

# The Nippon Synthetic Chemical Industry Co., Ltd.

(4201 TSE 1st Section)

Issue Date: December 1, 2015

## EVOH resin "Soarnol" remains steady in the U.S. and Europe primarily for use in food packaging

### Operating margin improved as a surge in the price of raw materials in the previous year receded

The sales in Q2 FY2016-3 amounted to 52.7 billion yen, a slight increase year-on-year. However, given the withdrawal from unprofitable businesses in the previous year which scaled down the sales volume, the Company achieved more sales than the previous year with the sales of the existing products more than offsetting the decline in sales associated with the withdrawn businesses. While the sales volume of "OPL Film," an optical use PVOH film for polarizing plates, only slightly increased due to inventory shortage related to regular repairs conducted early in the period and production restrictions caused by prototype manufacturing, sales of "Soarnol," an EVOH resin mainly used in food packaging remained steady, contributing to the sales growth year-on-year. "Shikoh," an UV curable resin, has also continued showing strong results as it has increasingly be applied for LCD panels.

As a temporary surge in the price of raw materials (vinyl acetate monomers) in Europe in the previous year has receded, the operating income recorded 7 billion yen, an increase by about 500 million yen year-on-year, with the operating margin improving to 13.2% from 10.6% for the full year of the previous fiscal year.

### Focus on developing product groups with the operating income of some 1 billion yen following two core products

The Company announced "NICHIGO 20," a new mid-term management plan (for FY2017-3 to FY2021-3). The Company sets the numerical targets in FY2021-3, the final fiscal year, to be the sales of 140 billion yen (+29.6% from FY2016-3 forecast; the same shall apply hereinafter), the operating income of 20 billion yen (+42.9%) and the operating margin of 14.3%. The Company will seek to achieve the plan based on (i) the continuous investment in the core business and (ii) the establishment of the new core business following "OPL Film" and "Soarnol". As to "OPL Film," one of core products, as the polarizing plate market which is a user of OPL Film continues to expand, the Company now focuses on establishment of the production technology to bring thinner films (20μm) in the market as early as possible. The Company also aims at an increase in demand for another core product, "Soarnol" through development of new applications. As to the establishment of the new core business, in an effort to develop business groups with the operating income of some 1 billion yen, the Company will promote expansion of the sales of "Coponyl," pressure sensitive adhesives for electronic and optical use and "Hi-Selon," a water-soluble PVOH film for use in packaging materials of liquid detergent. New production lines for "Coponyl" and "Hi-Selon" are scheduled to start operations in Q1 FY2017-3, which is expected to increase the sales and income as the production capacity expands.

### Follow-up Report (Q2 FY2016-3)

SQUADD Research &amp; Consulting, Inc.

Tomoko Okuyama/Sadao Sakamoto

Company Information	
Name	NIPPON GOHSEI
Equity Code	4201
Market Section	TSE's 1st Section
Location	2-4, Komatsubara-cho, Kita-ku, Osaka
President	Katsumi Kimura
Foundation Date	1927/3/30
Capital	17,989 mil yen
Listed Date	May of 1949
URL	<a href="http://www.nichigo.co.jp/">http://www.nichigo.co.jp/</a>
Industry	Material > Chemistry > Synthetic Resins
Accounting Period	March

Key Indicators As of 2015/11/27	
Stock Price	911 yen
Yearly High	966 yen (2015/5/11)
Yearly Low	662 yen (2015/2/5)
Shares Outstanding	98,369,186 Stock
Unit of Trading	1,000 Stock
Market Cap	89,614 mil yen
Dividend (Est)	20.00 yen (FY2016/3)
Div-Yield (Est)	2.20 (FY2016/3)
EPS (Est)	97.54 yen (FY2016/3)
EPS (Act)	68.25 yen (FY2015/3)
PER (Est)	9.34 times (FY2016/3)
PBR (Act)	1.01 times (2015/9)

(mil yen)											
FY		Revenue	y/y	Operating income	Operating margin	Ordinary profit	Ordinary profit margin	Net income*	Net margin	EBITDA	EPS (yen)
Mar-14	Actual	111,151	120.8%	16,229	14.6%	16,712	15.0%	8,018	7.2%	23,358	82.32
Mar-15	Actual	105,202	94.6%	11,186	10.6%	11,296	10.7%	6,648	6.3%	18,238	68.25
Mar-16	Company Estimate	108,000	102.7%	14,000	13.0%	14,300	13.2%	9,500	8.8%	22,200	97.54
Cumulative		Revenue	y/y	Operating income	Operating margin	Ordinary profit	Ordinary profit margin	Net income*	Net margin	EBITDA	EPS (yen)
2015/3-2Q	Actual	52,529	106.3%	6,465	12.3%	6,547	12.5%	4,189	8.0%	9,731	n.a.
2016/3-2Q	Actual	52,665	100.3%	6,970	13.2%	7,133	13.5%	5,333	10.1%	10,808	n.a.
2016/3-2Q	Progress Rate	48.8%	n.a.	49.8%	n.a.	49.9%	n.a.	56.1%	n.a.	48.7%	n.a.

\*Net income attributable to parent company shareholders

1/27

This report is prepared by SQUADD Research & Consulting Inc. ("SQUADD") for the purpose of providing information to investors, and not for solicitation of securities trading. Although this is based on the information and materials that SQUADD judged reliable, there is no guarantee of accuracy, credibility, completeness, suitability and timeliness. SQUADD shall not take any responsibility whatsoever for any results including direct or indirect damage arising from the use of, or reliance to, this report. Investors should take their own responsibility for securities and other transactions. The intellectual property right of this report belongs to SQUADD, and any copy, transmission or quote of any contents without permission is legally prohibited.

