - Lower break-even point using the fabless production method
 - Technology accumulation and technological edge
 - Knowledge of materials developed in the Material Business
-
- Growth in the 3D packaging market as miniaturization approaches physical limits
 - Expansion of next-generation display market
 - Equal opportunities for products to be adopted in a new market



- Still in the development phase, so business scale and profit contribution remain small (insufficient cash cycle)
 - High cost structure because mass production has yet to start
 - Delays in the full-scale emergence of the TSV market due to high process costs
-
- Full-scale entry by major companies as competitors catch up
 - Introduction of low-cost, high integration processes aside from 3D packaging

UV curing machines enable forming high-resolution TFT (Thin-Film Transistor) arrays without heat. Accordingly, there are growing needs for UV curing machines in the production of high-resolution displays for smartphones and tablet devices. Sales are growing mainly for the TUV ssi series of UV curing machines and other products that combine improved heat resistance and dry etch resistance while maintaining detachability.

In next-generation flexible display manufacturing equipment, R&D has intensified in cutting-edge technologies such as watch-like “wearable displays” and “flexible displays” just a few microns thick for attaching to curved surfaces, and TOK is focusing on R&D in new materials and manufacturing processes for these applications.

Three approaches for accelerating growth

Under the TOK Medium-Term Plan 2018, we are working to maximize the effects of selection and concentration in the above fields by focusing on three approaches in each of those fields.

Specifically, realizing that business opportunities are expanding with the end of the traditional roadmap and the diversification of processes for higher performance of devices, we are focusing on (1) development and sales of new equipment. Under our unique M&E strategy, we will tie this into (2) sales of components and related materials, and continuing our strategy of close relationships with customers, will also focus on (3) after-sales services, including repairs and remodelings.



UV curing machines
TUV ssi series



Non-spin coaters
TN series (Spinless)

TOK growth acceleration flow through three approaches in the Equipment Business segment



Continually evolving TSV technology

Semiconductor devices using TSV technology, including sensors, high-end GPUs and CPUs, and servers, are now under mass-production. We have got orders for TSV equipment for 2.5D and sensors.

In the accelerating trend toward IoT, faster data processing is indispensable. It requires higher transmission speed for networks that govern the Internet in addition to improving the performance of servers, PCs and smartphones. Accordingly, demand for highly integrated and miniaturized semiconductors using TSV technology is increasing. TOK is working to expand shares in various applications using TSV.

Wide I/O Memory for use in mobile devices

Wide I/O Memory is a semiconductor device that increases signal transmission bus width and provides the acceleration and low power consumption performance required by smartphones and tablet devices, as they increasingly handle video and graphics and offer higher definition screen resolution. As shown on the upper right, this type of memory is characterized by the use of TSV to pierce multi-layering memories and processors, and is expected to find significant demand for use in smartphones, tablets and other mobile devices. Semiconductor manufacturers across the globe are working to develop this technology.

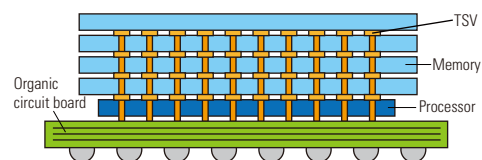
(Source: Technical Reports (BUSICOM POST/ Gicho Business Communications, Inc.)

High Bandwidth Memory (HBM) for use in cloud servers

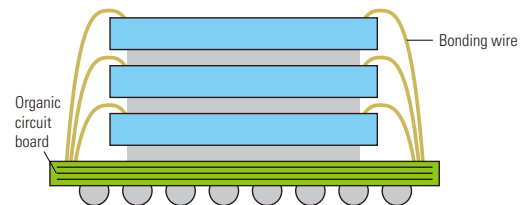
While Wide I/O Memory focuses on low power consumption for use in mobile devices and a layered structure that is literally "3D," High Bandwidth Memory (HBM), another type that uses TSV technology, is compatible with a wide memory range for high-performance computers, and is characterized by layering that is closer to 2.5D than 3D.

This type of memory has now evolved into HBM2, which, compared to HBM, offers greater speed and lower power consumption, and also features an increased number of chip layers and the ability to easily expand capacity. Compared to HBM, with applications for computer graphics and cloud servers, HBM2, which offers advances in speed and lower power consumption, is also being considered for future use in mobile devices, similar to Wide I/O Memory.

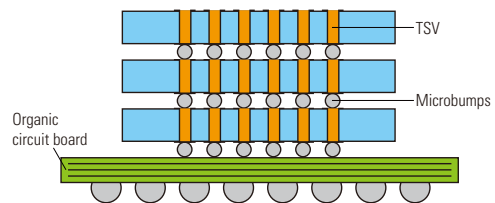
Wide I/O structure using TSV



Structure of a layered memory chip using the traditional method



Structure of HBMs using TSV



Evolution to
HBM2

World-leading technological capabilities customers to sustainably enhance corp

The Special Feature is written from the viewpoints of Sales/Marketing, R&D, New Business Development, Environmental Management, and Human Resource Development in TOK's value creation process under TOK Medium-Term Plan 2018.

Evolving Strengths

Main Invested Capital

Financial Capital

Manufacturing Capital

Intellectual Capital

Human Capital

Social and Relationship Capital

Natural Capital

Solid Financial Position

A financial position where large-scale investment can be rapidly implemented in the ever-changing semiconductor and electronics industries

Microprocessing Technology

The world-leading microprocessing technology, indispensable for evolving semiconductor devices

High Purity Processing Technologies

The world's highest purity chemical products holding the key to mass production of cutting-edge devices

Strategy of Building Close Relationships with Customers

We work together to create world-changing values through strong win-win relationships

Sales/ Marketing

→P42



R&D

→P44



es and close relationships with orate value

Unique TOK Value Creation



Sales/Marketing

Evolution of strategy of building close relationships with customers

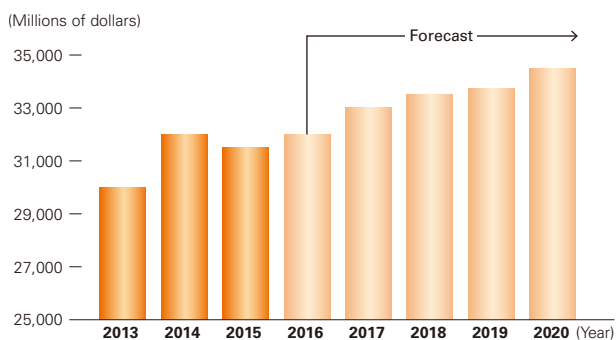
Keiichi Yamada

Director, Officer, Department Manager, Marketing Dept.



Creating value through KrF excimer laser photoresists

NAND market scale



Source: The Nikkan Kogyo Shimbum July 15, 2016 based on data from IHS Technology

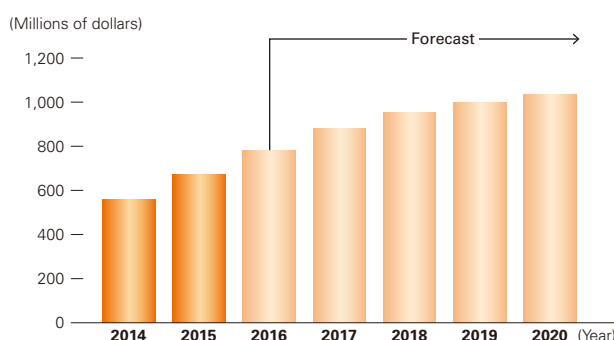
In the fiscal year ending March 2017, the first year of the TOK Medium-Term Plan 2018, there are growing signs that the 3D-NAND market is set to expand faster than previously anticipated. 3D-NAND is seeing growing demand for use in high-performance servers with Solid State Drives (SSDs). Going forward, 3D-NAND production is expected to expand for use in smartphones for China and other emerging markets.

A particular noteworthy area is all-flash storage using only SSDs. With better reliability in operational stability, at least 5 to 10 times* faster processing, power savings, and a slimmer profile than conventional Hard Disk Drive (HDD) storage, all-flash storage is creating new added value in terms of enhanced business efficiency and cost savings in corporate applications. As a company with the top global share in KrF excimer laser photoresists, we will keep advancing our strategy of building close relationships with customers and helping to create such value by supplying photoresists for 3D-NAND and peripheral materials.

*General estimate assuming models differ

Expanding the ArF excimer laser photoresist market

ArF excimer laser photoresists market* scale



(Source: Overview of Photo-Functional Material and Product Market 2016/Fuji Keizai)
*The sum total of ArF excimer laser photoresists and immersion ArF excimer laser photoresists

Development of 7nm, 5nm, and other single-digit node process technology using ArF excimer laser photoresists is now underway. This is because demand for single-digit node semiconductor process technology is growing, chiefly for high value-added smartphones, whereas the practical application of extreme ultraviolet (EUV) considered the most promising technology is taking longer than expected due partially to high costs and technological difficulty. As a result, the ArF excimer laser photoresist market continues to expand. We are determined to achieve a global share (more than 30%), which is one of the targets under the TOK Medium-Term Plan 2018. We are also set on realizing the level of market dominance we have with KrF excimer laser photoresists in ArF excimer laser photoresists. Accordingly, we will keep focusing on our strategy of building close relationships with customers.

Focusing on expanding the share of the ArF excimer laser photoresist market



Competition without a roadmap to escalate

Major semiconductor manufacturers are concentrating on development at the cutting-edge miniaturization level of 10nm and smaller. The level of technical difficulty therein is growing quadratically and development costs are rising in a similar fashion. And even when development itself succeeds, tough mass-production technology obstacles are hindering progress towards a real changeover to the next generation. Updates to the International Technology Roadmap for Semiconductors (ITRS), which has served as a guideline for miniaturization competition, have also ended with 5nm as the final generation. While the search for the next roadmap has begun, semiconductor manufacturers are accelerating development based on their respective visions, and competition without a roadmap is likely to escalate for the foreseeable future. (→ See [INSIGHT](#) on page 35)

Uncovering business seeds ahead of customers

As the history of the electronics industry shows, there is always a period of turmoil before technological breakthroughs give rise to new industry standards. Especially since it is now such a period, we will evolve our strategy to build close relationships with customers to pave a solid path for growth via the next technological innovation.

As the first step therein, we will work harder to uncover business seeds ahead of customers. For instance, we grew sales of high purity chemicals by about 1.5 times over the three years of our previous medium-term plan. The spark for that growth did not originate in customer requirements. Rather, it stemmed from an in-house project aiming to make products defect-free, which brought attention to the added value created by increasing the purity of products. We then tied that to customer proposals. In a business environment lacking a roadmap, it will also become increasingly important to uncover business seeds from information and insights gained by means other than contact with customers. To that end, we set out in the TOK Medium-Term Plan 2018 to build a value creation chain seamlessly linking parties such as business partners, various research institutions, and venture companies and evolve our strategy of building close relationships with customers.

Domains peripheral to miniaturization are key

Another key for evolving our strategy of building close relationships with customers is domains peripheral to miniaturization. High-density integration materials (bump photoresists for thick-film forming) developed for semiconductor post-processes are used in areas peripheral to miniaturization. We are now seeing strong earnings growth for such materials led by next-generation smartphone applications. By further bolstering our strengths in such areas peripheral to miniaturization, we will build a business portfolio that can seize earnings opportunities even in business climates where there is poor visibility on market trends.



Bumps formed on an IC chip (solder balls)
*IC chip photo is an image.

Global network evolution

A third key for advancing our strategy of building close relationships with customers is working to evolve our global networks. In South Korea where we established TOK Advanced Materials Co., Ltd. (TOKAM) in 2012 and in Taiwan where we established the Tongluo Plant for TOK TAIWAN CO., LTD. (TTW) in 2014, our move to localize development is already starting to contribute to performance. In other regions as well, we will work faster to reinforce local functions. In the United States, we shored up our development functions focused on high purity chemicals in June 2016. Additionally, we are enhancing our sales force in China, where significant growth is expected in the semiconductor industry.

We are also monitoring Europe as one key area for the future. While the region is small in terms of the production and consumption markets, it often leads in cutting-edge fields such as micro electro mechanical systems (MEMS) and setting the direction for next-generation technologies. Therefore, we are using the information gained at Tokyo Ohka Kogyo Europe B.V. (the Netherlands) in development in Asia and the United States to bring ties between regions into full play. By picking up the pace of these initiatives, we will pool knowledge within the Group to deliver new value to customers globalizing their supply chains. (→ See [Global Network](#) on page 80)



A base for building close relationships with customers in Taiwan (TOK TAIWAN CO., LTD. Tongluo Plant)

Research and Development

Upgrading development capabilities to next stage led by customer-oriented strategy

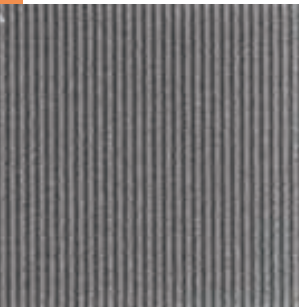
Harutoshi Sato

Director, Officer, Department Manager, Research and Development Dept.



Feasibility of EUV processing increases

Improvements in performance of exposure system have reached the point where we expect practical application of extreme ultraviolet lithography (EUV), regarded as the most promising microprocessing technology for single-digit node semiconductors, in 7nm node mass-production processes from 2018. We are currently advancing EUV technical development by actively utilizing overseas bases, both through increased evaluation frequency at customers and our involvement in the IMEC research consortium based in Europe. In addition, since we are approaching the limits of performance with chemically amplified photoresists (5nm to 3nm nodes), we must develop different kind of base materials for further miniaturization (3nm or less). To that end, we have taken an equity stake in Inpria Corporation, an R&D-oriented manufacturer of EUV photoresists. We are looking at scaling up production of Inpria's photoresists and supplying related materials so that we can make EUV photoresist production a commercial reality.



Circuit pattern formed by a metal-oxide EUV resist (Line width: 13 nm) (Photo: Inpria Corporation)

Leverage KrF excimer laser photoresists for 3D-NAND as barriers to market entry

Demand for memory chips will continue to grow in future due to the increasing use of Big Data as information-communication technology continues to evolve. Etching precision is critical for three-dimensional processing in the recently commenced 3D-NAND flash memory mass-production, and we are working closely with customers to develop optimized shaping of the flash memory. As rise in memory stack depth involves more technical difficulty, we are repeatedly conducting trial-and-error testing and work closely with customers to get all the details right. For this reason, development of KrF excimer laser photoresists for 3D-NAND tends to be a joint development with customers tailored to meet their needs. It raises the barriers to entry considerably for any competitors at the technical evaluation stage.



KrF excimer laser photoresists



Value:

We supply photoresists by working closely with customers on 3D-NAND stacking optimization

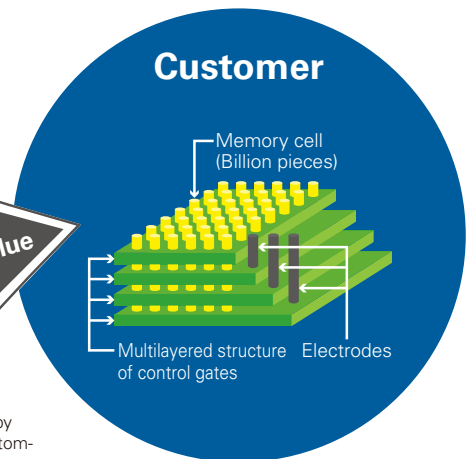


Diagram of basic 3D-NAND architecture

International Technology Roadmap for Semiconductors (ITRS)

Next Generation Technology	First Possible Use in Mfg.	Feature Type	Device Type	Key Challenges	Required Date for Decision Making
Multiple Patterning Extension to >4X patterning	2020 to 2023	10nm or less hp metal for logic MPUs 10nm hp for LGAA structures	"5nm" node logic	Extension to random logic/Printing and overlay of cut levels/Design to cost tradeoff	2018
EUV	2018	22 to 24nm hp CH/Cut Levels 18nm hp LS	"7nm" node logic 18nm DRAM	Availability & Throughput/Mask Defects/Resist sensitivity and roughness/High NA field size	2016
Nanoimprint	2017	14nm hp LS 20nm hp bit lines	2D Flash Memory 3D Flash Memory	Defectivity/Overlay/Master Template writing and inspection <20nm/Template replication <20nm	2016
DSA (for pitch multiplication)	2018	Contact holes/cut levels	1x DRAM "7nm" node logic	Pattern Placement/Defectivity and defect inspection/Design/3D Metrology	2016
Maskless Lithography (ML)	2021	Cut levels—possibly 20nm on 40nm pitch (estimated)	"5nm" node logic (estimated)	Concept demonstration/Functioning tool	2019

(Source: ITRS2.0 2015 EDITION "LITHOGRAPHY" Table 1: Difficult Challenges)

Packaging Photoresist

The significant growth we are achieving in the packaging photoresist market is due to taking a wider view and targeting the market for high-resolution positive photoresists for next-generation applications, instead of the existing negative photoresists market. Rather than developing an alternative product to cater to the many requirements of customers, with positive resists we have targeted next-generation processes from the earliest stage of development. Unlike pre-processes, a high-performance resist has broad applicability within the post-processes because we are still in the relatively early days of the development of the semiconductor packaging technology. These processes will undergo significant technical development, and we are focusing our efforts on highly localized capabilities so that we can meet new requirements by each customer or each process.

Further differentiation through "in-line support"

Unlike the photoresists used in pre-processes, packaging photoresists must satisfy a different range of requirements, such as form and resistance to plating solutions. We also focus on providing customers with tailored "in-line support" to help solve the many issues that arise during a process launch. The experience and skills that TOK can offer in this phase alongside our in-house inspection equipment will help to differentiate us as the market expands, which we expect will lead to fiercer competition. Currently we are growing our sales of photoresists, and we think the potential market is more than double once insulation films, protection films and other related materials are taken into account. We are working to expand TOK's product line-up so that we can grow this into an even larger business.

Realizing open innovation

Under the TOK Medium-Term Plan 2018, we will execute an open innovation model. Building a development framework to cater to the demands of future R&D, we plan to engage positively with outside technical needs and seeds, ideas and concepts. Collaborating with universities on basic research, we are participating in consortiums as well to capture future needs and gain access to inspection facilities. The advantage of the consortium approach is that even in the fields where TOK has little presence we can call attention to our technical capabilities that can lead to sample requests from companies with whom we have not had any prior contact, thus we can acquire new customers. We make maximum use of these merits to begin a new challenge.

Taking development capabilities to the next stage by localizing R&D and upgrading core technologies

Under and in the lead-up to the previous medium-term plan, we saw the role of Japan as the core region for development, with our overseas bases as sites where we hone the value of materials developed in Japan before quickly supplying to local customers. However, we have recognized the major contribution from our recent move to localize R&D in South Korea and Taiwan. Under the TOK Medium-Term Plan 2018, we will focus on expanding each of our overseas operations as core development sites.

Looking ahead, we will supply high-value-added products for niche fields based on TOK's core technologies in microprocessing and high-purity processing. We will also develop new sources of competitiveness by further honing core technologies in areas such as organic synthesis and polymers.

Always mindful of the value we can deliver to customers, we aim to upgrade our development capabilities to the next stage based on these various initiatives.

New Business Development

Targeting “game-changing” innovation in materials

Hiroji Komano

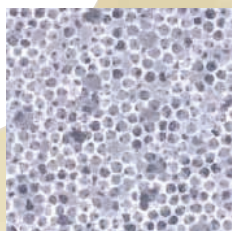
Director, Officer, Department Manager, New Business Development Dept.



Sharing a slogan with the customer

When aiming to build a new business based on first-in-the-world products, one of the critical points is to come up with a slogan that is shared with the customer. Being able to do that is one of our foremost strategies.

TOK has acquired brand power from our many years of experience in semiconductor-related materials, but in any new business we have to build trust with customers first. In our new business development, the exit strategy means the partnership strategy. So we have found that in new business development, the absolute prerequisite for success is to have a relationship with the customer that is built on trust, and a shared slogan expresses that. It is vital that we establish the TOK brand in new business areas and gain customer trust to ensure our consistent selection as business partner.



Closeup picture of the film surface

High-functional films (porous polyimide films):

Exhibiting high resistance to heat and chemicals as well as an ultra-low dielectric constant, these films can be used as safe and highly effective insulators. We are looking at developing them as substrates and insulating films.

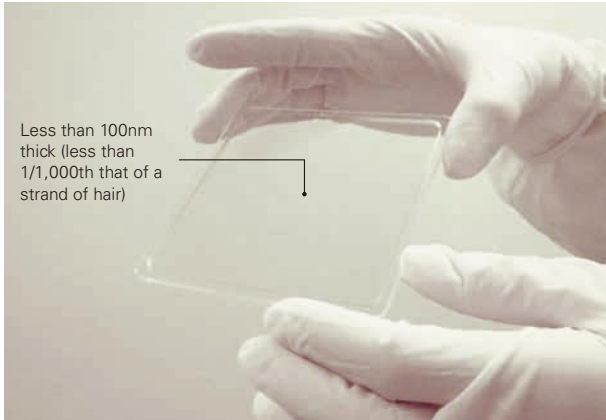
Game-changing materials

Porous polyimide high-functional films, in which we have now commenced mass production, are an example of a new product where we were able to share a slogan with the customer and establish the TOK brand successfully. We developed a production method that is completely different to that used with conventional porous films. It gives the film a unique pore structure and “super-clean” film characteristics, leading to functions never seen before that are set to overturn the existing market for films used in electronic substrates. We are confident that this product will be a game-changing material.

There has not been any killer application in the field of materials for nanoimprint lithography for a long time, but we are now ready to offer new value to this new market with a technical process using materials to enable control on a nanometer scale. In addition, we are creating products for life science applications, based on the slogan “Introducing semiconductor specs to biotech.” We aim to create new markets in life science by promoting our high-value-added TOK products based on expertise and technical specifications derived from the world of semiconductors.

More new products through open innovation

Elsewhere, we are also pursuing R&D based on a number of themes, including electromagnetic wave-absorbing materials, high-performance nano-films for gas separation, and technologies for adding various functional groups to existing molecules. With these new materials, we also try to create a development slogan to share with the customer. Through our Corporate Venturing Div. (established in 2015), which is leading our open



Nano-films, the thinnest films imaginable:

High-functional materials of organic, inorganic and composite can be used to create the thinnest films imaginable, with potential applications in gas separation, air filters, and other areas

innovation drive, we have invested in Inpria Corporation, a leading maker and developer of EUV photoresists. We expect adoption of EUV for the next 7 to 5 nm generation of semiconductor miniaturization. TOK has also taken an equity stake in a manufacturer of resins, and we are looking to develop multiple ventures with technical and financial assistance, notably in the manufacture of quantum dots for next-generation displays.

Lack of roadmap creates business opportunities

The International Technology Roadmap for Semiconductors (ITRS) has finished at 5nm, leaving semiconductor manufacturers to plot the future of the technology without any official guide. The lifeblood of the semiconductor industry has always been the quest for higher performance at lower cost, and this will not change even if we cannot move to larger silicon wafers. Fundamentally, making semiconductor chips smaller via microprocessing technology is the only realistic option for reducing costs. (→ See INSIGHT on page 35)

Semiconductors' higher-performance is partially achieved through post-process technological innovations such as 3D and TSV structures, currently under mass-production. However, we conclude from our customers' demand that further miniaturization of IC chips is necessary to reduce costs. New processes and materials need to be developed to realize necessary improvements in yields. In turn, this will generate a range of new business opportunities for TOK based on our core technical expertise in photoresists and other semiconductor-related materials.

Creating a world nobody has ever seen

Microprocessing below 10nm has created issues in semiconductor production processes that were not anticipated. For instance, the formation method of the insulation films is shifting from wet coating to a vacuum process. Less than 10nm, however, the small target dimension makes processes under vacuum impracticable, and wet coating is still being applied in this sector. Therefore, there is a need for next-generation coating technologies that can achieve single nanometer control, and this provides a business opportunity. Another challenge in this area is how to control the product quality to keep contamination due to metallic impurities down to the level of parts-per-quadrillion (ppq: 1 ppq is one part per thousand trillion).

Finding solutions for problems in areas nobody has ever seen is not something we can hope to do on our own. Our strategy must be based on a team that includes manufacturers of materials, equipment, and semiconductors to tackle these issues collectively. In a world with no roadmap, our aim is to build up the necessary technical expertise in new areas so TOK can be selected as a valuable partner in these teams of solution providers.

Teamwork to overcome technical hurdles

Looking ahead, semiconductor usage is set to rise dramatically not only in high-performance chips, but also in many IoT applications. We see the semiconductor market continuing to expand steadily, and we are confident our core expertise in microprocessing, high-purity chemicals and process solutions will still be required across a wide range of industries. Manufacturing is in the DNA of TOK, which has always sought to create first-in-the-world products to dominate market niches based on an internal culture of vigorous debate irrespective of role or years of service. We have inherited a heritage of working together, doing something firstly to try to change the world, and I think this is one of the major strengths of R&D at TOK.

Maximizing these strengths and building strong partnerships with our customers, business partners, and public institutions are the keys to success in new business development. TOK will continue to thrive commercially through such integrated capabilities.

Environmental Management

Maximizing customer value and environmental value by Best Known Method combination



Nobuo Tokutake

Director, Officer, Department Manager, Manufacturing Dept.

Demand for “high-purity” gathering pace

In the cutting-edge semiconductor domains, demand for the “high purity processing” that has always been a core technology of TOK is increasing at an accelerated pace. It becomes a major factor affecting the competitiveness of photoresists and related chemicals such as developing solution, thinner and stripping solution. We are increasing our share of the volume zone of the market in ArF/KrF excimer laser photoresists and high-purity chemicals for use in 2Xnm (20nm level) nodes. This is a result of our focus during the previous medium-term plan on clear, identifiable reductions in impurities in all TOK products to ensure fewer wafer defects as part of our overall quality improvement project.

As a result, levels of metallic impurities in our cutting-edge products are less than 1ppb*1 for photoresists and less than 10ppt*2 for thinner and developing solution. The value we add to these products through higher purity has contributed to our recent financial results and will be a critical factor in whether we succeed in the market. The degree of technical difficulty is rising exponentially for 1Xnm (10nm level) node and single-digit (7nm and 5nm) node, where the competition to develop products is also intensifying. Even lower defect rates and more stringent management of purity levels are required. Under the TOK Medium-Term Plan 2018, we are focused on realizing continuous technical

improvements to meet these needs.

*1 1ppb = 1 part per billion

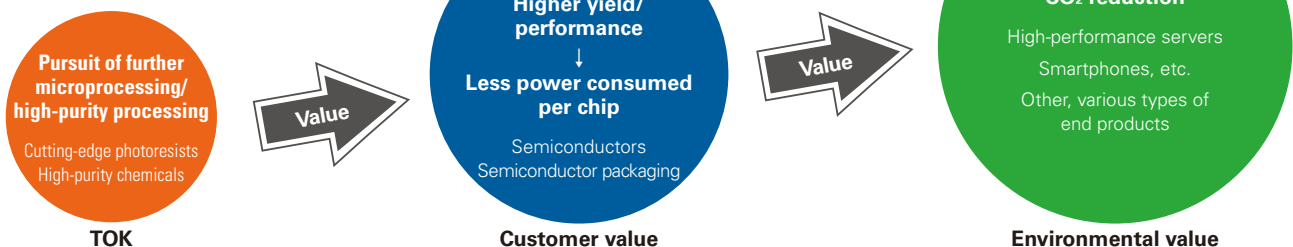
*2 1ppt = 1 part per trillion

Best Known Method (BKM) evolution as part of “growth-oriented” environmental management

Our technical innovation aimed at higher quality translates to higher yields and performance gains for our customers, notably for semiconductor manufacturers. Ultimately this creates environmental value in the form of improved energy-saving capability of high-performance servers and other electronic devices. We call this approach “growth-oriented” environmental management. Our aim is to maximize the value we create for customers and the environment by evolving our world-leading microprocessing and high-purity processing technologies.

Since our customers have already started manufacturing semiconductors using mid-10nm (around 15nm) processes, under the “TOK Medium-Term Plan 2018,” we are looking beyond to develop photoresists’ mass-production technology and high-purity chemicals for 10nm to 7nm nodes, while also focusing on the development of the basic technologies for the next generations of production at 5nm to 3nm. As I stated earlier, the exponentially rising level of technical difficulty will demand continuous innovation. However, we do not think that such innovation requires particular genius or flashes of inspiration. Our experience in most cases is one of

“Growth-Oriented” value creation process of environmental management

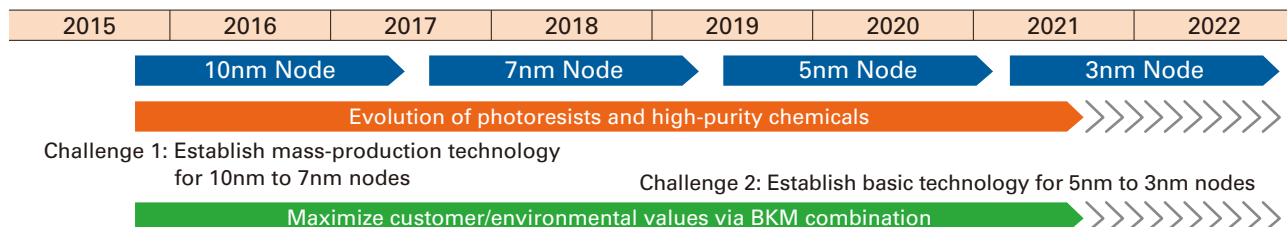


new technologies being created from the simple combination or application of existing technologies from varied fields. We will further evolve “growth-oriented” environmental management by reinforcing collaboration with all

the business partners in our supply chain to create and apply a new BKM, in addition to combining the most suitable technologies we have cultivated in the 75 years of TOK’s history of pursuing dominance in niche sectors.

Challenges in “TOK Medium-Term Plan 2018”

(Year)



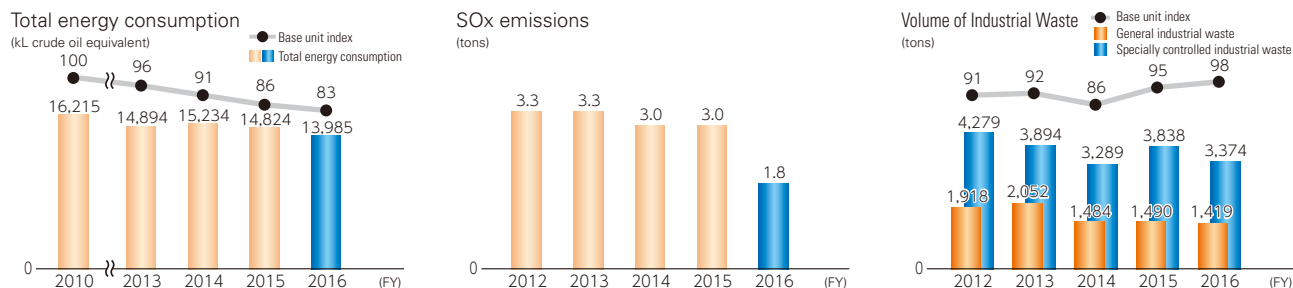
Target steady progress and evolution in the “defensive” approach to environmental management

At TOK, we view our sustainability initiatives to take the environment into consideration in our development and manufacturing processes for advanced photoresists and high-purity chemicals as an important part of risk management. We call this our “defensive” environmental management approach. In practical terms, we put Responsible Care

at the heart of our activities in procurement, manufacturing, transportation, and throughout the value chain. Using integrated management, we are working to achieve steady reductions over time in energy consumption, industrial waste emissions, SOx emissions, and other indicators. In particular, we have set 10-year reduction targets for energy consumption. In the period to March 2020, we aim to reduce our energy intensity* by 10% compared with FY 2010 levels (or by 1% each year).

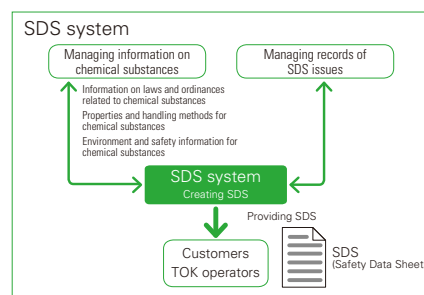
* Crude oil equivalent as a base unit

Progress in “defensive” approach to environmental management



To evolve our “defensive” approach to environmental management, we provide the Safety Data Sheet (SDS) system of information on environmental and safety aspects of TOK products, collecting specialized information on chemical substances and managing it for accurate and prompt provision to customers and operators. The SDS that we are currently issuing contains information about safety measures such as chemical characteristics, hazards, dangers, environmental impact, and stability, along with reactivity and disposal methods of products based on a real-time investigation of laws and regulations inside and outside Japan. To comply with GHS*, a world-wide standard, we provide SDS and labels for all of our products for the domestic market. When it comes to our exported products, we are also sequentially moving ahead with providing SDS and labels that correspond to the respective languages of

our export counterpart countries, as well as suited to the timeframe for the entering into force of GHS in our export counterpart countries.



* GHS: Abbreviation for Globally Harmonized System of Classifying and Labeling of Chemicals. This is an initiative that categorizes chemicals by hazardousness according to certain standards and displays this in an easy to understand manner through the use of pictorial indications and other similar means. The results of this are reflected on the label and MSDS, and are put to good use for the prevention of disasters, and the protection of human health and the environment.

Human Resource Development

Link “diversity and inclusion”
directly to competitive
advantage

Kunio Mizuki

Director, Officer, Department Manager, General Affairs Dept.

Strengthen human resource development as
a foundation for value creation

A feature of the TOK's business model with its strategy of building close relationships with customers overseas is that the ratio of overseas sales should continue to rise going forward. Carrying on from the previous medium-term plan, we have retained “develop global personnel” as a company-wide strategy under “TOK Medium-Term Plan 2018.” Personnel development from the perspective of the entire TOK Group will maximize the value we deliver and lead to the recruitment and promotion of diverse personnel appropriate for overseas business.

(→ See Overseas Sales Ratio on page 68)

Level-based training program results
and challenges

TOK's overseas business involves rapid and accurate response to local customers' sophisticated and diverse technological demands, as well as requiring the ability to create our demand ourselves. Level-based training was upgraded in the previous medium-term plan to strengthen these capabilities by focusing on improving communication skills and training logical thinking ability to identify the essence of problems. After approximately three years of this initiative, we have fostered a sense of unity regarding shared challenges among people from diverse departments across the organization and provided an opportunity

for individuals to understand the roles and responsibilities of each department and consider their ideal roles.

Looking ahead, our tasks are to make sure each individual participant elevates and consolidates the knowledge that resulted from training into wisdom, and to monitor their practical application of the wisdom. As the director in charge, I will follow up thoroughly by clearly providing opportunities for people to put their learning into practice, and by clearly assigning authority and responsibility while establishing an environment that enables people to taking on the challenge of acting boldly.