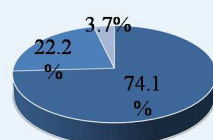
## Index

<b>1</b>	<b>Business Overview</b>	
(1)	Segment Composition	P3
(2)	Core Products Overview	P5
<b>2</b>	<b>Company Overview</b>	
(1)	Topics for 1st Half of FY2016-3	P7
(2)	Affiliates	P8
(3)	Major Facilities/Capital Investment	P9
(4)	Ownership	P10
<b>3</b>	<b>Performance Highlight</b>	
(1)	Financial Results for 1st Half of FY2016-3	P11
<b>4</b>	<b>Business Overview by Segment</b>	
(1)	Chemical Products	P13
(2)	Trading and Others	P16
<b>5</b>	<b>Financial Analysis</b>	
(1)	Cost Overview	P17
(2)	Balance Sheet Overview	P19
<b>6</b>	<b>Management Plan and Growth Strategy</b>	
(1)	Management Plan	P21
(2)	Growth Strategy	P22
<b>7</b>	<b>Stock Price Trend and Investment Return Analysis</b>	
(1)	Stock Price Trend	P24
(2)	Investment Return Analysis	P25

## 1. Business Overview

### 1-(1) Segment Composition

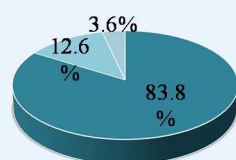
Revenue composition  
(FY2015-3)



■ Synthetic Resins  
■ Organic synthesis  
■ Others



Revenue composition  
(FY2016-3-2Q cum)



■ Chemical Products  
■ Trading and Others  
■ Others

### ◆Segments have been reclassified into "Chemical Products" and "Trading and Others" from FY2016-3.

The Nippon Synthetic Chemical Industry (hereinafter referred to as "Nippon Gohsei" or "Company") is a maker of chemical products centering on acetic acid resins. Since its establishment in 1927, the Company has developed the business with an acetic acid-based organic synthesis as a basic technology. Currently, (1) PVOH (or PVA: Polyvinyl alcohol), (2) EVOH (Ethylene-vinyl alcohol copolymer) and (3) Specialty polymers (pressure sensitive adhesives) are main businesses.

Triggered by the withdrawal from some industrial chemicals and fine chemicals in the previous fiscal year, the Company reviewed the business segmentation, entering in FY2016-3. After the review, industrial chemicals and fine chemicals have been integrated into synthetic resins which have been renamed to "Chemical Products," and resale products handled by Taisei Kayaku, the Company's wholly-owned subsidiary, and the business of Kansaikagakukogyo, another wholly-owned subsidiary, have been reclassified into "Trading and Others". The annual sales of the industrial chemicals and fine chemicals which were integrated away from the organic synthesis segment into the synthetic resins segment are around 10 billion yen with the operating income generally at the balanced level.

The total sales in FY2015-3 of 105.2 billion yen was consisted of synthetic resins (74%), organic synthesis (22%) and others (4%) based on the old segmentation, and almost all of the operating income (11.2 billion yen) was generated from the synthetic resins segment. After the change to segmentation, the chemical products segment has become the major segment, accounting for 84% of the total sales and more than 95% of the operating income (in Q2 FY2016-3 on a cumulative basis).

### ◆Business Segment

Old	New	Business outline	
Synthetic Resins	Chemical Products	PVOH	Industrial material for adhesive, emulsifiers and suspension agents, processing agents, etc.
		PVOH Film	Optical-use film for LCD panels etc.
		EVOH	Food packaging film, material for fuel tank
		Specialty Polymer	Adhesives for polarizing plates, hard-coated optical materials
Organic Synthesis	Chemical Products	Acetyl Chemicals	Vinyl acetate monomers, acetic acid, other basic chemicals
		Fine Chemicals	Chemical products used as a raw material for pharmaceuticals and food preservatives, etc.
	Trading/Others	Trading/Others	Resale products
Others	Others	Logistics, equipment maintenance, environmental analysis, insurance agent	

Source: financial results materials and company HP.

## ◆Main Products

PVOH		Specialty Polymer	
Gohsenol Gohsenx Gohsenol EG		Coponyl	
IT and Electronic-use Materials OPL Film		Shikoh	
Functional Film Hi-Selon		Mowvinyl	
		Nichigo Polyester	

**PVOH**  
Biodegradable and water-soluble synthetic resin, used as material for adhesive, paper, emulsifiers and suspension agents, fiber, and films as well as additive to processing agent for pharmaceuticals and cosmetics.  
Optical-use PVOH film. It is used to make polarizing film, an indispensable element of LCD.  
Water-soluble PVOH film. It is an optimal film for packaging with excellent heat-sealing property and printability.

**Specialty Polymer**  
Acrylic copolymer, used for pressure sensitive adhesives such as sticker and tape as well as to produce polarizing plate for liquid crystal TV.  
UV curable resin. With its high adhesion and solidity it is used as a hard coating compound for plastic and optical film.  
Synthetic resin emulsion. It is used for water soluble paint, construction material, pressure sensitive adhesives, paper processing, and functional coating.  
It has great adhesive property for plastic film, molded products, and metals such as aluminum and copper.

EVOH・EVA*		BVOH**	
Soarnol G. Soarnol		Nichigo G-Polymer	
Soarlite	EVOH for engineering plastic.	Industrial Chemicals	Fine Chemicals
Soarblen	EVA that contains more vinyl acetate used for PVC modifier.	Vinyl acetate monomer	Sodium acetate
Soaresin	Resin used as an agent for modifier of resin or as a stabilizer for extrusion.	Acetic acid	Acetoacetic esters

**EVOH・EVA\***  
Ethylene-vinyl alcohol copolymer. It is used for film, bottles and tubes for food packaging as well as construction material and gasoline tanks.  
EVA for engineering plastic.  
EVA that contains more vinyl acetate used for PVC modifier.  
Resin used as an agent for modifier of resin or as a stabilizer for extrusion.