TOK Global Practical Training for
Selected Members

Under the previous medium-term plan, we started TOK Global Practical Training for Selected Members, which focuses on development of human resources who can fulfill the three points listed below.

Vision of TOK Global Practical Training for Selected Members

1. Self-reliant human resources who can display competence while shouldering risks by themselves in any business situation in Japan or abroad
2. Human resources who can work effectively and proactively pitch-in with a positive mindset, attitude, and ability to take action in an unknown world and a sometimes harsh environment
3. Human resources who have firm values and a strong presence without losing their identity of being a TOK employee

Under this program, from among employees who have accumulated business experience overseas or have been consistently undertaken self-development with a



TOK Global Practical Training



desire to do business overseas, we select qualified people based on the criteria of “Achieved excellent results” “Have what it takes to proactively take on challenges on a global stage” and “Are capable of being senior management in the future,” and conduct more intensive training, including overseas training. We introduced the “selection” method to foster a sense of healthy competition among young employees and an immediate result was a boost in morale among them. Training has been completed by over 30 employees who will carry TOK’s future in departments including development, production, sales and marketing, legal affairs and human resources. Each of these people is now fulfilling an important role in developing TOK’s overseas business.

Similar to level-based training, we are aware that we have a challenge to implement something to ensure that after the training is completed participants are given an appropriate opportunity to implement what they have learned. We must also monitor how training results have been utilized in actual work and then connect the findings to improvements.

Establishing a competitive advantage through “diversity and inclusion”

To establish a competitive advantage on a global level or succeed in new business requires more than merely thinking along existing lines or pursuing ideas of the same quality or type. That is why we employ human resources of diverse affiliations and specialized fields and strive to maximize their different capabilities and potentials.

For example, we actively employ non-Japanese people, provide equal opportunities to both genders in recruitment and strive to create female-friendly workplaces. Under the previous medium-term plan these efforts achieved a five percentage point increase in the ratio of non-Japanese employed to 21% and a 42% ratio of women among new graduates employed. In addition,

we have added a woman as an independent director on the Board of Directors and are gradually increasing the number of female managers. In these and other ways, TOK’s diversity is deepening and steadily developing, mainly in a quantitative aspect.

The meaning of diversity, meanwhile, is not just diversity of gender, nationality or specialization; in its essence, it is diversity of perspectives. Although recruitment of non-Japanese and women will continue to be prioritized as a key performance indicator going forward, our first priority will be “inclusion,” which means respecting and utilizing diverse opinions, feelings and abilities, aiming to establish a competitive advantage on a global level and succeed in new business.



Deepening diversity (TOK ADVANCED MATERIALS CO., LTD.)

Training for selected members from overseas subsidiaries

As one aspect of a system directly linking “diversity and inclusion” to competitive advantage, the “TOK Medium-Term Plan 2018” will newly incorporate the TOK Group Core Human Resource Training Program for training selected employees from overseas subsidiaries. The program aims to increase the Group’s global cohesiveness, develop core human resources to form the Group’s future senior management, and maximize value provision through exchanges between these diverse human resources.

Specifically, we will select employees from overseas subsidiaries based on criteria such as “loyalty to the TOK Group,” “achieved excellent results,” “desire for improvement” and “character,” and through rigorous business simulation training, enable them to master communication, thought process and response methods. The program will enable participants to find what it takes to be future global managers of the TOK Group and, through exchanges among management candidates, build their awareness and sense of belonging as an important member of the Group, as well as provide an opportunity to strengthen the mutual ties between Group companies.

Interview with an Outside Director

In this section, we interviewed Noriko Sekiguchi, an outside director of the TOK Group. Ms. Sekiguchi shared her views on the Group's corporate governance and sustainable growth and her own role in the Group.

Noriko Sekiguchi
Outside Director (Independent Officer)



Q1 What is your perspective on TOK's strengths, corporate culture and so on?

A Company that Effectively Meshes Cooperation with its Employees and its DNA since Founding

I think the TOK Group's strength really comes down to its being an R&D-driven enterprise that continues to introduce original technologies and products adapted to the changing times. I sense that TOK's founding philosophy of manufacturing—to create products that others cannot imitate, to be original, to focus on high purity products, and to support manufacturing with advanced technological capabilities—continues to be passed down as part of TOK's DNA.

At the same time, I get the impression that the TOK Group values its employees highly. Since my appointment last year, I have observed their operations at a total of six sites, including in South Korea, Taiwan and in Japan, and management's policy of treating employees as the Company's most important asset seems to have permeated throughout the entire organization. Regardless of which site I visited, I sensed that everyone was working together as a team, moving forward day to day toward a common objective. This in no way suggests a culture of complacency, rather an impression that, through the Level-Based Training Programs and the TOK Global Practical Training for Selected Members, the TOK Group has, in a good sense, infused the organization with a merit-based culture. I think TOK's effectively meshing cooperation with its employees and its DNA since founding has led to high quality value creation. Although they are not visible to the naked eye, I want the management resources that are essential to the sustainable growth of TOK in the future to be passed on.

Q2 What is your assessment of the TOK Group's corporate governance system?

Full Compliance, with Added Originality

While the TOK Group is a full-compliance company that implements all of the principles of the Corporate Governance Code, in doing so it has taken an original approach that makes it easier to ensure maximum effectiveness for the Company. To begin with, the composition of its independent officers—consisting of a former business executive, a CPA (myself) and three former executives from financial institutions—is unique. Mr. Kurimoto has eight years of management experience as representative director of a listed company, and at Board of Director's meetings offers beneficial advice from the perspective of someone who has actually run a company. Outside auditors Mr. Shimbo, Mr. Yoneda and Mr. Saito also make highly insightful statements that get at the heart of risk management, based on knowledge they have gained through their involvement in management at financial institutions. A recent example is a lively series of shareholder-oriented questions and suggestions that grew out of a vote on a major investment deal, as the auditors strove to verify that the investment was in line with corporate objectives, had gone through the appropriate processes, and would ultimately lead to earnings growth. They also make effective points about financial risks outside of the business itself. I think this independent officer structure has proven effective in providing a support function for the Company's technologically-oriented management team.

Based on Supplementary Principle 4.8.1 of the Corporate Governance Code, TOK has established separate meetings for its independent officers, but given the

need for support from someone in the Company familiar with technology-related issues, the Company's standing statutory auditor also participates. At these meetings, additional explanation is provided on topics from management meetings that were not on the agenda of the Board of Directors; any questions or opinions that come up are then addressed as needed and where appropriate by the standing statutory auditor. Subjects involving those questions and opinions are sometimes also taken up at the next Board of Director's meeting. Last year, the Board began conducting self-assessments, but I think even if they begin with third-party assessments at some point, these kinds of original initiatives will likely be well-regarded.

Q3 What must TOK do to drive sustainable growth and continuously enhance its corporate value?

Based on a Long-Term Vision, Continuing to Refine the Balance Between Profit, Investment and Dividends

In 2010, the TOK Group set a management vision for 2020, 10 years hence. I think for the Company to achieve sustainable growth, it is important to continue to establish this kind of long-term vision at each juncture.

In financial terms, ideally the Company should ensure financial soundness and increase ROE by working to increase profits from each business, while investing funds generated from a review of strategic equity holdings and changes in business portfolios in areas expected to deliver higher profitability, and offering shareholder returns. In that sense, investment in R&D is an essential lifeline for the TOK Group as it works to adapt to market conditions. On that basis, TOK's sustainable growth and enhancement of corporate value requires continued refinement of the balance between profits, investment and dividends.

Q4 In the future, what corporate governance issues does the TOK Group face, and what role do you hope to play?

Corporate Governance Is Never Truly "Complete"

If you think of corporate governance as a framework for bringing discipline to business for the sake of sustainable growth and enhanced corporate value, I think it is

never truly "complete," because as a company grows, governance systems and processes require constant reevaluation. In that sense, I think the issue for the TOK Group in terms of governance is to look beyond last year's 75th anniversary, to build and manage the framework needed to become a 100-year company.

I hope to ensure I fulfill my role as outside director by reviewing whether corporate strategies offered by management are acceptable from the shareholders' perspective, asking management to explain how those strategies will be executed, and supervising management while constantly considering whether or not management decisions are in line with corporate strategy.

Contributing to Reducing Risk in Anticipation of Becoming a 100-Year Company

TOK's internal control system functions under the direct supervision of the president, and at this point, I see no cause for concern. That said, I also believe that with overseas sales representing approx. 80% of net sales, and an "aggressive" medium-term plan being rolled out in the midst of fast-moving changes in market conditions and technology trends, the TOK Group faces potential business risks that could easily extend to its internal controls. By working even more closely with the other independent officers, and providing advice as an expert in internal controls, which exemplify a "company's defenses," to further enhance compliance, I hope to contribute to efforts to reduce risk. I hope that by doing so, I can help the TOK Group continue to specialize in cutting-edge technology fields and move closer to becoming a 100-year company.



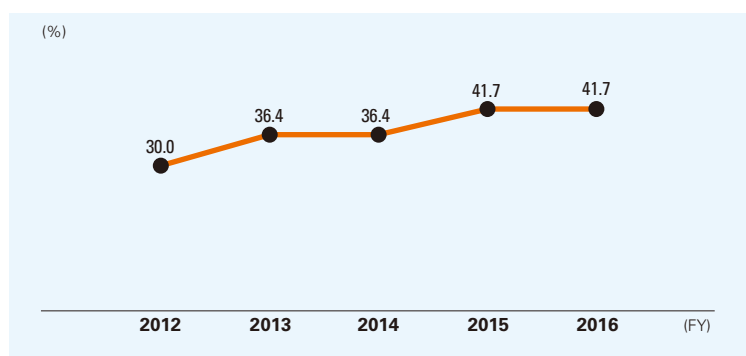
Corporate Governance

Our goal is to further strengthen corporate governance and achieve sustained enhancement of corporate value into our first 100 years as a company and beyond.

TOK's path to stronger corporate governance

<p>■ June 2003</p>	<p>Executive officer system introduced to clearly separate management decision-making and supervisory functions from business execution</p> <p>With the introduction of the executive officer system, the number of directors was also adjusted downward, from a maximum of 20 directors to a maximum of 10</p>
<p>■ June 2006</p>	<p>Tenure of directors shortened from two years to one year</p> <p>Selected one outside director for the first time</p>
<p>■ June 2012</p>	<p>Appointed the first non-Japanese officer</p>
<p>■ June 2013</p>	<p>Added one outside auditor, bringing the total to three</p>
<p>■ June 2015</p>	<p>Appointed a (female) outside director, bringing the total to two</p>

Ratio of Outside Officers in the Board of Directors



Ratio of Outside Auditors among Corporate Auditors



Basic Concept

We have a management vision of aiming to be a globally trusted corporate group by inspiring customers with high value-added products that have satisfying features, low cost and superior quality, under our business principles since our establishment ("Continue efforts to enhance our technology," "Raise the quality levels of our products," "Contribute to society," and "Create a frank and open-minded business culture.") We believe that realizing this will lead to benefits shared by shareholders and all other stakeholders and will improve corporate value.

Realizing the management vision is the means to maintain a sound and transparent management and to enhance operational efficiency with speeding up of the decision-making process as one of the most important management issues.

Type of System

As a company with corporate auditors, TOK employs the corporate auditor system. We are taking actions to strengthen audits performed by the corporate auditors with the greater authority endowed by the Companies Act of Japan. In addition, TOK is taking advantage of the benefits of reforms to its Board of Directors, establishment of the executive officer system, and the election of an independent outside director to fortify the management decision-making and supervisory function and the business execution function while clarifying responsibility for performing these functions. We are convinced that these measures are the most effective means to upgrade our corporate governance.

the auditing policy, the division of tasks, and other considerations. In addition, the auditors check the performance of directors by receiving reports from directors and other corporate staff, and requesting an explanation if necessary. For financial audits, the auditors receive reports from the accounting auditor and use other means, including requesting an explanation if necessary, to verify the suitability of financial accounting methods and the results of these audits. Note that the corporate auditors (including standing statutory and outside auditors) hold regular quarterly meetings with the outside directors in an effort to share information and opinions. To improve the effectiveness of corporate audits, and to ensure smooth execution of audit duties, one person is also assigned to assist the auditors.

Internal Auditing Division **Diagram 4**

The Internal Auditing Division, under the direct control of the president, comprises six full-time staff members. In addition to internal audits, this division offers suggestions, proposals, and advice for continuous improvement through evaluations of the effectiveness of internal controls in financial reporting.

Accounting Auditor **Diagram 5**

The accounting auditor conducts accounting audits of the Company from an impartial and independent standpoint. There were two certified public accountants who conducted the accounting audit of the Company in the fiscal year ended March 31, 2016: Yasuhiro Ohnaka and Masato Shoji, both of whom are designated limited liability partners and executive members of accounting auditor Deloitte Touche Tohmatsu LLC. Moreover, there were six other certified public accountants, two junior accountants, and 14 other people who assisted in conducting the Company's

accounting audit. The details of the remuneration of the Company's certified public accountants (Deloitte Touche Tohmatsu LLC) for conducting the accounting audit during the fiscal year ended March 31, 2016 are as follows:

- Remuneration in relation to the services set forth in Article 2, Paragraph 1 of the Certified Public Accountants Act (Act No. 103 of 1948): ¥52 million

Legal Advisor, etc. **Diagram 6**

The Company has concluded advisory contracts with a number of law firms, and receives appropriate advice from legal advisors in situations requiring legal assessment.

Efforts to Invigorate the General Meeting of Shareholders and Facilitate Smooth Exercise of Voting Rights **Diagram 7**

To facilitate the exercise of voting rights by shareholders, we try to avoid holding our General Meeting of Shareholders on days when most other Japanese companies hold their meetings. We also set a period for reviewing the resolutions for approval by the meeting that is longer than the number of days required by law, and send our Notice of Convocation of the General Meeting of Shareholders out early (21 days (three weeks) before the day of the meeting). It is also published on our website ahead of time, four weeks prior to being sent out.

To enable the shareholders in attendance to better understand the proceedings of the General Meeting of Shareholders, we use narrated video footage to report the items up for resolution. In addition, we also upload the Notice of Convocation, Notice of Resolution, and Results of the Exercise of Voting Rights to the General Meeting of Shareholders for disclosure on the Company website.

Cooperation between the Auditors, Internal Auditing Division and Accounting Auditor

Internal Audit and Corporate Audit **Diagram 8**

Cooperation between the auditors and accounting auditor

The auditors receive reports on the result of accounting audits and other work from the accounting auditor (auditing firm) four times a year. They also receive an explanation of the auditing plan from the accounting auditor (auditing firm) once a year. In addition, the auditors also accompany the accounting auditor (auditing firm) to the factory audits the accounting auditor conducts around twice a year, as well as examine the auditing method of the accounting auditor (auditing firm). Apart from this, the auditors also exchange information and opinions with the accounting auditor (auditing firm) as required.

Relationship between internal audits, corporate audits, accounting audits and the internal control department

The TOK Group's internal control department comprises divisions in charge of compliance and risk management in addition to the Internal Auditing Division, which is in charge of evaluating the effectiveness of internal control as it pertains to internal audits and financial reporting.

The Internal Auditing Division, as a part of the internal control department, reports the results of internal audits to the president, auditors and the relevant divisions. In addition, it provides the relevant divisions with suggestions, proposals and advice as required.

As for corporate audits, the auditors report the results of their corporate audits of directors' execution of duties to the president and the accounting auditor (auditing firm). In conducting internal control audits, the auditors receive evaluation reports and other information

from the internal control department as necessary.

The accounting auditor (auditing firm) reports the results of its accounting audits to the President and auditors. It also holds discussions with the internal control department to help them with internal control audits.

Election of Outside Directors and Outside Auditors

The Company has eight directors, of whom two are outside directors, as well as four auditors, of whom three are outside auditors.

The Company has established the following criteria and policies regarding independence in the election of outside directors and outside auditors.

Independence Standards for Outside Officers

Independent outside officers under this criteria are defined as those who fulfill the legal requirements of an outside officer, and to whom any one of the following does not apply.

- a. A person who executes the business of the Company or its consolidated subsidiaries (the "Group"), or who did so for a period of 10 years before being appointed.
- b. A person/entity for which the Group is a major client^(Note 1), or who executes the business of such a person/entity.
- c. A major customer of the Group^(Note 2) or a person who executes the business of such customer.
- d. A major lender of the Group^(Note 3) or a person who executes the business of such lender.
- e. A person who, apart from receiving officer compensation from the Group, belongs to a consulting, accounting, or legal firm (corporate entity, cooperative, or other such group) receiving large amounts of cash or other assets^(Note 4) from the Group.
- f. A person to whom the above b. through e. applied in the previous three years.
- g. A person who in the past three years has received donations from the Group averaging more than ¥3.0 million per year.
- h. Major shareholders of the Group^(Note 5) or a person who executes the business of such shareholder.
- i. A person who executes the business of a company with a mutual relationship between outside officers.^(Note 6)
- j. A person whose spouse or a relative within the second degree of kinship come under any one of above items a. through i.
- k. A person who has served a total of more than eight years as an outside officer.
- l. Regardless of the above provisions, a person for whom it is deemed likely that conflicts of interest will arise with the Company.

Notes 1. A person/entity for which the Group is a major client, means a supplier that provides the Group with products or services, the amount of which transactions averaged more than ¥10.0 million per year over the past three years and represented more than 2% of the supplier's consolidated annual revenue in the most recent fiscal year.

2. A major customer of the Group means a customer to which the Group provides products and services, the amount of which transactions averaged more than ¥10.0 million per year over the past three years and represented more than 2% of the Group's consolidated annual revenue in the most recent fiscal year.

3. A major lender of the Group means a financial institution which has lent an amount equivalent to more than 2% of the Group's consolidated total assets.

4. A large sum of cash or other assets, means assets that averaged more than ¥10.0 million per year over the past three years, and which in the most recent fiscal year had an economic value in excess of 2% of said consultant or accounting or legal expert's consolidated annual revenue. (In the event the beneficiary of said assets is a corporation, association or other organization, then assets that averaged more than ¥10.0 million per year over the past three years, and which in the most recent fiscal year had an economic value in excess of 2% of said organization's consolidated annual revenue.

5. Major shareholder, means a shareholder with a ratio of voting rights of more than 10%.

6. A mutual relationship between outside officers means a relationship in which a person who executes the business of the Group is also an outside officer at another company, and in which a person who executes the business of said outside company is also an outside officer of the Company.

Reasons for the Election of Outside Directors

Name (Election date)	Reasons for election
Hiroshi Kurimoto (June 2014)	Kurimoto was elected on the expectation that he would supervise TOK's management from an objective and neutral point of view, based on his abundant experience and considerable insight as a business executive of a listed company, and contribute to strengthening corporate governance by advising the Company on management in general.
Noriko Sekiguchi (June 2015)	Sekiguchi was elected to contribute to corporate governance and TOK's management from an objective and neutral point of view, based on her professional expertise in accounting and abundant hands-on business experience with several companies as a certified public accountant, and her thorough understanding of internal control, including from her experience as a member of external committees investigating fraudulent accounting at numerous listed companies, and advise the Company on management in general.

Reasons for the Election of Outside Auditors

Name (Election date)	Reasons for election
Seichi Shimbo (June 2013)	Shimbo was elected on the expectation he would contribute to auditing TOK's management from an objective and neutral point of view, based on his abundant experience and considerable insight as a business executive including at financial institutions. No conflicts of interest in terms of personal, capital, business or other relationships exist between Shimbo and TOK. Shimbo was once a business executive with Tokio Marine & Nichido Fire Insurance Co., Ltd., which owns stock in TOK and conducts insurance transactions with the Company under routine and standard business conditions. However, these capital and business relationships were deemed not to affect Shimbo's independence as an outside auditor of TOK.
Katsumi Yoneda (June 2013)	Yoneda was elected on the expectation he would contribute to auditing TOK's management from an objective and neutral point of view, based on his abundant experience and considerable insight as a business executive including at financial institutions. No conflicts of interest in terms of personal, capital, business or other relationships exist between Yoneda and TOK. Yoneda was once a business executive with Meiji Yasuda Life Insurance Company, which owns stock in TOK and conducts insurance transactions with the Company under routine and standard business conditions. However, these capital and business relationships were deemed not to affect Yoneda's independence as an outside auditor of TOK.
Hiroshi Saito (June 2015)	Saito was elected on the expectation he would contribute to auditing TOK's management from an objective and neutral point of view, based on his abundant experience and considerable insight as a business executive including at financial institutions. No conflicts of interest in terms of personal, capital, business or other relationships exist between Saito and TOK. Saito was once a business executive with Mitsubishi UFJ Trust and Banking Corporation, which owns stock in TOK and conducts cash deposit, stock administration agent and other transactions with the Company under routine and standard business conditions. However, these capital and business relationships were deemed not to affect Saito's independence as an outside auditor of TOK. In addition, Saito was also once a business executive with Mitsubishi UFJ Financial Group, Inc. stock in which TOK owns, however this capital relationship was deemed not to affect Saito's independence as an outside auditor of TOK.

The Main Activities of Outside Directors and Outside Auditors

Name	Attendance record and activities at Board of Directors and Auditors meetings
Hiroshi Kurimoto (Outside Director)	Kurimoto attended 14 of the 15 Board of Directors meetings (attendance rate 93%) held during the fiscal year ended March 2016. He voiced timely opinions as required when discussing resolutions, based on his broad experience and abundant expertise as a business executive.
Noriko Sekiguchi (Outside Director)	Since she was elected on June 25, 2015, Sekiguchi attended all 12 of the 12 remaining Board of Directors meetings (attendance rate 100%) held during the fiscal year ended March 2016. She voiced timely opinions as required when discussing resolutions, based on her professional expertise in accounting and abundant hands-on business experience with several companies as a certified public accountant.
Seichi Shimbo (Outside Auditor)	Shimbo attended 14 of the 15 Board of Directors meetings (attendance rate 93%) and all 16 of the 16 Board of Auditors meetings (attendance rate 100%) held during the fiscal year ended March 2016. He voiced and raised timely opinions and questions as required at the meetings, based on his broad experience including at a financial institution, and his abundant expertise as a business executive.
Katsumi Yoneda (Outside Auditor)	Yoneda attended all 15 of the 15 Board of Directors meetings (attendance rate 100%) and all 16 of the 16 Board of Auditors meetings (attendance rate 100%) held during the fiscal year ended March 2016. He voiced and raised timely opinions and questions as required at the meetings, based on his broad experience including at a financial institution, and his abundant expertise as a business executive.
Hiroshi Saito (Outside Auditor)	Since he was elected on June 25, 2015, Saito attended all 12 of the remaining 12 Board of Directors meetings (attendance rate 100%) and all 11 of the 11 remaining Board of Auditors meetings (attendance rate 100%) held during the fiscal year ended March 2016. He voiced and raised timely opinions and questions as required at the meetings, based on his abundant experience and considerable insight as a business executive including at financial institutions.

The Main Agenda of Board of Director Meetings in the Fiscal Year Ended March 2016

- R&D investment and capital investment plan under the new medium-term plan
- Progress, investment plan for new business
- Establishment of ROE target levels
- Level for raising the dividend payout ratio
- Exchange rate risk hedge (against the strong yen)

■ Remuneration of Directors and Auditors

TOK's guidelines for remunerating its directors and auditors are as follows. The guidelines focus mainly on complying with laws and regulations and maintaining sound management, while seeking also to set remuneration at a level that satisfies the expectations of shareholders and other stakeholders by increasing earnings and corporate value.

Directors' Remuneration

Company directors' remuneration consists of basic remuneration in the form of a fixed salary, performance-related bonuses for each fiscal year, and medium- to long-term performance-related stock options (subscription warrants).

The fixed-salary remuneration is decided and paid within the remuneration framework approved at the General Meeting of Shareholders (of within ¥420 million per year), based on specific standards established by the Company's Board of Directors.

Bonuses are set within the above-mentioned remuneration framework (of within ¥420 million per year). The Board of Directors decides whether or not to pay bonuses, and the amount of bonuses to be paid, after taking into consideration the performance of the Company and the individual director.

Stock options (subscription warrants) consist of regular stock options and stock compensation-type stock options. Regular stock options are granted to directors

within a separate compensation framework (of within ¥42 million per year) approved at the 82nd Ordinary General Meeting of Shareholders held on June 27, 2012, in addition to the above-mentioned remuneration framework. The Board of Directors decides the number of subscription warrants to be allocated to each director. Stock compensation-type stock options were set as a part of the above-mentioned remuneration framework (of within ¥420 million per year) when revisions to TOK's remuneration system were approved by the 84th Ordinary General Meeting of Shareholders held on June 26, 2014. Based on certain standards set forth by TOK, the Board of Directors decides the amount of fixed salary of each director to be replaced by stock compensation-type stock options. This is done to bolster morale

and motivate each director to raise the corporate value of TOK by contributing to an increase in earnings, and thereby the stock price of TOK, over the long term. Outside directors do not receive stock options (subscription warrants) in consideration of their roles.

Auditors' Remuneration

Auditors are responsible for supervising and auditing business duties executed by the directors, in a position that is independent of the Board of Directors. They receive only a basic remuneration in the form of a basic salary, which is decided on and paid out following discussions among the auditors, within a remuneration framework (of within ¥72 million per year) approved by the General Meeting of Shareholders.

Remuneration Totals Paid to Directors and Auditors (Fiscal Year Ended March 2016)

Position	Total remuneration (Millions of yen)	Total of various types of remuneration (Millions of yen)			Number of eligible personnel
		Basic remuneration	Stock options	Bonuses	
Directors (Excluding outside directors)	181	144	20	16	7
Auditors (Excluding outside auditors)	22	22	—	—	1
Outside directors and auditors	43	42	—	1	6

Notes 1. The amounts for total remuneration and total of various types of remuneration for directors (excluding outside director) do not include the portion paid as salary for employee activities undertaken in parallel with director activities.
2. The amounts for total remuneration and total of various types of remuneration for directors (excluding outside director) and outside directors and auditors include payments to one director and one outside auditor who retired at the end of the 85th Ordinary General Meeting of Shareholders held on June 25, 2015 ("85th Ordinary General Meeting of Shareholders").

Message from an Outside Auditor

TOK is an R&D-driven enterprise, distinctive for the goals set out in its Management Principles of continuing efforts to enhance its technology and raising the quality of its products. Ongoing capital investment is essential to building a solid advantage in cutting-edge semiconductor domains, which will form the foundation for sustained growth, and to making concrete progress in reforming their business portfolio through development of new business domains. Large-scale investment will also be required to enhance their development structure through close relationships with customers in Japan, South Korea, Taiwan and the U.S. In doing so, it will be extremely important that they implement detailed, appropriate responses to various risks. Especially in the near term, the direction of the semiconductor industry and the global economy has become difficult to predict, and I hope to make full use of the sense of risk I have acquired working in a financial institution to advise TOK on how best to take positive risks.

With no end of corporate scandals and accounting fraud, moves are underway to reform corporate governance, and I realize that the role of auditor has become even more important. TOK was an early mover in aggressive governance reform efforts, and in fact, the meetings of its Board of Directors are notable for their constructive,

lively discussions, thanks in part to the company's frank and open-minded business culture and the leadership of the Board's chairman. The proceedings are well-managed, with diligent consideration given to important resolutions, and the Board of Directors can be said to be fulfilling its function. Compared to three years ago, the number of outside directors and auditors has increased by one, to two directors, and the number of outside auditors has also been increased from two to three auditors. Meetings are also held among the non-executive officers, made up of the five outside directors and one standing statutory auditor, where they engage in a frank exchange of opinion. To help ensure the permanent continuation and growth of TOK's business, I also try to conduct audits from the perspective of an independent officer, bringing a measure of constructive skepticism. In this way, I hope to maintain independence and neutrality, while helping TOK to strengthen and enhance its corporate governance, respond to the expectations of all of its stakeholders, and further improve corporate value.



Seiichi Shimbo

Internal Control System

The Board of Directors has voted on a basic policy for building an internal control system. The section presents excerpts from a summary of progress in using that internal control system to ensure proper operations, with a focus on compliance, risk management, business execution reporting and other Group internal control systems, information archiving and management system.

(For further details on internal control, please see the Corporate Governance Report at http://www.tok.co.jp/content/download/927/11053/file/gov_report.pdf. (in Japanese))

Compliance System

- To encourage greater penetration of compliance awareness, the Group is focusing on the TOK Group Compliance Standards of Conduct, implementing awareness and educational efforts at Group sites inside and outside Japan.
- The Group has revised its compliance regulations, increased the frequency with which its Compliance Committee meets, and provides a summary of the Committee's activities to the Board of Directors.
- TOK is working to improve its group compliance system, including internal reporting at overseas subsidiaries and strengthened centralized management of Group internal compliance information.

Anti-takeover Measures

- TOK has adopted anti-takeover measures. Please refer to our website for more information. <http://www.tok.co.jp/content/download/2637/40347/file/150521.pdf> (in Japanese)

Risk Management System

- Based on its contingency management regulations, the Group's Contingency Management Committee meets annually, and a summary of the Committee's activities is provided to the Board of Directors.
- Based on its Business Continuity Plan (BCP), the Company runs simulated BCP drills that assume a large-scale earthquake has struck Japan, as well as drills for setting up a disaster response headquarters.
- Based on its financial risk management regulations, the status of Group internal financial risk is reported to the Board of Directors, with annual policies for responding to that risk presented to and voted on by the Board.

Business Execution Reporting and Other Group Internal Control Systems

- Based on its subsidiary management regulations, the Company receives monthly business reports from its domestic and overseas subsidiaries, with a report on overseas subsidiaries presented to the Board of Directors annually.
- To ensure cohesion with its subsidiaries, the Company has launched a project to build a corporate management system to oversee the Group as a whole, with the goal of enhancing Group corporate value. As part of this project,

we are reviewing regulations regarding authority related to decision-making at overseas subsidiaries, as well as the approval process.

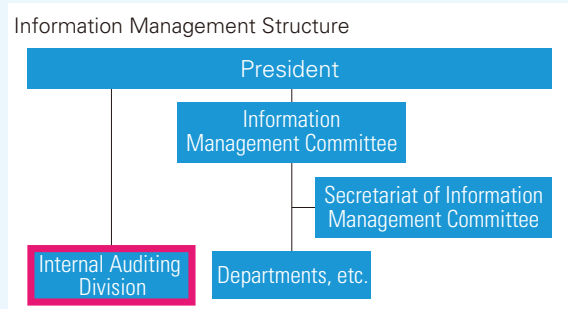
- Based on the basic policies regarding internal controls related to financial reporting, internal control assessments are conducted annually, the results of which are reported to the Internal Control Committee, with a summary provided to the Board of Directors.

Retention and Management of Information

- Based on the document organization and retention regulations, retention periods have been established by type for minutes of the Board of Directors, approval forms and other important information related to decision-making, and such documents are appropriately retained and managed.
- The Group has formulated a set of basic regulations for information management, and based on those regulations, the Information Management Committee meets quarterly, with a summary of its activities provided to the Board of Directors.

Reinforce Information Management Structure

It would not be going too far to say that for TOK, which engages in R&D in cutting-edge semiconductor fields under its strategy of building close relationships with its customers, a solid information management structure is the most important aspect of risk management. Positioning information management as one of its most important corporate governance issues, the Group is working to steadily implement an information management scheme based on the Information Management Policies revised in 2013, and to continuously reinforce that scheme.



Information Management Audits by the Internal Auditing Division

The Internal Auditing Division, which is independent of the Information Management Committee, regularly audits compliance with rules and other matters, and reports the results to the president. If there are problems, improvement orders are issued to the audited divisions and the Information Management Committee. In this way the division works to continuously improve our information management system.

Seven Working Groups that Promote Information Management

In the cutting-edge fields of R&D, information as a management resource has become increasingly important. By conducting activities with working groups for each important theme, TOK steadily implements the plan, do, check, act (PDCA) cycle.

1. Trade Secrets

We treat as trade secrets the important information we manage, including that from customers, and legally protect this information. To prevent information leaks, we conducted interviews with our various departments and based on this, we established specific management targets and methods, the understanding of which we are now promoting through education and training.

2. Training and Compliance with Rules

Promoting information management requires that all executives and employees recognize the importance of management and comply with the rules. To this end we conduct regular training on the importance of information management, management methods and other related matters in an effort to raise awareness of information management.

3. Human Resources Related

In connection with human resources, necessary rules are established and training conducted based on training programs for different ranks with related responsibilities, and employees sign and submit pledges when they join and leave the company.

4. IT Development

The importance of IT in information management has continued to grow in recent years. Measures to prevent human error, malicious attacks and intentional information leaks from the inside need to be developed not only in Japan but at overseas sites as well. We are developing and implementing various necessary IT systems and conducting drills simulating targeted email attacks and other measures.

5. Physical Security Measures

We conduct a wide range of activities that include implementing and developing various physical security measures for protecting confidential information, establishing common rules for this, supporting the creation of rules at each site based on these common rule and surveying operations. Going forward, we plan to implement and reinforce measures at all sites under unified standards.

Physical Security Measures



In TOK Advanced Materials Co., Ltd. (TOKAM), our strategic base in South Korea for building close relationships with customers, depositing recording equipment at the security gate is mandated.

6. Information Incidents*

Based on the assumption that incidents occur involving a lost mobile phone or computer with important information, we set up measures to minimize the damage and impact, and identify the causes and prevent recurrence. We have reviewed the communication flow for when incidents occur along with corresponding measures and have revised procedures for their implementation.

*Information incidents are security threats related to information management and system operations.

7. Supplier Information Management Assessment

Suppliers including raw materials manufacturers play an important role in the supply chain process of developing, manufacturing, and delivering products. The status of information management at each supplier is ascertained and suppliers are asked to cooperate in information management by making improvements if there are problems.



At domestic and overseas production bases, applying a blindfold sticker on mobile phone cameras is mandated.



IR Activities/SR Activities

Dialogue with Shareholders and Investors

The Director, Officer, Department Manager of General Affairs Dept. is responsible for managing and overseeing investor relations (IR), and through meetings on business results, meetings with institutional investors, company orientations for individual investors and a variety of other efforts, works to be proactive in achieving a constructive dialogue.

The Public Relations Division serves as the department responsible for TOK's IR with regard to dialogue with shareholders and investors, and is primarily responsible for facilitating that dialogue, exchanging information with our accounting, sales, legal and other departments as needed and maintaining a coordinated collaboration. The department in charge of IR also works to provide the relevant officers with records of meetings with analysts, shareholders and investors, and to share information.

IR Activities

TOK conducts proactive IR activities, centered primarily on the Public Relations Division, in an effort to enhance our dialogue with shareholders and investors. Specifically, we hold events including biannual meetings on business results, company orientations for individual investors, as well as tours of our facilities. Our CSR reports, annual reports, business reports to shareholders, and Notice of The Convocation of The Ordinary General Meeting of Shareholders are all published on our website, part of our proactive effort to provide shareholders and investors with the information they need.