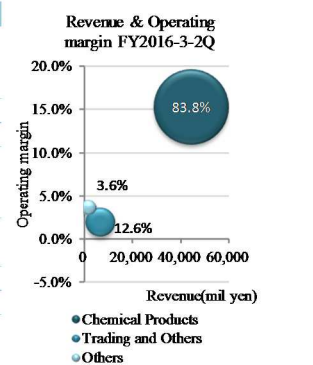
**BVOH\*\***  
Amorphous vinyl alcohol type resin. It is a high-function new material that has higher gas barrier property than EVOH as well as moldability and biodegradability.  
Raw material for copolymers, adhesives, etc.  
Food, aroma, etc.  
Raw material for pharmaceuticals, food preservatives  
Raw material for organic chemicals

\*EVA: ethylene-vinyl acetate, \*\*BVOH: butenediol vinylalcohol copolymer

Source: financial results materials and company HP

## ◆Half period business results by segment (new)

		2015/3-2Q	2016/3-2Q	change	change(%)
Revenue	Chemical Products	43,686	44,155	469	1.1%
	Trading and Others	6,933	6,626	(307)	-4.4%
	Others	1,910	1,884	(26)	-1.4%
	Total	52,529	52,665	136	0.3%
Operating income	Chemical Products	6,214	6,758	544	8.8%
	Trading and Others	94	132	38	40.4%
	Others	127	70	(57)	-44.9%
	Sub total	6,435	6,960	525	8.2%
	Adjustment	30	10	(20)	-66.7%
	Total	6,465	6,970	505	7.8%
Operating margin	Chemical Products	14.2%	15.3%	1.1%	n.a.
	Trading and Others	1.4%	2.0%	0.6%	n.a.
	Others	6.6%	3.7%	-2.9%	n.a.
	Total	12.3%	13.2%	1.0%	n.a.



Source: summary of financial results and financial results materials

## ◆(Ref) Business results by segment (old)

		(mil yen)					
		Company estimate					
		Mar-11	Mar-12	Mar-13	Mar-14	Mar-15	Mar-16
Revenue	Synthetic Resins	64,946	61,510	67,113	83,560	77,944	n.a.
	Organic Synthesis	22,932	22,034	20,643	23,754	23,371	n.a.
	Others	3,381	3,699	4,219	3,836	3,887	n.a.
	Total	91,260	87,243	91,976	111,151	105,202	108,000
Operating income	Synthetic Resins	10,234	7,244	11,837	16,407	11,381	n.a.
	Organic Synthesis	(131)	35	174	49	5	n.a.
	Others	200	231	243	218	189	n.a.
	Sub total	10,303	7,512	12,254	16,675	11,575	n.a.
	Adjustment	(216)	(395)	(395)	(446)	(389)	n.a.
	Total	10,087	7,117	11,859	16,229	11,186	14,000
Operating margin	Synthetic Resins	15.8%	11.8%	17.6%	19.6%	14.6%	n.a.
	Organic Synthesis	-0.6%	0.2%	0.8%	0.2%	0.0%	n.a.
	Others	5.9%	6.2%	5.8%	5.7%	4.9%	n.a.
	Total	11.1%	8.2%	12.9%	14.6%	10.6%	13.0%

Source: summary of financial results and financial results materials

## 1-(2) Core Products Overview

### a. OPL Film

"OPL Film"(PVOH) and "Soarnol"(EVOH) are two core products of income generation.

Kuraray (70%) and Nippon Gohsei (30%) dominate the optical-use PVOH film market.

## ◆"OPL Film" (PVOH): A material for "polarizing plate", an indispensable element of liquid crystal displays

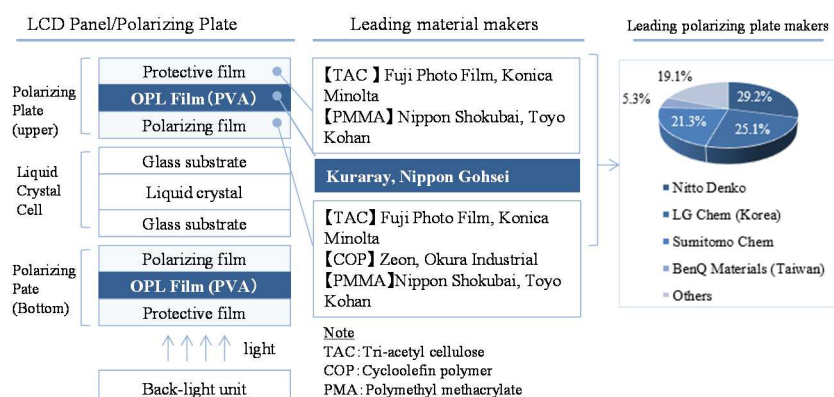
In this section, two core products, "OPL Film (PVOH)" and "Soarnol (EVOH)" will be outlined.

"OPL Film" is an optical-use PVOH film (PVA film) produced from "Gohsenol" as a raw material. After development of its application to a polarizing plate (polarizing film), an indispensable element of liquid crystal displays (LCD), OPL Film has grown to be as one of the Company's key products as LCD TVs have become popular. As liquid crystals have a characteristics that they change a molecular sequence with electric pressure and refract the light, putting liquid crystals between two polarizing plates and passing and blocking the light can display objects on a screen. A PVOH film which functions as a polarizer has been used as a material for polarizing plates for a long time, because of difficulty in finding substitute products. Production of optical-use PVOH films requires a high level of the precision processing technology for use in polarizing plates in addition to an advanced technology of refining PVOH. It creates a very high technical hurdle for a new entry to this field, securing the dominant market position of Kuraray (about 70% share) and Nippon Gohsei (about 30%)(estimate from the production capacity). Main users are polarizing plate makers, each procuring PVOH films from both Kuraray and Nippon Gohsei, although the respective shares vary.