Records of opinions and requests from shareholders and investors that reach us through this dialogue are collected and regularly reported to the president and other management, and we work to ensure that information is understood and shared.

In accordance with our Compliance Standards of Conduct, TOK also makes an effort to provide its shareholders and investors with consistent information, and to offer fair and timely disclosure. We have also established internal regulations regarding management of insider information, and strive to ensure those regulations are closely followed.

Complying with the Corporate Governance Code

TOK implements all of the principles set forth in the Corporate Governance Code established by the Tokyo Stock Exchange.

Complying with Various Principles of the Corporate Governance Code

(Principle 1.4) Cross-shareholdings

(1) Policies regarding cross-shareholdings

Given that our business centers primarily on cutting-edge fields in the electronics market, and that we are expanding our business domains, we believe that maintaining and developing smooth relationships with our business partners is essential to achieving sustainable growth in the medium- to long-term. For that reason, we may at times acquire and own shares in the companies we do business with.

Our basic policy is that such acquisition and ownership will target shares of those business partners through which such ownership will enable us to strengthen relationships, thus leading to sustained enhancement in corporate value. At the same time, the Board of Directors regularly reviews these cross-holdings in terms of whether they are fulfilling their role and purpose, and determines whether to continue holding them or sell them off.

(2) Criteria for exercising voting rights

In exercising voting rights with regard to cross-shareholdings, we not only look at whether such exercise will contribute to improving the corporate value of the business partner in question, but also determine whether to approve such measures based on comprehensive consideration for maintaining our rights as a shareholder and of the objectives of the cross-shareholding.

(Principle 1.7) Related Party Transactions

When engaging in transactions with its officers, major shareholders and others (i.e., related party transactions), TOK considers the rationality of pricing and other transaction terms as it would in third party transactions, to ensure that such transactions do not harm the common interests of the Company and its shareholders. At the same time, in compliance with legal provisions and our own internal regulations, particularly important transactions are presented to the Board of Directors for their approval.

(Principle 3.1) Full Disclosure

- (1) Company objectives (e.g. business principles), business strategies and business plans
→See page 8 "Management Principles"; pages 20–21 "Our Future"; pages 22–27 "Message from the President"
- (2) Basic views and guidelines on corporate governance
→See page 54 "Basic Concept"
- (3) Board policies and procedures in determining the remuneration of the senior management and directors
→See page 58 "Remuneration of Directors and Auditors"
- (4) Board policies and procedures in the appointment of senior management the nomination of director and auditor candidates
 - a. Policies and procedures in the appointment of senior management and the nomination of director candidates

Once a year, the president prepares a draft used in determining senior management and director personnel issues (e.g. elections and dismissals), based on consideration of the Group's performance, the contribution of senior management and directors to the medium-term plan and the previous fiscal year's

budget, and a self-assessment by the Board of Directors. Outside directors are briefed on this draft in advance, and provide advice as required. The Board of Directors then decides on a resolution to the General Meeting of Shareholders based on said draft.

b. Policies and procedures in the nomination of auditor candidates
In nominating auditor candidates, the president will, (a) in the case of auditors nominated from within the Company, consider the knowledge, experience and capabilities gained by the individual through execution of their duties within the Company, and, (b) in the case of outside auditors, will consider their independence, objectivity, and the knowledge, experience and capabilities gained through execution of their duties outside the Company. The president will then prepare a draft proposal for the Board of Auditors. Upon the consent of the Board of Auditors, the Board of Directors then decides on a resolution to the General Meeting of Shareholders.

(5) Explanations with respect to the individual appointments of senior management and nominations of director and auditor candidates based on (4)

Refer to pages 57–58 “Reasons for the Election of Outside Directors” and “Reasons for the Election of Outside Auditors” for information on the reasons for election of outside directors and auditors. Reasons for the election of officers and all other directors and auditors are as noted in the Notice of the Convocation of the 86th Ordinary General Meeting of Shareholders.

• **Notice of The Convocation of The 86th Ordinary General Meeting of Shareholders:**

<http://www.tok.co.jp/eng/content/download/3102/49488/file/160530.pdf>

(Supplementary Principle 4.1.1)

Based on the Board of Directors regulations, the Company's Board of Directors decides on matters prescribed by laws and regulations, the Articles of Incorporation, and other matters concerning the execution of important business. Decision-making involving execution of business other than matters to be decided by the Board of Directors is delegated, as appropriate, to the Committee of Officers, the representative director, the directors and the officers, and those matters are clearly set forth in the Committee of Officers regulations and the Specific Authority by Position.

(Principle 4.9) Independence Standards and Qualification for Independent Directors

→See page 57 “Independence Standards for Outside Officers”

(Supplementary Principle 4.11.1)

(1) Policies for appointment of director candidates and approach to composition of the Board of Directors
Internal director candidates are chosen from among officers and others responsible for overall management, based on a comprehensive consideration of numerous factors, including diverse, advanced skills, knowledge and actual performance. Outside director candidates are also evaluated for similar factors, with appointments focusing on those with extensive experience at listed companies and wide-ranging knowledge in management, or from among experts with a thorough understanding of legal affairs, finances, accounting, internal control systems and other areas. We also select those who can devote sufficient time and

effort as required by their duties, and who meet the standards for independence prescribed by TOK and the Tokyo Stock Exchange. With regard to the diversity and size of the Board of Directors, we strive for a balanced composition, with internal directors selected for their thorough understanding of areas including sales, development, and manufacturing, as well as whether they are newly appointed or reappointed, their experience and past performance. We also ensure diversity by bringing in multiple outside directors of differing backgrounds, knowledge and expertise. Our policy is to maintain a Board of appropriate size that will contribute to quick, bold decision-making in a manner commensurate with our business.

(2) Procedures for appointing director candidates

Based on the above policy, the president prepares a draft appointment of director candidates. Outside directors are briefed on this draft in advance and provide advice as required. The draft is then voted on by the Board of Directors and presented as a resolution to the General Meeting of Shareholders.

(Supplementary Principle 4.11.2)

Directors serving in other important positions

→See pages 66–67 “Board of Directors/ Corporate Auditors and Officers”

(Supplementary Principle 4.11.3)

Our directors and auditors conduct a self-assessment of (a) the composition of the Board of Directors; (b) the effectiveness of the Board of Directors; (c) information related to the Board of Directors; (d) the decision-making process; and (e) external communications. This offers an analysis and assessment of the effectiveness of the Board of Directors as a whole.

As a result, the composition of the Board of Directors offers an even distribution of inside directors with thorough understanding of each field, and is well-balanced between experience and actual performance. The Board of Directors also maintains diversity by incorporating outside directors with differing backgrounds, knowledge and expertise. The size of the Board of Directors, the frequency with which it meets, the matters on which it deliberates and the time required for deliberation are all appropriate, and with the participation of outside auditors the proceedings are highly transparent, with rapid decision-making; in general, the Board of Directors is positively assessed. We are working to add further improvements to increase the effectiveness of the Board of Directors by preparing materials to enhance deliberations, improving the manner in which business execution and resolutions and reports are explained, and so forth.

(Supplementary Principle 4.14.2)

TOK offers its outside officers opportunities to gain knowledge of the TOK Group's business, structure, management strategy and financial condition, as well as opportunities to deepen their understanding of the TOK Group through participation in internal meetings and visits to our plants and so forth. Upon appointment, inside officers are offered opportunities to learn their legal obligations and responsibilities as fiduciaries, as well as to recognize the attitudes and roles expected of them as officers, and to acquire the knowledge they need to appropriately execute those obligations and roles.

(Principle 5.1) Policy for Constructive Dialogue with Shareholders

→See page 62 “IR Activities/SR Activities”

Relationship with Society — Corporate Citizenship —

As a good corporate citizen with roots in local and regional communities, TOK cooperates with stakeholders other than shareholders and investors by making concerted efforts to contribute to society.

Contributing to Scientific and Technological Progress

Tokyo Ohka Foundation for The Promotion of Science and Technology Celebrates its 30th Anniversary

Established in 1987 by our late founder Shigemasa Mukai, the Tokyo Ohka Foundation for The Promotion of Science and Technology (hereinafter, the "Tokyo Ohka Foundation") was founded on the philosophy that the development of Japan, a nation with few natural resources, depends on the development of innovative technologies from advances in fundamental research, and the application of these technologies in industry will lead to peace and prosperity for

humanity. For about 30 years, the Tokyo Ohka Foundation has continued to provide assistance for facilitating R&D in science and technology and researcher exchanges.

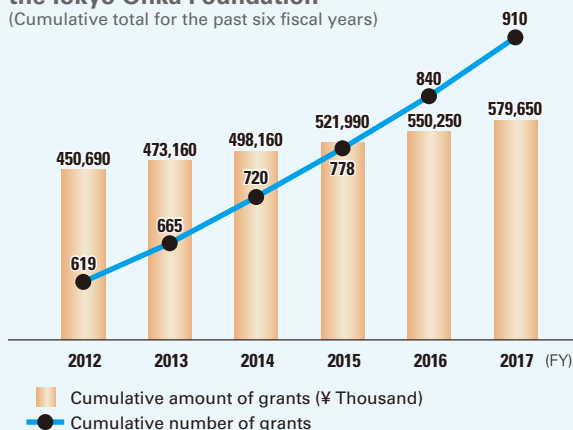
In fiscal 2017, the Tokyo Ohka Foundation provided grants totaling ¥29.4 million for 70 projects. Since its establishment through fiscal 2017, it has provided a total of ¥579.65 million in funding for 910 projects.

History of the Tokyo Ohka Foundation

Year	History
1987	Established as the Tokyo Ohka Foundation for The Promotion of Science and Technology, and began to provide research grants, as well as grants for international exchanges and researcher exchanges
1990	Created the Mukai Award to recognize excellent research that deserves attention for promoting science and technology, and began awarding prizes
2006	Created new grants for promoting science and educating youth about science as a fourth pillar of the grant business, as the younger generation will be key to the technological capabilities of Japan in the future, a nation built on technology
2011	Changed registration to a public interest incorporated foundation following approval for the change from the prime minister

Number and amount of grants given by the Tokyo Ohka Foundation

(Cumulative total for the past six fiscal years)



List of Mukai Award recipients (past six fiscal years) *Affiliation as of award reception date

FY	2012	2013	2014	2015	2016	2017
Recipient	Mr. Haruo Inoue (Professor at Tokyo Metropolitan University)	Ms. Maki Kawai (Executive Director at Riken)	Mr. Yasuhiro Koike (Professor at Keio University, Faculty of Science and Technology)	Ms. Reiko Kuroda (Professor at Research Institute for Science & Technology, Tokyo University of Science)	Mr. Kazuhito Hashimoto (Professor at Department of Applied Chemistry, School of Engineering, University of Tokyo)	Mr. Tetsuya Osaka (Research Council Professor and Advisor of the Office of the President, Waseda University)
Result	Photochemistry using visible light	Surface monomolecular spectroscopy	Basic research and function creation in photonics polymer	Advancement of solid chiral chemistry, development of new chiral spectrometer	Research related to energy and environmental science, based on electrochemical reactions	Transfer of technology from academia to industry via electrochemical nanotechnology

Conversation about Promoting Science and Technology

In July 2016, Mr. Akira Fujishima, the president of the Tokyo University of Science and the Tokyo Ohka Foundation, interviewed TOK President & CEO Ikuo Akutsu about a variety of topics related to science and technology, and the interesting aspects of science, based on the headline themes "children are refined by their curiosity," and "adults are refined by their failures."

Please visit our website to read the entire interview. (Japanese language only)

<http://www.tok.co.jp/special-interview2016> (in Japanese)

Part 1	Children are refined by their curiosity. (available on our website)
Part 2	Adults are refined by their failures. (available on our website)



Right: Mr. Akira Fujishima
(President of Tokyo University of Science and the Tokyo Ohka Foundation)
Left: President Ikuo Akutsu

Dialogue with Society

Social Contribution Activities as a Good Corporate Citizen

TOK makes concerted efforts to communicate with all stakeholders through dialogue and engagement with local communities in which it has a business presence, as well

as a variety of activities that contribute to society, such as volunteer activities and educational support.

The Main Activities in Business Sites

1. Oregon Plant (U.S.) Beautification of areas around the plant / participation in local cleanup events	5. Kumagaya Plant Beautification of areas around business sites
2. Sagami Operation Center, Shonan Operation Center Holding of Noryosai (summer festival) / beautification of areas around business sites	6. Gotemba Plant Dragonfly watching at the plant's biotope
3. Koriyama Plant Red Cross blood donation campaigns	7. Aso Plant Cleaning activities to protect a natural treasure
4. Utsunomiya Plant Traffic safety activities in areas around business sites	8. Headquarters, Operation Centers and Plants Students from the neighborhood tour the workplace (business office and plant)

1. Oregon Plant



Employees, their families and local volunteers picked up garbage and cut weeds in nature conservation areas, and helped patch up the vegetation

2. Sagami Operation Center, Shonan Operation Center



This venue serves to facilitate communication as many local residents and business partners gather every year to enjoy the refreshment booths and the Bon festival dance

6. Gotemba Plant



Grass-roots environmental preservation activities, such as dragonfly watching, take place at the biotope, which was created for analysis and research into restoring local nature

8. Headquarters, Operation Centers and Plants



Support is provided for educational activities that explain the business, products, and facilities (the headquarters is featured in the photograph)

Board of Directors/Corporate Auditors and Officers

Directors

Nobuo Tokutake



Hiroshi Kurimoto



Noriko Sekiguchi



Keiichi Yamada



Harutoshi Sato



Ikuo Akutsu



Hiroji Komano



Kunio Mizuki



Ikuo Akutsu

Representative Director,
President & Chief Executive Officer

1982 Joined the Company
2003 General Manager, Manufacturing Technology Div.
2003 General Manager, Advanced Material Development Div. 2
2007 Chairman and President of TOK TAIWAN CO., LTD.
2009 Officer; Dept. Manager, Corporate Planning Dept.
2010 Director; Executive Officer; Dept. Manager, Corporate Planning Dept.
2011 Representative Director, President and Chief Executive (to the present)

Hiroji Komano

Director, Officer
Dept. Manager, New Business Development Dept.

1976 Joined the Company
1997 General Manager, Advanced Material Development Div. 2
2000 General Manager, Advanced Material Development Div. 1
2004 Officer; Deputy Dept. Manager, Research and Development Dept.
2004 Officer; Deputy Dept. Manager, Research and Development Dept. and General Manager, New Technology Development Section
2007 Officer (President and Director of TOKYO OHKA KOGYO AMERICA, INC.)
2011 Officer; Dept. Manager, New Business Development Dept.
2012 Director; Officer; Dept. Manager, New Business Development Dept. (to the present)

Harutoshi Sato

Director, Officer
Dept. Manager, Research and Development Dept.

1984 Joined the Company
2004 General Manager, Quality Assurance Div.
2007 General Manager, Advanced Material Development Div. 2
2008 General Manager, Advanced Material Development Div. 1
2009 Officer; Deputy Dept. Manager, Research and Development Dept. and General Manager, Advanced Material Development Div. 3
2011 Officer; Deputy Dept. Manager, Research and Development Dept. and General Manager, Advanced Material Development Div. 1
2012 Director; Officer; Dept. Manager, Research and Development Dept. (to the present)

Kunio Mizuki

Director, Officer
Dept. Manager, General Affairs Dept.

1985 Joined the Company
2005 General Manager, General Affairs Div.
2009 Officer; Deputy Dept. Manager, Administration Dept. and General Manager, General Affairs Div.
2012 Officer; Dept. Manager, General Affairs Dept.
2013 Director; Officer; Dept. Manager, General Affairs Dept. (to the present)

Nobuo Tokutake

Director, Officer
Dept. Manager, Manufacturing Dept.

1984 Joined the Company
2003 Chairman and President of TOK TAIWAN CO., LTD.
2007 General Manager, Quality Assurance Div.
2009 Senior General Manager, Production Control Div. and General Manager, Quality Assurance Div.
2013 Officer; Deputy Dept. Manager, Manufacturing Dept.
2015 Director; Officer; Dept. Manager, Manufacturing Dept. (to the present)

Keiichi Yamada

Director, Officer
Dept. Manager, Marketing Dept.

1983 Joined Japan Synthetic Rubber Co., Ltd. (present JSR Corporation)
2001 General Manager, Kyushu Office of JSR Corporation
2002 Business Director of Shipley Far East Ltd. (present Rohm and Haas Electronic Materials K.K.)
2004 General Manager Japan of Rohm and Haas Electronic Materials K.K.
2008 Senior Deputy General Manager, Electronic Material Marketing Control Div. of the Company
2012 Deputy Dept. Manager, Marketing Dept. of the Company
2013 Officer; Deputy Dept. Manager, Marketing Dept. of the Company
2016 Director; Officer; Dept. Manager, Marketing Dept. (to the present)

Hiroshi Kurimoto

Outside Director
(Executive Advisor, OILES CORPORATION)

1970 Joined OILES CORPORATION ("OILES")
1999 Director of OILES
2003 Director; Managing Operating Officer of OILES
2006 Representative Director, President and Chief Operating Officer of OILES
2011 Representative Director and Chairman of OILES
2014 Director (Outside Director) of the Company (to the present)
Director and Senior Advisor of OILES
2015 Senior Advisor of OILES
2016 Executive Advisor of OILES (to the present)

Noriko Sekiguchi

Outside Director
(Representative of Sekiguchi CPA Office)

1986 Joined Manufacturers Hanover Bank (present JPMorgan Chase Bank, N.A.)
1991 Joined Asahi-Shinwa Kaikeisha audit corporation (present KPMG AZSA LLC)
1994 Registered as certified public accountant
1998 Joined Japan Broadcasting Corporation
2001 Joined Triumph International (Japan) Ltd.
2002 Reregistered as certified public accountant
2004 Joined Ernst & Young ShinNihon (present Ernst & Young ShinNihon LLC)
2010 Representative of Sekiguchi CPA Office (to the present)
2011 Contract Monitoring Committee Member of Japan International Cooperation Agency ("JICA") (to the present)
2011 External Assessment Committee Member of JICA (to the present)
2012 Registered as certified tax accountant
2015 Director (Outside Director) of the Company (to the present)

Auditors



Katsumi Yoneda

Hajime Fujishita

Seiichi Shimbo

Hiroshi Saito

Hajime Fujishita

Standing Statutory Auditor

1983 Joined the Company
 2003 General Manager, Utsunomiya Plant
 2004 General Manager, Aso Plant
 2005 General Manager, Manufacturing Technology Div.
 2009 Officer (Chairman and President of TOK TAIWAN CO., LTD.)
 2012 Officer; Dept. Manager, Process Equipment Manufacturing Dept.
 2016 Standing Statutory Auditor (to the present)

Katsumi Yoneda

Outside Auditor

1974 Joined Meiji Life Insurance Company ("MLI") (present Meiji Yasuda Life Insurance Company)
 1998 General Manager, Finance Promotion Dept. of MLI
 2001 General Manager, Kinki Corporate Dept. of MLI
 2003 General Manager, Osaka Corporate Dept. of MLI
 2004 General Manager, Osaka General Corporate Dept. of Meiji Yasuda Life Insurance Company ("MYLI")
 2005 Senior General Manager, Osaka General Corporate Dept. of MYLI
 2005 Officer; General Manager, Nagoya Headquarters of MYLI
 2006 Executive Officer; General Manager, Nagoya Headquarters of MYLI
 2008 Managing Executive Officer of MYLI
 2010 Advisor of Meiji Yasuda Life Foundation of Health and Welfare
 2010 Chairman of Meiji Yasuda Life Foundation of Health and Welfare
 2013 Deputy President of Meiji Yasuda General Insurance Co., Ltd.
 Auditor of the Company (Outside Auditor) (to the present)

Seiichi Shimbo

Outside Auditor

1975 Joined Tokio Marine and Fire Insurance Company, Limited ("TMFI") (present Tokio Marine & Nichido Fire Insurance Co., Ltd.)
 2000 General Manager, Corporate Planning Dept. (responsible for planning) of TMFI
 2003 General Manager, Tokyo Automotive Unit, Automotive Sales Div. 3 of TMFI
 2004 Executive Officer; General Manager, Tokyo Automotive Unit, Automotive Sales Div. 3 of TMFI
 2006 Managing Executive Officer of Tokio Marine & Nichido Fire Insurance Co., Ltd.
 2009 Senior Managing Director of Non-Life Insurance Policy-holders Protection Corporation of Japan (to the present)
 2013 Auditor of the Company (Outside Auditor) (to the present)
 2015 Director of ITOCHU ENEX Co., Ltd. (Outside Director) (to the present)

Hiroshi Saito

Outside Auditor

1974 Joined Mitsubishi Trust and Banking Corporation ("MTB;" present Mitsubishi UFJ Trust and Banking Corporation)
 1998 Manager, Foreign Exchange and Money Market Div. of MTB
 2000 Manager, Asset Management Div. 2 of MTB
 2002 Manager, Investment Planning Div. of MTB
 2002 Officer and Manager, Investment Planning Div. of MTB
 2004 Officer and Manager of Kyoto Branch of MTB
 2006 Representative Director and Managing Director of Mitsubishi UFJ Trust and Banking Corporation
 2007 Representative Director and Senior Managing Director of Mitsubishi UFJ Financial Group, Inc. Director (Outside Director) of The Bank of Tokyo-Mitsubishi UFJ, Ltd.
 2011 Representative Director and President of Mitsubishi UFJ Trust Investment Technology Institute Co., Ltd. ("MTEC")
 2012 Corporate Auditor (Outside Corporate Auditor) of Maruzen Showa Unyu Co., Ltd.
 2014 Advisor of MTEC (to the present)
 2015 Auditor of the Company (Outside Auditor) (to the present)

Officers

Yoichi Shibamura

Executive Officer
 Dept. Manager,
 Accounting Dept.

Yoshio Hagiwara

Executive Officer
 Dept. Manager,
 Corporate Planning Dept.

Atsuro Shibagaki

Executive Officer
 President and CEO,
 TOK Advanced Materials
 Co., Ltd.

Jun Jang

Officer
 Vice President,
 TOK Advanced Materials
 Co., Ltd.

Kazufumi Sato

Officer
 Deputy Dept. Manager,
 Research and Development
 Dept.

Koichi Irino

Officer
 Chairman and President of
 TOK TAIWAN CO., LTD.

Yuichi Murakami

Officer
 Deputy Dept. Manager,
 Manufacturing Dept.

Noriaki Taneichi

Officer
 Deputy Dept. Manager,
 New Business Development
 Dept.

Kousuke Doi

Officer
 President, TOKYO OHKA
 KOGYO AMERICA, INC.

Tsukasa Honkawa

Officer
 Dept. Manager,
 Process Equipment
 Manufacturing Dept.

Financial Information

— Historical 10-Year Performance and Analysis —

Net Sales and Operating Income: Long-Term Trend (Past 10 Years)

Looking at TOK's performance over the past 10 years, we first note that business structural reform sparked by the collapse of Lehman Brothers in 2008 has transformed our earnings structure so that sales growth is now tied directly to profit growth.

In the fiscal year ended March 31, 2007, brisk momentum in the Equipment Business mainly for the LCD panel market combined with expansion in the Material Business drove consolidated net sales past ¥100 billion for the first time.

In the fiscal year ended March 31, 2009, immediately following the collapse of Lehman Brothers, we recorded our first operating loss since going public. After that, we concentrated on business structural reform and brought operating income back into the black in the following fiscal year ended March 31, 2010. We kept revamping operations. Among other things, we streamlined domestic plants, divested an overseas subsidiary, and exited the printing material business. In the fiscal years ended March 31, 2011 and 2012, we became able to stably secure a certain level of profit.

From the fiscal year ended March 31, 2013, we shifted our focus to new business growth. We concentrated on strengthening and expanding cutting-edge materials for semiconductors, working even harder to strengthen close relationships with customers overseas, and dramatically reshaping our business portfolio.

As a result, we achieved record-high operating income in the fiscal year ended March 31, 2015. Along with accelerating our growth strategy initiatives in pursuit of high-quality profits, we will also work in earnest to enhance capital efficiency as measured by indicators such as ROE.

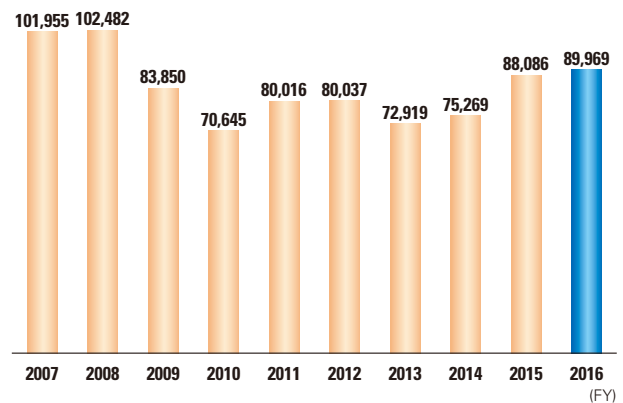
In the fiscal year ended March 31, 2016, income declined as smartphone market growth slowed (→ See page 70). Nevertheless, we are forging ahead towards record operating income in the fiscal year ending March 31, 2019 under the "TOK Medium-Term Plan 2018" launched in the fiscal year ending March 31, 2017.

Overseas Sales Ratio: Long-Term Trend (Past 10 Years)

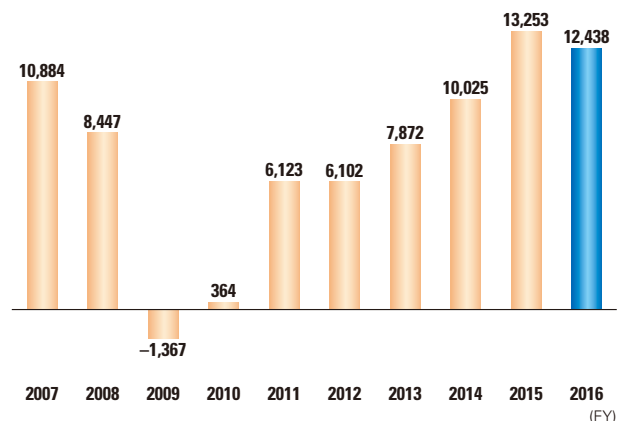
With a focus on our strategy of close relationships with customers, we have worked to grow market share for core products and provide products that are in tune with changing needs, especially with regard to overseas customers. As a result, overseas sales and the overseas sales ratio have stayed on an uptrend since the fiscal year ended March 31, 2010.

This has increased our exposure to fluctuation in foreign exchange rates, and we have taken steps to counter the risk of yen appreciation based on our financial risk management rules (→ See Message from the CFO on page 29).

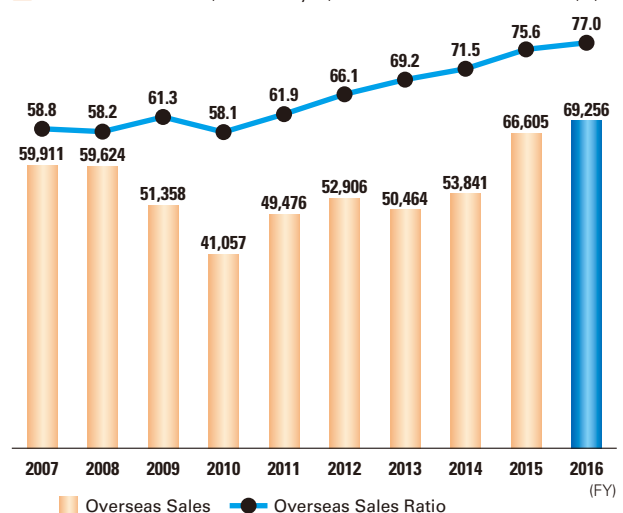
■ Net Sales (Millions of yen)



■ Operating Income (Loss) (Millions of yen)



■ Overseas Sales (Millions of yen)/Overseas Sales Ratio (%)



Performance by Segment: Long-Term Trend (Past 10 Years)*

Material Business

In the Material Business, reduced demand due to a global economic slump, as well as our exit from the printing material business contributed to a decline in sales levels from the fiscal year ended March 31, 2009. However, our focus on high added-value products and forging close relationships with customers helped the segment's sales to enter a growth trend from the fiscal year ended March 31, 2014, achieving a record high in the fiscal year ended March 31, 2016.

Equipment Business

In the Equipment Business, process equipment for LCD panels drove sales to a record high in the fiscal year ended March 31, 2007. However, subsequent structural changes in the LCD panel market led to a downtrend in orders. While there are periods of sales expansion due to factors such as the timing of acceptance inspections and shipments, sales growth is stagnant largely because the 3D packaging market has been slower to gain traction than was anticipated.

* Intersegment sales or transfers have not been eliminated.

Financial Condition: Long-Term Trend (Past 10 Years)

Total assets were on a downtrend through the fiscal year ended March 31, 2012, reflecting lackluster business activity. However, total assets returned to a growth trajectory from the fiscal year ended March 31, 2013 as earnings expanded.

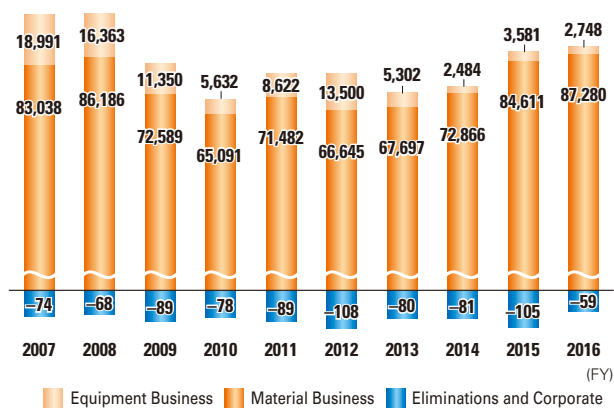
The equity ratio has hovered around 85% since the fiscal year ended March 31, 2012. It is on an uptrend as a result of our strictly following a policy of maintaining a certain level of cash reserves since the 1990s, as well as a reduced increase in total assets from the fiscal year ended March 31, 2008 and subsequent curbs on growth in total assets.

Cash Flows:

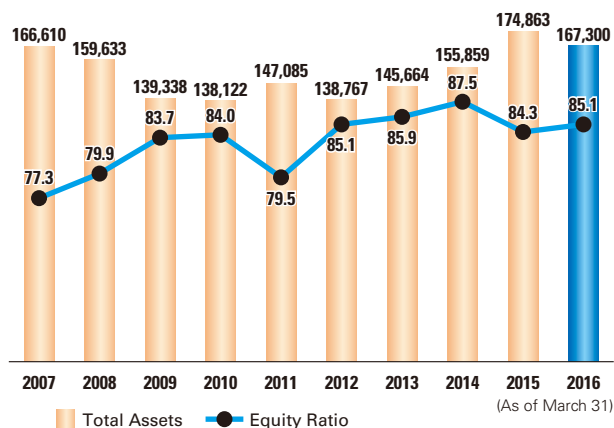
Long-Term Trend (Past 10 Years)

Free cash flows were negative in the four fiscal years ended March 31, 2007, 2008, 2012, and 2014. These results were attributable to increases in expenditures for investing activities such as payments into time deposits and long-term time deposits in three of the four fiscal years (the exception being the fiscal year ended March 31, 2007). There was not actually an issue with cash flows.

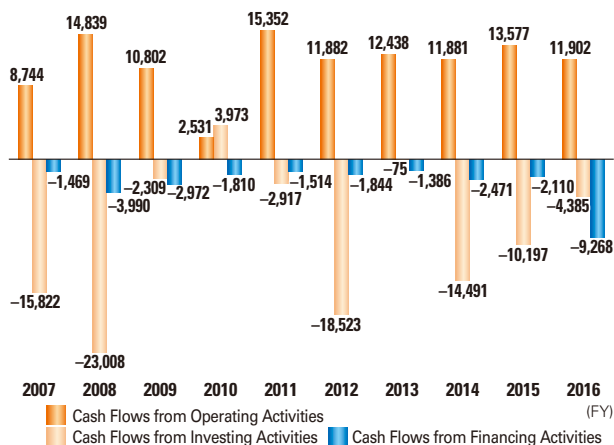
Net Sales by Business Segment (Millions of yen)



Total Assets (Millions of yen)/Equity Ratio (%)



Cash Flows (Millions of yen)



—FY2016 Results of Operations, Financial Position and FY2017 Performance Outlook—

Business Environment

In the fiscal year ended March 31, 2016, the global economy overall was marked by modest recovery. Although China's economy declined gradually, economic recovery continued in places such as the U.S. and the Eurozone, even though tempered by weakness. Furthermore, the Japanese economy stayed on a recovery track, aided by various government policies amid ongoing improvement in employment and income conditions against a backdrop of strong corporate earnings.

The yen averaged ¥120.8 against the U.S. dollar and was generally weaker year on year for the first half of the fiscal year ended March 31, 2016. The yen continued to trend toward depreciation through the third quarter of the fiscal year, but shifted to appreciation from the fourth quarter. As a result, the average rate for the full fiscal year was ¥119.3 against the U.S. dollar, roughly ¥10 weaker against the U.S. dollar than in the previous fiscal year.

Net Sales and Operating Income

In the fiscal year ended March 31, 2016, consolidated net sales increased ¥1,882 million, or 2.1%, from the previous fiscal year to ¥89,969 million. Net sales in the first half increased ¥2,747 million, or 6.5%, to ¥44,805 million. Net sales in the second half decreased ¥865 million, or 1.9%, to ¥45,163 million.

In the electronics industry, the leading source of demand for our products, business was lackluster overall, with a drop in demand for PCs and tablet devices as well as a slowdown in smartphone market growth.

Cost of sales increased ¥1,557 million, or 2.8%, from the previous fiscal year to ¥56,659 million. The increase was driven mainly by increases in depreciation and amortization and costs for consumables, despite declines in materials costs, inventory disposal losses, and storage and transportation costs, among others. The cost of sales ratio climbed 0.4 percentage points to 63.0%. As a result, gross profit

increased ¥324 million, or 1.0%, to ¥33,309 million.

Selling, general and administrative (SG&A) expenses increased ¥1,139 million, or 5.8%, from the previous fiscal year to ¥20,871 million, mainly due to an increase in patent royalty and depreciation and amortization, despite decreases in utilities costs (water, gas, and electricity) and consumables.

Operating income declined by ¥814 million, or 6.1%, from the previous fiscal year to ¥12,438 million, mainly due to the increase in SG&A expenses, despite the increase in gross profit.

Performance by Segment*

Material Business Segment

Sales in the Material Business increased by ¥2,668 million, or 3.2%, from the previous fiscal year to ¥87,280 million. Operating income decreased ¥152 million, or 0.9%, to ¥16,203 million, due to increases in expenses such as manufacturing expenses and SG&A expenses, despite an increase in sales of high value-added products and foreign exchange fluctuation gains.