Around 70% of polarizing plates (square measure base) are used for TVs and around 30% are used for smartphones/tablets and PCs. While demand for use in smartphones/tablets is recently growing rapidly, demand for use in TVs continues dominating the market.

However, Nitto Denko, a leading polarizing plate maker, started in-house production of "coating polyvinyl alcohol (coating PVA)" to substitute for PVOH films. Application of coating PVAs to smartphones and other devices started in FY2015-3, marking a start of its full-scale practical use. To date, as the application of coating PVAs is limited to small- to mid-size products such as high-spec smartphones and tablets, still not causing a fall in demand for PVOH films. Recently, along with a trend towards thinner and lighter devices, PVOH films have become thinner from the initial 75μm up to 30μm, and the Company is currently seeking to establish a technology to produce 15-20μm-thick films. As 20 μm-thick PVOH films will have almost no difference in thickness with coating PVAs, considering the stretching process, the Company aims for a practical use of 20 μm-thick films as early as possible.

### ◆Polarizing plate (polarizing film) industry/leading makers



Source: Fuji Chimera Research Institute, Inc., "2015 Current Status and Outlook of Functional Polymeric Films"



## b. Soarnol

Mainly used in food packaging

Kuraray, Nippon Gohsei, Chang Chun Petrochemical (Taiwan) are participants.

### ◆ "Soarnol (EVOH)": A synthetic resin with a high gas barrier and processability properties









"Soarnol" (EVOH resin) balances the gas barrier properties and melt extrudability, by modifying PVOH with ethylene to improve processability. "Soarnol" is used, by adding film-lamination after co-extrusion molding with other resins and film processing, for packaging films, bottles, tubes and sheet formation material. While various grades of "Soarnol" are available in accordance with the ethylene content, derivative products such as "Soarlite" for engineering plastic and "Soarblen" that contains more vinyl acetate content and is used as a modifier of polyvinyl chloride (PVC). While about half of applications of "Soarnol" are for packaging films, it is also used for bottles and retort pouches (see below).

(1) Kuraray, (2) Nippon Gohsei and (3) Chang Chun Petrochemical (Taiwan) are only three manufactures of EVOH resins in the world. The respective production capacity (ton/year) is (1) Kuraray: 81,000 ton<sup>(\*)</sup>, (2) Nippon Gohsei: 66,000 ton and (3) Chang Chun Petrochemical: 10,000 ton with the market share measured by the production capacity being (1) Kuraray: 52%, (2) Nippon Gohsei: 42% and (3) Chang Chun Petrochemical: 6% (source: release materials of each company and hearing with the Company).

In addition to a high technical barrier to entry, EVOH resins are non-commodity products that require customization and technical services according to application, and an ability to supply products that meet with needs of customers is critical. A heavy burden of initial costs, such as around one million yen per ton of capital investment required to construct a new production plant, also serves as a barrier to new entry.

(\*) Kuraray is currently expanding the facility with capacity of 11,000 ton/year in Belgium (expected to start operations in late 2016), which potentially increases the production capacity from 81,000 ton/year to 92,000 ton/year.

#### ◆ Sample Applications for Soarnol

Films	Blow molded bottles	Extruded tubes	Cups & trays
			
Sample: fresh meat, ham and sausage, cheese	Sample: mayonnaise, cooking oil, agrochemical bottles	Sample: cosmetics tubes	Sample: jelly, processed rice diet, soybean paste
Retort pouches	Pipes	Extrusion coatings	Tanks
			
Sample: lids for processed rice containers and dessert containers	Sample: floor heating pipes	Sample: juice carton	Sample: gasoline tanks

Source : company HP

## 2. Company Overview

### 2-(1) Topics for 1st Half of FY2016-3

In July 2015, brought "MelFil," a water-soluble filament for use in 3D printers, into the market

### ◆ In July 2015, brought "MelFil," a water-soluble filament for use in 3D printers, into the market

The following table summarizes press releases published since April 2015.

#### ◆ Most recent press release (extracts) from 2015/4

Date	Category	Note
Apr-15	EVOH	Introduction to exhibition at "Chinaplas 2015" and "Propak Asia 2015"
Apr-15	General	Announcement of revised "Basic Policy on Establishment of Internal Control System"
May-15	General	Announcement of change in representative director
Jun-15	General	"In-PHARMA JAPAN" (PHARMACEUTICAL INGREDIENTS EXPO and CONFERENCE)
Jun-15	PVOH	Introduction of water-soluble filaments for FDM-type 3D printers
Jul-15	Other	Announcement of merger of consolidated subsidiaries
Oct-15	PVOH	Notice of exhibiting "3D Printing 2016"
Oct-15	S.Polymer	Notice of exhibiting "China Coat 2015"
Oct-15	General	Notice of revision to performance guidance
Nov-15	General	Release New Mid-Term Management Plan "NICHIGO 20"

Source: company HP

During the current fiscal year, in July 2015, the Company brought "MelFil," a water-soluble filament made of "Nichigo G-Polymer" (BVOH) for use in 3D printers, into the market. Major 3D printing methods include (1) fused deposition modeling (FDM) method, (2) rapid prototyping method, (3) powder sintering lamination molding method and (4) ink-jet method, among which the Company developed "MelFil" for use in 3D printers with the FDM method. The FDM method has become popular among 3D printers for domestic use, as the apparatus price is relatively cheap. "MelFil" is a material which supports modeling of main modeling materials and used in the supporting portion of the modeled objects and in the void portion of the stereoscopic structure. While PLA (polylactic resin) filaments, HIPS (high impact polystyrene resin) filaments and PVOH filaments have been used as a supporting material, there has been a safety issue in the fusion process as the eliminating solvent is alkali for PLA and limonene for HIPS. PVOH filaments, despite some water-soluble property, have also weakness in adhesiveness and printability to main modeling materials. In contrast, "MelFil" has high water-solubility and biodegradability, and is also superior in adhesiveness, plasticity and printability.