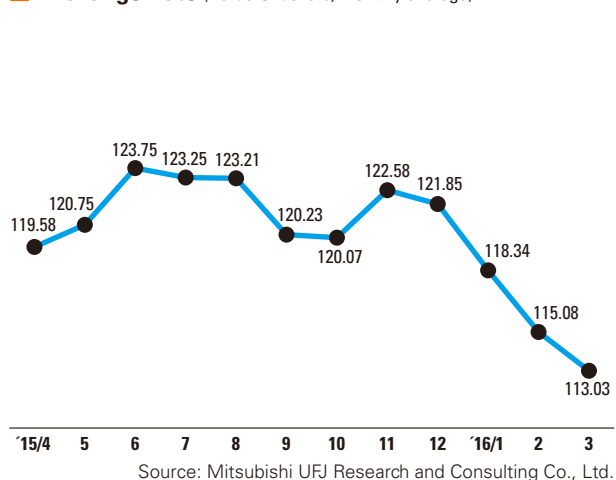
Electronic Functional Materials Division

In the electronic functional materials division, sales increased ¥1,315 million, or 2.6%, to ¥51,134 million.

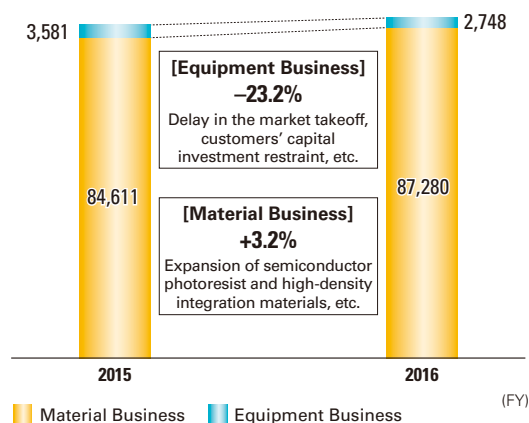
Sales of semiconductor photoresists were robust. We won new business in products for 3D memory, which is seen as a promising market for growth in terms of new applications for excimer laser photoresists. In addition, the South Korean subsidiary's efforts to expand sales of locally developed products and other initiatives delivered solid results. There was also a contribution from major users fully deploying cutting-edge processes in mass production. On the other hand, sales of photoresists for LCDs substantially decreased year on year as products for high-definition displays and general-purpose products were affected by changes in the demand environment and a drop in product

* Intersegment sales or transfers have not been eliminated.

Exchange Rate (Yen/U.S. dollars, Monthly average)



Net Sales by Segment Year-on-Year Comparison (Millions of yen)



prices. However, sales of high-density integration materials grew sharply thanks to successful R&D and sales activities that precisely reflect user needs, and higher sales of photoresists for semiconductor packages and photoresists for MEMS (microelectromechanical systems).

■ High Purity Chemicals Division

Sales in the high purity chemicals division increased ¥1,086 million, or 3.1%, from the previous fiscal year to ¥35,931 million.

Sales of photoresist chemicals used to manufacture semiconductors grew, buoyed by a rise in sales of high-quality products for cutting-edge processes—especially in Asia. In contrast, sales of photoresist-related chemicals used to manufacture LCDs fell, owing to sluggish sales in the domestic and Asian market.

Equipment Business Segment

■ Process Equipment Division

Sales and orders of the Zero Newton TSV process system fell, owing mainly to the delay in the takeoff of the 3D packaging market and users' capital expenditure curbs.

As a result, sales in the Equipment Business decreased ¥832 million or 23.2% year on year to ¥2,748 million. Operating loss expanded by ¥443 million from the previous fiscal year to a loss of ¥423 million.

Orders decreased ¥1,334 million, or 38.1%, from the previous fiscal year to ¥2,166 million. Orders in the first half totaled ¥1,210 million and in the second half ¥955 million. The year-end order backlog increased ¥67 million, or 6.3%, to ¥1,140 million.

Financial Condition

Total assets as of March 31, 2016 decreased by ¥7,563 million from the previous fiscal year-end to ¥167,300 million.

Total current assets as of March 31, 2016 decreased ¥3,939 million from the previous fiscal year-end to ¥87,114 million. This primarily reflects declines of ¥3,090 million in

cash and cash equivalents, ¥1,500 million in trade notes and accounts, and ¥465 million in "other" under current assets, partially due to a decrease in short-term loans receivable, which outweighed a ¥1,444 million increase in inventories.

Non-current assets declined ¥3,623 million from the previous fiscal year-end to ¥80,185 million. This was mainly attributable to decreases of ¥2,017 million in net defined benefit assets, ¥1,119 million in investment securities due to sales and declining market value of investment securities, and ¥1,458 million in property, plant and equipment reflecting depreciation, which outweighed an increase of ¥1,232 million in deferred tax assets.

Total liabilities decreased ¥2,834 million year on year to ¥20,029 million. Increases of ¥660 million in payables and ¥132 million in short-term loans payable were more than offset by decreases of ¥2,010 million in trade notes and accounts, ¥865 million in income taxes payable, and ¥411 million in long-term loans payable.

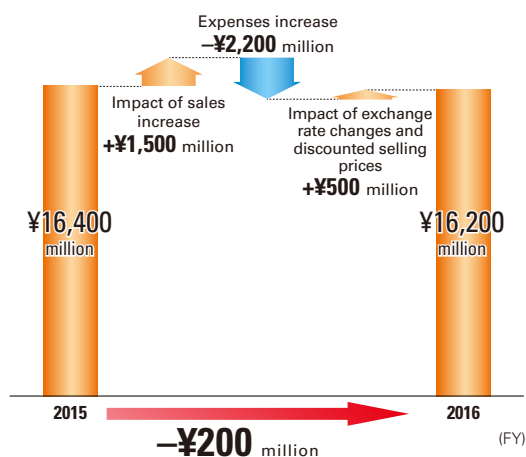
Total equity as of March 31, 2016 decreased ¥4,728 million from the previous fiscal year-end to ¥147,270 million. The decrease mainly reflects purchase of treasury stock of ¥6,269 million, cash dividends paid of ¥2,734 million, and remeasurements of defined benefit plans of ¥1,844 million, and a decrease in unrealized gain on available-for-sale securities of ¥1,043 million, despite recording profit attributable to owners of the parent of ¥7,716 million.

As a result, the equity ratio stood at 85.1% at the end of the fiscal year.

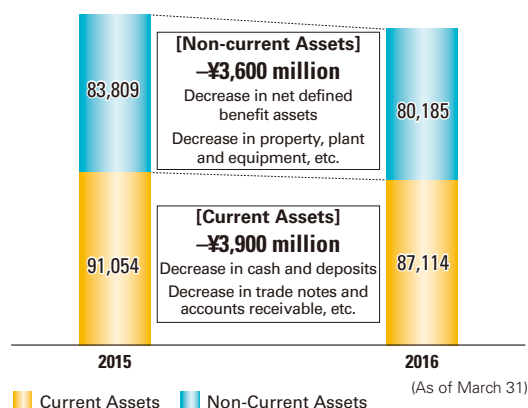
Cash Flows

Net cash provided by operating activities during the fiscal year under review came to ¥11,902 million, a decrease of ¥1,675 million from the end of the previous fiscal year. The decrease reflected a decrease in trade notes and accounts payable, and income before income taxes, which was partially offset by a decrease in trade notes and accounts receivable, foreign exchange loss—net, and an increase in depreciation and amortization.

■ Breakdown of Change in Material Business Segment Operating Income



■ Total Assets Year-on-Year Comparison (Millions of yen)

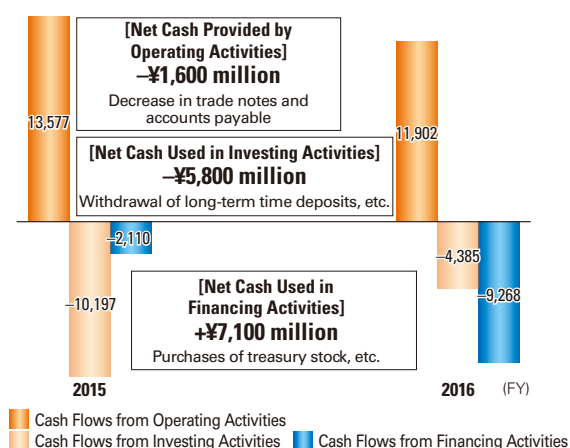


Net cash used in investing activities was ¥4,385 million, a decrease of ¥5,811 million from the previous fiscal year, mainly reflecting an inflow of cash from withdrawal of long-term time deposits, which outweighed outflows for purchases of property, plant and equipment and investment securities.

Net cash used in financing activities was ¥9,268 million, an increase of ¥7,157 million from the previous fiscal year. The increase reflected purchases of treasury stock and dividends paid.

As a result, cash and cash equivalents on March 31, 2016 decreased ¥2,049 million to ¥39,516 million from ¥41,565 million at the previous fiscal year-end.

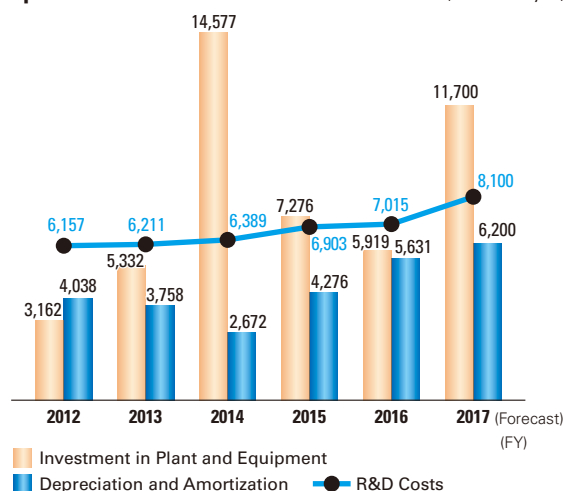
■ Cash Flows Year-on-Year Comparison (Millions of yen)



FY2017 Performance Outlook

Net sales in the fiscal year ending March 31, 2017 are forecast to decline 3.2% year on year to ¥87,100 million. Sales growth in the Equipment Business is expected to be absorbed by a decline in the Material Business due to the deceleration in semiconductor and LCD markets as well as the impact of yen appreciation. Operating income is forecast to decrease 38.1% year on year to ¥7,700 million, assuming an average exchange rate of ¥105.0 compared with ¥119.3 to \$1.0 in the previous fiscal year, as well as an increase in depreciation from aggressive investment in plant and equipment in Japan and overseas. Profit attributable to owners of the parent is projected to decline 31.3% year on year to ¥5,300 million, reflecting lower operating income.

■ Investment in Plant and Equipment/ Depreciation and Amortization/R&D Costs (Millions of yen)



■ Earnings Forecasts

	FY2016 (Results)	FY2017 (Forecasts)	
		Change	%
Net Sales	89,969	87,100	(2,869) (3.2)
Operating Income	12,438	7,700	(4,738) (38.1)
Profit Attributable to Owners of the Parent	7,716	5,300	(2,416) (31.3)

(FY)

Risk Information

The TOK Group conducts business activities in every region of the world in a diverse range of fields. When carrying out these business activities, it encounters a variety of risk factors that may have a detrimental impact on its financial conditions and management performance. The risks described below are solely those that the Group judged to be most significant as of March 31, 2016 and do not constitute all of its risk factors.

1. Industrial and economic change-related risk

The Group conducts its business within the electronics industry and a characteristic of this industry's market is its major cyclical changes in demand. In particular, materials and devices for semiconductors and LCDs are extremely affected

by such demand trends. Also, due to the rapid speed of technological innovation in this industry and the complexity and diversity of user needs, market conditions often change, as do prices in response to these changes. These factors may have an impact on the Group's business results.

2. Exchange rate fluctuation-related risk

The Group is focusing its energies into developing its businesses in the markets of North America, Europe, and Asia, which are expected to expand in the future, and has production and sales bases in these regions. Some of the Group's overseas transactions are yen-denominated, while for others it carries out risk hedging through forward exchange contracts. However, if exchange rate fluctuations are greater than forecast, this may have an impact on the Group's business results.

3. Research and development-related risk

In order for the Group to maintain its competitiveness in the electronics industry, where technological innovation occurs at a rapid pace, it carries out R&D to provide products that precisely reflect user needs. However, realizing technological innovation and anticipating changes to user needs are not easy tasks and regardless of how much management resources it invests into R&D, due to unforeseeable reasons it may not produce the hoped-for results. This may have an impact on the Group's business results.

4. Intellectual property-related risk

In carrying out its business activities, the Group has acquired a diverse portfolio of intellectual property, to which it grants licenses to third parties. Also, when it deems it necessary or useful to do so, it acquires licenses from third parties in order to use their intellectual property. If the Group is unable to safeguard and maintain its own intellectual property rights or acquire third party rights as anticipated, it may become a party in a dispute or lawsuit relating to these rights. The costs incurred due to these events may have an impact on the Group's business results.

5. Raw material procurement-related risk

The Group uses various raw materials in its production activities and it aims to stably procure these materials by maintaining a network of multiple suppliers. However, its production activities may be affected by a delay or suspension in the supply of raw materials due to problems at the manufacturers of these materials. This may have an impact on the Group's business results. In addition, an increase in the price of raw materials may have an impact on its business results.

6. Product liability-related risk

Within the process in which the Group supplies its products to customers who then use them, problems may occur that originate in a product defect. The Group has insurance to cover product liability compensation payments, but insurance may not be able to cover the entire amount that has to be paid. Therefore, if such a problem occurs it may have an impact on the Group's business results.

7. Natural disaster and accident-related risk

The Group has established manufacturing plants both within Japan and overseas. In the event of a natural disaster, such as an earthquake, or an unforeseen accident, such as a fire or

an explosion, it may have to suspend its production activities and delay product shipments. The Group may also have to pay repair or replacement costs at the damaged plant. These events may have an impact on the Group's business results.

8. Environment-related risk

The Group uses various types of chemical substance within its production activities and has strict rules to ensure they are handled safely. However, in the event of an accident involving the leakage of chemical substances, the Group's reputation within society may be affected, it may have to pay costs as compensation or in order to carry out counter measures, and it may have to suspend production activities. These factors may have an impact on the Group's business results.

In addition, the Group always observes the various environment-related laws and regulations in each country where it conducts its business activities. However, in the future these laws and regulations may be made stricter the Group may be forced to pay additional costs or limit its business activities. These factors may have an impact on the Group's business results.

9. Legal risk

When conducting its business activities throughout the world, the Group must acquire approval for business and investment activities and observe each government's regulations relating to restrictions on imports and exports. In addition, it must observe laws and regulations relating to trade, monopolies, international taxation, the environment, and recycling. If there are major revisions to any of these laws and regulations, or if the Group fails to precisely understand their requirements, or if for any reason it is unable to observe them, then this may have an impact on the Group's business results.

10. Overseas business activity-related risk

The Group carries out production and sales activities in North America and Asia and sales activities in Europe. However, in its overseas business activities it constantly faces the following types of risk; unexpected revisions to laws and regulations; a weakening of the industrial base; difficulties in securing the required personnel; and the possibility of terrorist attacks, conflicts, and natural disasters. If any of these risks occur, it may obstruct the Group's overseas business activities and have an impact on its business results.

11. Information leakage risk

The Group possesses confidential business information and also information relating to various other companies and individuals. It implements thorough measures to ensure the security of all the information it handles, but if due to some unforeseeable event information leaks outside of the Group, this may damage its reputation within society and it may have to pay liability payments for the damage caused to a company or individual whose information was leaked. These factors may have an impact on the Group's business results.