While 3D printing has not yet been popular, with a trend of lower prices of 3D printers for domestic use, the Company plans to cultivate demands by attracting the customer base which has not been satisfied with the traditional supporting materials. The Company sells "MelFil" not only in Japan but also in the U.S. and other regions where 3D printers are more popular.

#### ◆ Printing methods of 3D printers

	Fused deposition modeling	Rapid prototyping	Powder sintering lamination molding	Ink-jet
Strength	○	×	○	▲
Precision	×	◎	○	○
Smooth surface	×	○	×	○
Support resin	Yes	Yes	No	Yes
Used resin	ABS, PLA	Epoxy, Ac-type	Nylon, ceramics, elastomers, PP	Ac-type, ABS, PP
Application	Domestic use	Auto parts model	Automobiles	Organ model
Apparatus price	Several hundreds thousand yen	More than 10 mil. yen	Nearly 100 mil. yen	Nearly 10 mil. yen

Source: press release

## 2-(2) Affiliates

## ◆Two subsidiaries engaged in other business will merge

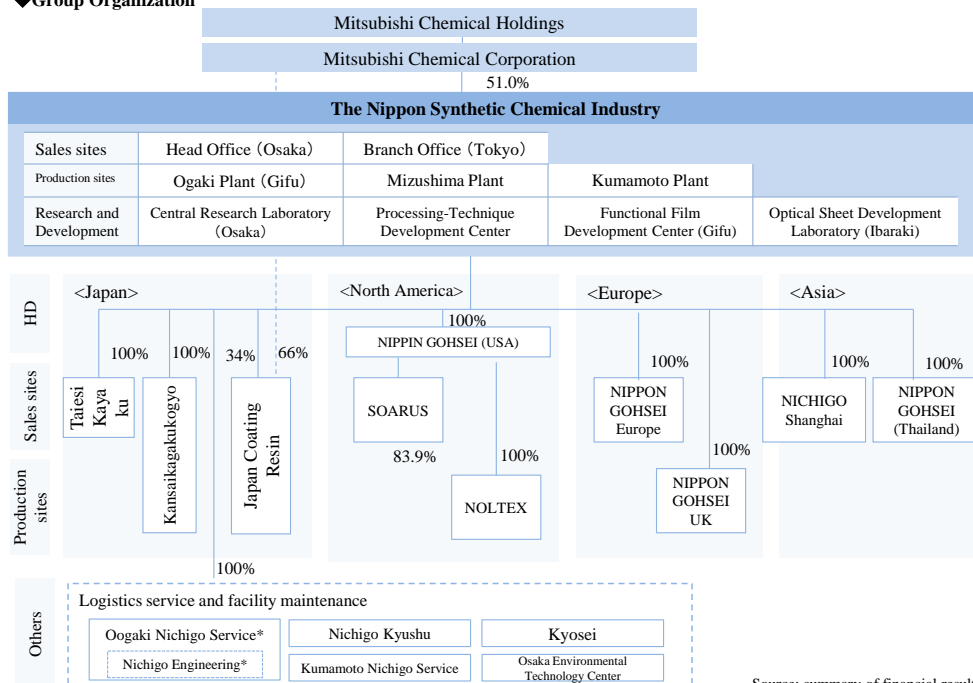
Nippon Gohsei belongs to the Mitsubishi Chemical Holdings Group, within which the Company constitutes the "Designed Materials Segment" as a listed subsidiary of Mitsubishi Chemical Corp. Parent Mitsubishi Chemical Corp. supplies ethylene and other raw materials to the Company with the trade amount of about 10 billion yen in FY2015-3 (accounting for about 13% of costs of goods sold). One outside director of the Company is assigned from Mitsubishi Chemical for the purpose of exchanging the management information with the Mitsubishi Chemical group.

Nippon Gohsei itself has 15 consolidated subsidiaries and one affiliated company accounted for by the equity method (see below chart). Out of 15 subsidiaries, 6 provide "Other" services such as logistics services and maintenance of facilities, and one subsidiary serves as a holding company. Also within the other business segment, Ogaki Nichigo Service (logistics) will absorb Nichigo Engineering (design of chemical facilities) in January 2016. As both companies are wholly-owned subsidiaries, the merger will have little impact on the consolidated performance.

In Japan, Nippon Gohsei is a primary entity of manufacturing and sales, while Taisei Kayaku is mainly engaged in sales as a trading company specialized in chemical products and Kansai Kagaku Kougyo manufactures and distributes film products.

The overseas business is centered on EVOH, with two subsidiaries in North America: NOLTEX (U.S.), an EVOH manufacturing subsidiary, and SOARUS (U.S.), a sales subsidiary, and also two subsidiaries in Europe: NIPPON GOHSEI UK (U.K.), an EVOH manufacturing subsidiary, and NIPPON GOHSEI Europe (Germany), a sales subsidiary. Currently, there is no production base in Asia, but the Company has two sales subsidiaries in China and Thailand. Breakdown of the sales in FY2015-3 by region was: Japan (46%), Asia (25%), Europe (16%), North and South America (12%). The target for FY2021-3 is: Japan (40%), Asia (29%), Europe (16%) and North and South America (14%).

## ◆Group Organization



\*Oogaki Nichigo Service plan to merge Nichigo Engineering at 2016/1.

Source: summary of financial results



## 2-(3) Major facilities/ Capital Investment

Consolidation and enhancement of the Ogaki site

A new "OPL Film" production line (7th line) in sight

Delay in operations of a new EVOH facility in the U.S. to December 2015

New facilities for "Hi-Selon" and "Coponyl" expect to start operations from Q1 FY2017-3

### ◆Reorganization of Ogaki Plant

The Company has 5 production sites, consisting of 3 sites in Japan - "Kumamoto Plant", "Mizushima Plant" and "Ogaki Plant", and one each in the U.S. and the U.K. Two overseas plants specialize in production of EVOH. Ogaki Plant (Gifu) will use the site where the Company withdrew from the business to install new production facilities and enhance existing facilities in an effort to become the state-of-the-art plant.

#### ◆Production capacity for major products

Production base	PVOH (ton / year)	OPL Film (1,000m <sup>2</sup> / year)	EVOH (ton / year)
Kumamoto Plant (Kumamoto)	30,000	63,000	-
Mizushima Plant (Okayama)	40,000	-	10,000
Ogaki Plant (Gifu)	-	25,000	-
NOLTEX (US)	-	-	38,000
NIPPON GOHSEI UK (UK)	-	-	18,000
Total	70,000	88,000	66,000

Source : financial results materials

### ◆"OPL Film": Plan to construct a new line for 20μm-thick products upon solving technical challenges

A new production line for super-wide "OPL Film" (the 6th line) was completed in Kumamoto Plant during Q1 FY2015-3 (with total investment of about 6.5 billion yen; 18 million m<sup>2</sup>/year). During the previous fiscal year, it took time to stabilize the product quality in the 6th line, causing a delay in the full-scale operations to November 2014, but in FY2016-3, the 6th line maintains normal operations. The Company is currently seeking to establish a technology to produce 20μm-thick products which are expected to be used for smartphones and tablet devices, and given the demand receiving from users for practical use of 20μm-thick products, the Company will look to expansion of the production capacity, including a construction of a new line with the similar to or more capacity than the 6th line.

### ◆EVOH: A new facility in the U.S. NOLTEX (15,000 ton/year) starts operations in December 2015

Construction of a new facility for EVOH in the U.S. NOLTEX which started in July 2013 completed during Q2 FY2016-3 (total investment of about 180 million dollar; 15,000 ton/year). However, though the new facility was initially expected to start operations from Q2 right after the completion of construction, the start of operations has been delayed due to prolonged regular repairs at energy supply companies and raw material supply plants and is now expected in December 2015. All three lines in the U.S. plant are expected to start fully-fledged production from December 2015.

### ◆New facilities for "Hi-Selon" and "Coponyl" under construction

Currently, construction of a new production facility for "Hi-Selon," a water-soluble PVOH film (total investment of about 3.3 billion yen) and expansion of the facility for "Coponyl," an acrylic solvent-based pressure sensitive adhesive for use in electronic materials (total investment of about 2.6 billion yen) are in progress, both expecting to start operations during Q1 FY2017-3.

As the line which currently produces "Hi-Selon" in the Ogaki Plant is running at the full capacity, the incremental supply for use in the packaging of liquid detergent which is growing particularly in Europe and the U.S. will be met by this expansion of the production capacity.

## 2-(4) Ownership

No significant change in the ownership structure with Mitsubishi Chemical Corporation holding the majority shares

### ◆Production Facility Expansion Status

Production site	Amount of CAPEX	Start of const	Plan	Production Facility
Kumamoto Plant	3.3B JPY	Feb-15	FY2017-3 1Q (2016/4-6)	PVOH film [HI-SELON]
Ogaki Plant	2.6B JPY	Oct-14	FY2017-3 1Q (2016/4-6)	Acrylic pressure sensitive adhesives solvent type [COPONYL] (+12,000ton/ y)

\*Reference figures are calculated as USD=118JPY, ¥=180JPY.

Source: press release and financial results materials

### ◆No significant change in major shareholders

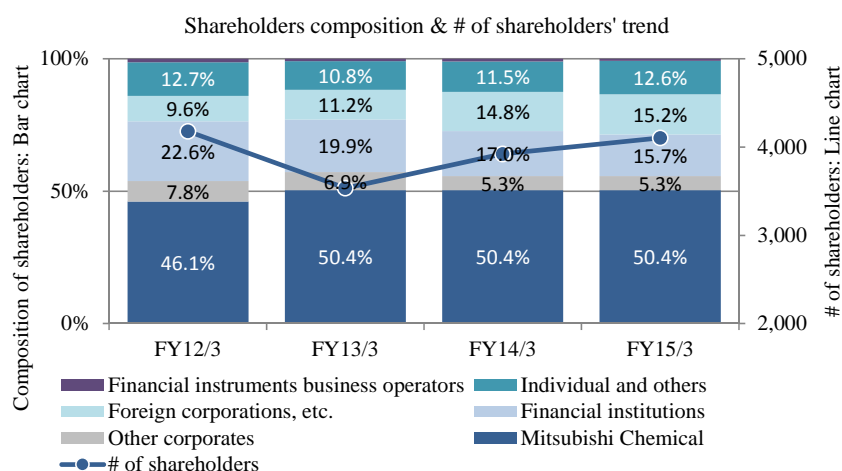
There has been no significant change in the ownership structure, with parent Mitsubishi Chemical maintaining about a 50% ownership and top 10 shareholders maintaining around a 70% ownership.

By type of shareholders, the ownership by foreign corporations and financial institutions have both remained around 15%, but in recent few years, the share of financial institutions has slightly decreased, while the share of foreign corporations has increased, and the number of foreign shareholders has also increased from 120 in March 2012 to 148 in March 2015.