Consolidated Balance Sheets

TOKYO OHKA KOGYO CO., LTD. and Consolidated Subsidiaries
March 31, 2016 and 2015

ASSETS	Millions of yen		Thousands of U.S. dollars
	2016	2015	2016
CURRENT ASSETS			
Cash and cash equivalents	¥ 37,516	¥ 39,565	\$ 334,964
Time deposits	13,360	14,401	119,287
Receivables:			
Trade notes and accounts	17,921	19,422	160,009
Securities	2,000	2,000	17,857
Other	303	1,089	2,826
Allowance for doubtful accounts	(37)	(35)	(335)
Inventories	12,999	11,555	116,070
Deferred tax assets	1,497	1,821	13,370
Prepaid expenses and other current assets	1,553	1,232	13,754
Total current assets	87,114	91,054	777,805
PROPERTY, PLANT AND EQUIPMENT			
Land	9,098	9,205	81,232
Buildings and structures	59,019	55,881	526,961
Machinery and equipment	55,226	55,382	493,097
Furniture and fixtures	18,190	16,531	162,412
Leased assets	—	0	—
Construction in progress	3,176	5,420	28,363
Total	144,711	142,423	1,292,069
Accumulated depreciation	(96,798)	(93,051)	(864,273)
Net property, plant and equipment	47,913	49,371	427,796
INVESTMENTS AND OTHER ASSETS			
Investment securities	9,524	10,808	85,044
Investments in and advanced to an unconsolidated subsidiary and associated companies	953	789	8,511
Net defined benefit asset	946	2,964	8,449
Long-term time deposits	18,000	18,000	160,714
Deferred tax assets	1,293	60	11,552
Other assets	1,554	1,815	13,878
Total investments and other assets	32,272	34,437	288,149
TOTAL	¥167,300	¥174,863	\$1,493,751

LIABILITIES AND EQUITY	Millions of yen		Thousands of U.S. dollars
	2016	2015	2016
CURRENT LIABILITIES			
Payables			
Trade notes and accounts	¥ 7,787	¥ 9,797	\$ 69,531
Construction and other	3,717	3,051	33,196
Income taxes payable	1,310	2,176	11,699
Accrued expenses	3,550	3,633	31,698
Deferred tax liabilities	18	40	168
Other current liabilities	745	595	6,656
Total current liabilities	17,130	19,295	152,950
LONG-TERM LIABILITIES			
Long-term loans payable	137	549	1,228
Deferred tax liabilities	2,137	2,036	19,084
Net defined benefit liability	150	134	1,342
Other long-term liabilities	473	848	4,228
Total long-term liabilities	2,899	3,569	25,884
EQUITY			
Common stock—authorized, 197,000,000 shares in 2016 authorized, 197,000,000 shares in 2015 issued, 45,100,000 shares in 2016 issued, 46,600,000 shares in 2015	14,640	14,640	130,718
Capital surplus	15,207	15,207	135,784
Retained earnings	110,359	109,500	985,350
Treasury stock—at cost, 1,846,632 shares in 2016 and 1,598,326 shares in 2015	(5,239)	(3,183)	(46,784)
Accumulated other comprehensive income:			
Unrealized gain on available-for-sale securities	2,834	3,877	25,304
Foreign currency translation adjustments	4,823	5,813	43,069
Remeasurements of defined benefit plans	(253)	1,590	(2,267)
Total	142,371	147,447	1,271,176
Stock acquisition rights	309	191	2,761
Non-controlling interests	4,589	4,360	40,978
Total equity	147,270	151,999	1,314,916
TOTAL	¥167,300	¥174,863	\$1,493,751

Consolidated Statements of Income

TOKYO OHKA KOGYO CO., LTD. and Consolidated Subsidiaries
Years Ended March 31, 2016 and 2015

	Millions of yen		Thousands of U.S. dollars
	2016	2015	2016
NET SALES	¥89,969	¥88,086	\$803,296
COST OF SALES	56,659	55,101	505,890
Gross profit	33,309	32,984	297,405
SELLING, GENERAL AND ADMINISTRATIVE EXPENSES	20,871	19,731	186,350
Operating income	12,438	13,253	111,054
OTHER INCOME (EXPENSES)			
Interest and dividend income	287	229	2,569
Foreign exchange (loss) gain—net	(642)	1,459	(5,735)
Gain (loss) on valuation of derivatives	270	(460)	2,418
Equity in earnings of an associate	219	101	1,961
Loss related to a new factory	—	(496)	—
Operation preparation expense	(339)	—	(3,033)
Loss on impairment of long-lived assets	(752)	(665)	(6,722)
Gain on revision of retirement benefit plan	—	622	—
Other—net	296	258	2,647
Other (expenses) income—net	(660)	1,048	(5,895)
INCOME BEFORE INCOME TAXES AND NON-CONTROLLING INTERESTS ...	11,777	14,301	105,159
INCOME TAXES			
Current	3,031	4,161	27,065
Prior years	18	40	165
Deferred	468	663	4,180
Total income taxes	3,518	4,865	31,411
NET INCOME BEFORE NON-CONTROLLING INTERESTS	8,259	9,435	73,748
NON-CONTROLLING INTERESTS IN NET INCOME	543	617	4,848
PROFIT ATTRIBUTABLE TO OWNERS OF THE PARENT	¥ 7,716	¥ 8,818	\$ 68,899

PER SHARE OF COMMON STOCK	Yen		U.S. dollars
	2016	2015	2016
Basic profit	¥177.30	¥196.61	\$1.58
Diluted profit	176.17	195.71	1.57
Cash dividends applicable to the year	64.00	60.00	0.57

Consolidated Statements of Comprehensive Income

TOKYO OHKA KOGYO CO., LTD. and Consolidated Subsidiaries
Years Ended March 31, 2016 and 2015

	Millions of yen		Thousands of U.S. dollars
	2016	2015	2016
NET INCOME BEFORE NON-CONTROLLING INTERESTS	¥ 8,259	¥ 9,435	\$ 73,748
OTHER COMPREHENSIVE INCOME			
Unrealized (loss) gain on available-for-sale securities	(1,043)	1,471	(9,314)
Foreign currency translation adjustments	(1,127)	3,168	(10,068)
Remeasurements of defined benefit plans	(1,844)	210	(16,468)
Share of other comprehensive income in an associate	(55)	72	(496)
Total other comprehensive income	(4,071)	4,921	(36,348)
COMPREHENSIVE INCOME	¥ 4,188	¥14,357	\$ 37,400
TOTAL COMPREHENSIVE INCOME ATTRIBUTABLE TO			
Owners of the parent	¥ 3,838	¥13,377	\$ 34,275
Non-controlling interests	349	980	3,124

Consolidated Statements of Changes in Equity

TOKYO OHKA KOGYO CO., LTD. and Consolidated Subsidiaries
Years Ended March 31, 2016 and 2015

	Thousands		Millions of yen									
	Number of shares of common stock outstanding	Common stock	Capital surplus	Retained earnings	Treasury stock	Accumulated other comprehensive income (loss)			Total	Subscription rights to shares	Non-controlling interests	Total equity
						Unrealized (loss) gain on available-for-sale securities	Foreign currency translation adjustments	Remeasurements of defined benefit plans				
BALANCE, APRIL 1, 2014	44,823	¥14,640	¥15,207	¥103,162	¥(3,280)	¥ 2,406	¥2,936	¥ 1,380	¥136,453	¥ 83	¥3,425	¥139,962
Cumulative effect of changes in accounting policy				129					129			129
Restated balance	44,823	14,640	15,207	103,292	(3,280)	2,406	2,936	1,380	136,583	83	3,425	140,092
Profit attributable to owners of the parent	—	—	—	8,818	—	—	—	—	8,818	—	—	8,818
Cash dividends paid:												
Final for prior year, ¥28.0 per share	—	—	—	(1,260)	—	—	—	—	(1,260)	—	—	(1,260)
Interim for current year, ¥30.0 per share	—	—	—	(1,350)	—	—	—	—	(1,350)	—	—	(1,350)
Purchase of treasury stock	(0)	—	—	—	(2)	—	—	—	(2)	—	—	(2)
Disposal of treasury stock	51	—	—	—	99	—	—	—	99	—	—	99
Retirement of treasury stock	—	—	—	—	—	—	—	—	—	—	—	—
Net change in the year	—	—	—	—	—	1,471	2,877	210	4,558	108	934	5,601
BALANCE, MARCH 31, 2015	44,873	14,640	15,207	109,500	(3,183)	3,877	5,813	1,590	147,447	191	4,360	151,999
Cumulative effect of changes in accounting policy												—
Restated balance	44,873	14,640	15,207	109,500	(3,183)	3,877	5,813	1,590	147,447	191	4,360	151,999
Profit attributable to owners of the parent	—	—	—	7,716	—	—	—	—	7,716	—	—	7,716
Cash dividends paid:												
Final for prior year, ¥30.0 per share	—	—	—	(1,350)	—	—	—	—	(1,350)	—	—	(1,350)
Interim for current year, ¥32.0 per share	—	—	—	(1,384)	—	—	—	—	(1,384)	—	—	(1,384)
Purchase of treasury stock	(1,750)	—	—	—	(6,269)	—	—	—	(6,269)	—	—	(6,269)
Disposal of treasury stock	45	—	—	(0)	89	—	—	—	88	—	—	88
Retirement of treasury stock	—	—	—	(4,123)	4,123	—	—	—	—	—	—	—
Net change in the year	—	—	—	—	—	(1,043)	(990)	(1,844)	(3,877)	118	229	(3,530)
BALANCE, MARCH 31, 2016	43,169	¥14,640	¥15,207	¥110,359	¥(5,239)	¥ 2,834	¥4,823	¥ (253)	¥142,371	¥309	¥4,589	¥147,270

	Thousands of U.S. dollars										
	Common stock	Capital surplus	Retained earnings	Treasury stock	Accumulated other comprehensive income (loss)			Total	Subscription rights to shares	Non-controlling interests	Total equity
					Unrealized (loss) gain on available-for-sale securities	Foreign currency translation adjustments	Remeasurements of defined benefit plans				
BALANCE, MARCH 31, 2015	\$130,718	\$135,784	\$977,686	\$(28,424)	\$34,619	\$51,909	\$ 14,201	\$1,316,495	\$1,707	\$38,931	\$1,357,134
Cumulative effect of changes in accounting policy											—
Restated balance	130,718	135,784	977,686	(28,424)	34,619	51,909	14,201	1,316,495	1,707	38,931	1,357,134
Profit attributable to owners of the parent	—	—	68,899	—	—	—	—	68,899	—	—	68,899
Cash dividends paid:											
Final for prior year, \$0.27 per share	—	—	(12,054)	—	—	—	—	(12,054)	—	—	(12,054)
Interim for current year, \$0.29 per share	—	—	(12,358)	—	—	—	—	(12,358)	—	—	(12,358)
Purchase of treasury stock	—	—	—	(55,973)	—	—	—	(55,973)	—	—	(55,973)
Disposal of treasury stock	—	—	(5)	796	—	—	—	791	—	—	791
Retirement of treasury stock	—	—	(36,817)	36,817	—	—	—	—	—	—	—
Net change in the year	—	—	—	—	(9,314)	(8,840)	(16,468)	(34,624)	1,053	2,047	(31,522)
BALANCE, MARCH 31, 2016	\$130,718	\$135,784	\$985,350	\$(46,784)	\$25,304	\$43,069	\$ (2,267)	\$1,271,176	\$2,761	\$40,978	\$1,314,916

Consolidated Statements of Cash Flows

TOKYO OHKA KOGYO CO., LTD. and Consolidated Subsidiaries
Years Ended March 31, 2016 and 2015

	Millions of yen		Thousands of U.S. dollars
	2016	2015	2016
OPERATING ACTIVITIES:			
Income before income taxes and non-controlling interests	¥ 11,777	¥ 14,301	\$ 105,159
Adjustments for:			
Income taxes paid	(4,157)	(3,935)	(37,121)
Depreciation and amortization	5,631	4,276	50,277
Provision for doubtful accounts	(18)	(94)	(160)
Foreign exchange loss (gain)—net	934	(1,423)	8,346
Equity in earnings of an associate	(219)	(101)	(1,961)
Loss on impairment of long-lived assets	752	665	6,722
(Gain) loss on valuation of derivatives	(270)	460	(2,418)
Increase in net defined benefit asset	(686)	(1,855)	(6,125)
Increase in net defined benefit liability	16	39	147
Decrease (increase) in trade notes and accounts receivable	1,200	(2,119)	10,720
Increase in inventories	(1,755)	(368)	(15,677)
(Decrease) increase in trade notes and accounts payable	(1,522)	3,121	(13,597)
Decrease in advances from customers	(5)	(692)	(45)
Other—net	224	1,302	2,007
Net cash provided by operating activities	11,902	13,577	106,274
INVESTING ACTIVITIES:			
Deposit for time deposits—net	(12)	(70)	(109)
Purchases of property, plant and equipment	(5,335)	(7,052)	(47,638)
Purchases of intangible assets	(177)	(456)	(1,586)
Payments into long-term time deposits	(14,000)	(13,000)	(125,000)
Withdrawal of long-term time deposits	15,000	13,000	133,928
Purchases of investment securities	(345)	(2,284)	(3,084)
Collection of loans receivable	373	85	3,332
Other—net	111	(419)	999
Net cash used in investing activities	(4,385)	(10,197)	(39,159)
FINANCING ACTIVITIES:			
Repayments of short-term loans payable	(143)	—	(1,279)
Proceeds of long-term loans payable	—	523	—
Repayments of long-term loans payable	(122)	(122)	(1,089)
Dividends paid	(2,729)	(2,605)	(24,368)
Dividends paid for non-controlling interests	(120)	(45)	(1,077)
Disposal of treasury stock	152	148	1,360
Purchases of treasury stock	(6,304)	(2)	(56,285)
Other—net	(1)	(6)	(15)
Net cash used in financing activities	(9,268)	(2,110)	(82,754)
FOREIGN CURRENCY TRANSLATION ADJUSTMENTS ON CASH AND CASH EQUIVALENTS	(298)	1,138	(2,663)
NET (DECREASE) INCREASE IN CASH AND CASH EQUIVALENTS ...	(2,049)	2,408	(18,302)
CASH AND CASH EQUIVALENTS, BEGINNING OF YEAR	41,565	39,157	371,124
CASH AND CASH EQUIVALENTS, END OF YEAR	¥ 39,516	¥ 41,565	\$ 352,821

Corporate Information / Stock Information

Data

Corporate Information (As of March 31, 2016)

Corporate Name	TOKYO OHKA KOGYO CO., LTD.
Established	October 25, 1940
Headquarters	150 Nakamaruko, Nakahara-ku, Kawasaki-shi, Kanagawa 211-0012, JAPAN
Number of Employees	1,564 (Consolidated)
Paid-In Capital	¥14,640,448,000
Web Site	http://www.tok.co.jp/eng
Stock Listing	Tokyo
Investor Relations Contact	Public Relations Division 150 Nakamaruko, Nakahara-ku, Kawasaki-shi, Kanagawa 211-0012, JAPAN TEL. +81-44-435-3000 FAX. +81-44-435-3020



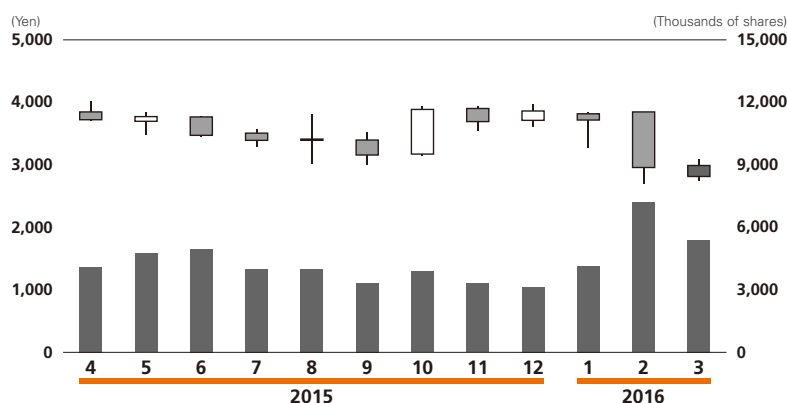
Head office

Stock Information (As of March 31, 2016)

General Information

Total Number of Shares Authorized	197,000,000
Number of Shares Issued	45,100,000
Number of Shareholders	6,052

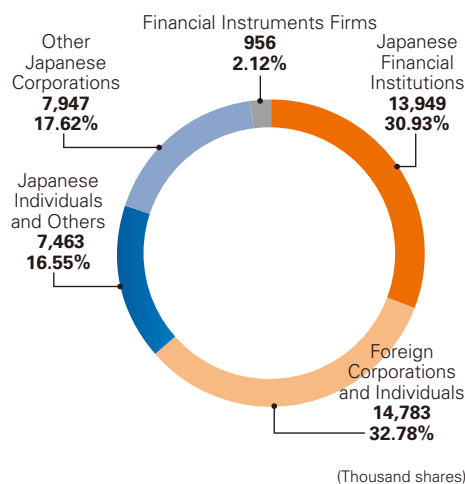
Change of Stock Price and Turnover



Major Shareholders

Name	Number of Shares Held (Thousands)	Ratio of Shareholding (%)
BNYM TREATY DTT 15	2,373	5.49
Meiji Yasuda Life Insurance Company	1,826	4.22
Japan Trustee Services Bank, Ltd. (Trust Account)	1,776	4.11
The Master Trust Bank of Japan, Ltd. (Trust Account)	1,739	4.02
MLPFS CUSTODY ACCOUNT	1,494	3.45
The Bank of Tokyo-Mitsubishi UFJ, Ltd.	1,207	2.79
The Bank of Yokohama, Ltd.	1,026	2.37
Tokyo Ohka Foundation for The Promotion of Science and Technology	984	2.28
Mitsubishi UFJ Trust and Banking Corporation	953	2.21
Mitsubishi UFJ Capital Co., Ltd.	860	1.99

Classification of Shareholders



Notes:

- The Company owns 1,846 thousand shares of treasury stock which is excluded from the above Major shareholders.
- The ratio of shareholding is calculated based on the number of shares (43,253,368 shares) obtained by subtracting the number of treasury stock from the total number of shares issued.

Global Network

1 TOKYO OHKA KOGYO CO., LTD.

TOKYO OHKA KOGYO AMERICA, INC.

Established: April 1989

Business: Manufacture and sales of photoresists and related chemicals, etc.

2 Headquarters/Oregon Plant

3 Sales Office (California)

TOK TAIWAN CO., LTD.

Established: January 1998

Business: Manufacture and sales of photoresists and related chemicals, etc.

4 Headquarters (Hsinchu City)

Miaoli Plant (Miaoli City)

Tongluo Plant (Miaoli County)

CHANG CHUN TOK (CHANGSHU) CO., LTD.

Established: October 2004

Business: Manufacture and sales of high-purity chemicals, etc.

5 Headquarters/Changshu Plant (China)

TOKYO OHKA KOGYO EUROPE B.V.

Established: December 2005

Business: Manufacture and sales of photoresists and related chemicals, etc.

6 Headquarters (The Netherlands)

TOK Advanced Materials Co., Ltd.

Established: August 2012

Business: Development, manufacture, and sales of photoresists and related chemicals

7 Headquarters/Incheon Plant (South Korea)

8 Shanghai Representative Office

9 Singapore Office





tok TOKYO OHKA KOGYO CO., LTD.

150 Nakamaruko, Nakahara-ku, Kawasaki-shi,
Kanagawa 211-0012, JAPAN

<http://www.tok.co.jp/eng>