### ◆Major Shareholders

As of 2015/9		Mar-12	Mar-13	Mar-14	Mar-15	Sep-15
Rank	Major shareholders					
1	Mitsubishi Chemical Corporation	46.1%	50.4%	50.4%	50.4%	51.0%
2	Japan Trustee Services Bank, LTD. (TA)	11.2%	8.7%	5.6%	6.2%	7.5%
3	NORTHERN TRUST CO. (AVFC) RE-HCR00	-	1.4%	1.3%	2.1%	2.2%
4	State Street Bank and Trust Company	1.6%	1.7%	3.6%	3.3%	2.1%
5	Mizuho Bank, LTD.	1.2%	1.2%	1.2%	1.2%	1.2%
6	State Street Bank and Trust Company 505223	-	-	-	-	1.2%
7	Japan Trustee Services Bank, LTD. (Trust Account9)	1.8%	1.4%	1.5%	1.1%	1.1%
8	Marubeni Corporation	1.0%	1.0%	1.0%	1.0%	1.0%
9	THE BANK OF NEW YORK MELLON SA/NV 10	0.0%	0.0%	-	0.9%	1.0%
10	Treasury stock	1.0%	1.0%	1.0%	1.0%	1.0%
	The Master Trust Bank of Japan, Ltd. (TA)	3.0%	2.6%	2.6%	1.6%	-
	Resona Bank, LTD.	-	-	0.9%	-	-
	Mitsubishi Corporation	2.0%	2.0%	-	-	-
	Mizuho Securities Co., Ltd.	1.0%	-	-	-	-
	Top 10 stockholders total	69.8%	71.4%	69.0%	68.8%	69.2%
	Others	30.2%	28.6%	31.0%	31.2%	30.8%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%

Source: annual report and financial results materials



### 3. Performance Highlight

#### 3-(1) Financial Results for 1st Half of FY2016-3

Achieved sales growth year-on-year, with increased sales of "Soarnol" covering the scale-down of business as a result of withdrawal from unprofitable business

Surge in the price of vinyl acetate monomers in Europe in the previous year receded

#### ◆ Operating margin improved as a surge in the price of vinyl acetate monomers in Europe receded

The sales in the 1st half of FY2016-3 amounted to 52.7 billion yen, a slight increase year-on-year. However, the Company has withdrawn from some fine chemical products in the previous year and withdrawn sales of imported ethyl acetate. The reduction in sales associated with such withdrawal from business was covered by the stronger sales of other products, securing the sales at the similar level to the previous year. "Soarnol" performed particularly well in Europe and recorded more-than-expected sales, as demand remained solid centered on for the use in food packaging. The sales of "Gohsenol," a PVOH resin, remained steady in the specialty field but the sales in the commodity field were negatively affected by a slowdown of the Chinese market, resulting in a moderate decrease in the sales of "Gohsenol" overall year-on-year. The sales of "OPL Film" remained flat year-on-year due to inventory shortage related to regular repairs at the Kumamoto Plant early in the period. Within the specialty polymers, the sales of "Shikoh," a UV curable resin, remained strong, but the sales volume of "Copoly," an acrylic pressure sensitive adhesive, modestly plunged due to inventory adjustments made by some customers.

Meanwhile, the operating income recorded 7.0 billion yen, an increase by about 500 million from the same period of the previous year (6.5 billion yen), with the operating margin securing 13.2%, higher than the same period of the previous year (12.3%). The trouble in the previous year, i.e. a surge in the price of vinyl acetate monomers in Europe has receded in FY2016-3, and compared to the second half of FY2015-3, the operating margin significantly improved from 9.0% to 13.2%.

#### ◆ Expect financial results for the 2nd half of FY2016-3 to maintain almost the same level with the 1st half

The sales and operating income for the 2nd half of FY2016-3 are expected to be almost the same with the 1st half; the sales for the full year are expected to increase by about 2.8 billion yen (+2.7%) to 108.0 billion yen from the previous year.

The Company adjusted the guidance in October 2015 and reduced the sales forecast from 112 billion yen to 108 billion yen, down by 4.0 billion yen. This revision was due to the expected fall in the sales price of commodity products along with further decline in the price of domestically-produced naphtha, a raw material of ethylene.(\*). The forecast of operating income and subsequent profit and loss items are kept unchanged from the previous guidance.

The operating income is expected to record 14.0 billion yen (operating margin of 13.0%) for the full year. Compared to the previous year (11.2 billion yen), the operating income is expected to increase by 2.9 billion yen, as the positive effect of an increase in volume (+4.1 billion yen) and a decrease in raw materials cost (+2.9 billion yen) will more than offset the negative effect of a fall in the sales price (-1.2 billion yen). Compared to the forecasts at the beginning of the period, there is a difference of 1.2 billion yen in the expected change in fixed costs (at the beginning: -2.7 billion yen; Q2 FY2016-3: -1.5 billion yen). This difference is due to the effect of no depreciation expenses incurred in the 1st half as the new EVOH production line at the U.S. NOLTEX which had been scheduled to start operations in Q2 has delayed to December 2015.

(\*) Ethylene prices are determined in tandem with prices of domestically-produced naphtha. Nippon Gohsei changes the sales price of some commodity products in accordance with a change in the ethylene price.

## ◆ Financial Statements Summary (Half)

(mil yen)

◆ Income Statement	FY2014-3		FY2015-3		FY2016-3		Annual*	Annual	Forecast
	First HY	Second HY*	First HY	Second HY	First HY	Second HY	FY2014-3	FY2015-3	FY2016-3
Revenue	49,439	61,712	52,529	52,673	52,665	55,335	111,151	105,202	108,000
Gross profit	15,591	17,302	14,400	13,313	15,025	n.a.	32,893	27,713	n.a.
Operating income	7,802	8,427	6,465	4,721	6,970	7,030	16,229	11,186	14,000
EBITDA**	11,037	12,321	9,731	8,507	10,808	11,392	23,358	18,238	22,200
Ordinary profit	8,121	8,591	6,547	4,749	7,133	7,167	16,712	11,296	14,300
Income before income taxes	7,976	8,179	6,303	3,560	7,777	n.a.	16,155	9,863	n.a.
Net income	5,269	2,749	4,189	2,459	5,333	4,167	8,018	6,648	9,500
Depreciation	3,235	3,894	3,266	3,786	3,838	4,362	7,129	7,052	8,200
R & D expense	1,714	1,744	1,625	1,950	1,878	n.a.	3,458	3,575	n.a.
Interest expenses	100	100	35	29	18	n.a.	200	64	n.a.
CAPEX ***	6,675	13,588	7,696	6,816	4,854	n.a.	20,263	14,512	n.a.
EBITDA-CAPEX	4,362	(1,267)	2,035	1,691	5,954	n.a.	3,095	3,726	n.a.

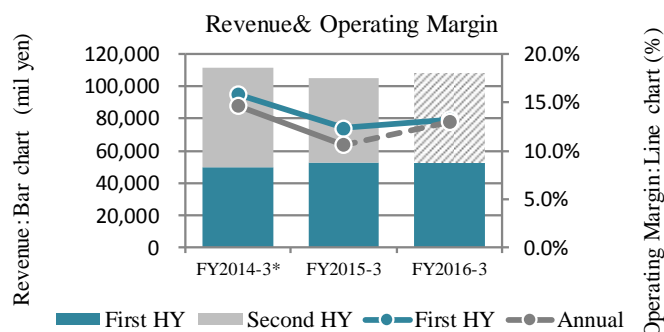
\*Figures reflect the impact of the change in the accounting period of consolidated subsidiaries. Revenue and Operating Income for FY2014-3 before reflecting such impact would be 100.2 bil. yen and 14.8 bil. yen, respectively.

\*\*EBITDA=Operating Income+Depreciation, \*\*\*CAPEX=Capital Expenditure on CF Statement.

◆ Key Indicators	FY2014-3	1900年1月	FY2015-3	1900年1月	FY2016-3	1900年1月	Annual*	Annual	Forecast
	First HY	Second HY	First HY	Second HY	First HY	Second HY	FY2014-3	FY2015-3	FY2016-3
Gross margin	31.5%	28.0%	27.4%	25.3%	28.5%	n.a.	29.6%	26.3%	n.a.
Operating margin	15.8%	13.7%	12.3%	9.0%	13.2%	12.7%	14.6%	10.6%	13.0%
EBITDA margin	22.3%	20.0%	18.5%	16.2%	20.5%	20.6%	21.0%	17.3%	20.6%
Ordinary profit margin	16.4%	13.9%	12.5%	9.0%	13.5%	13.0%	15.0%	10.7%	13.2%
Net Margin	10.7%	4.5%	8.0%	4.7%	10.1%	7.5%	7.2%	6.3%	8.8%

Note: blue fonts suggest forecast figures.

◆ Balance Sheet	FY2014-3	FY2015-3	FY2015-9
Current assets	56,907	60,716	60,063
Tangible assets	66,511	73,078	75,224
Investments and other assets	6,689	8,316	6,726
Total assets	130,107	142,110	142,013
Current liabilities	38,822	41,992	41,528
Non-current liabilities	14,515	16,398	12,460
Total liabilities	53,337	58,390	53,988
Total net assets	76,770	83,720	88,025
Interest bearing debt	15,350	25,237	17,793
Cash and deposits	5,785	7,312	9,768
Net interest bearing debt	9,565	17,925	8,025



\*Figures reflect the impact of the change in the accounting period of consolidated subsidiaries. Revenue for FY2014-3 before reflecting such impact would be 100.2 bil. yen with Operating Margin (full year) of 14.8%.

Source: annual report and quarterly report

## ◆ Analysis of operating income [FY2015-3(act) vs FY2016-3(forecast)]

(Forecast)

	FY15-3 Operating income	Sales price	Raw materials / UTY price	Volume	Fixed costs	Others*	FY16-3 Operating income
Beginning of period	11,200	(1,500)	2,400	4,400	(2,700)	300	14,000
FY2016-3 2Q	11,200	(1,200)	2,900	4,100	(1,500)	(1,400)	14,000
Difference	0	300	500	(300)	1,200	(1,700)	0

\*Others mainly include the effect of the gap in inventory delivery related to application of the weighted-average method.

Source: financial results materials

## 4. Business Overview by Segment

### 4-(1) Chemical Products

#### a. Outline

From FY2016-3, integrated industrial chemicals and fine chemicals into the old synthetic resins segment and started reporting as the chemical products segment

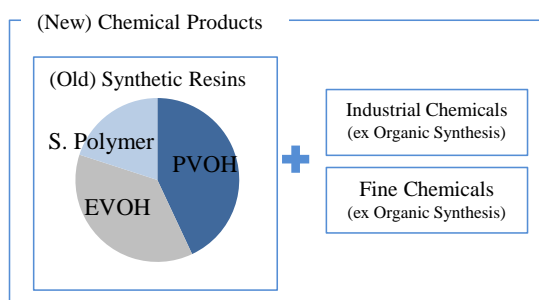
#### ◆Chemical products: PVOH, EVOH and Specialty Polymers are main business

The chemical products segment is a core segment, accounting for 84% of the total sales and almost the entire operating income (in Q2 FY2016-3 on a cumulative basis). (1) PVOH (polyvinyl alcohol), (2) EVOH (ethylene-vinyl alcohol copolymer) and (3) Specialty Polymers (pressure sensitive adhesive resins) are main businesses, each accounting for (1) PVOH: 40%+, (2) EVOH: 40%- and (3) Specialty Polymers: 20% of the segment sales (excluding industrial chemicals and fine chemicals).

"OPL Film (PVOH) and "Soarnol (EVOH)" are two core products, driving the performance of both sales and income. While the Company has focused on the expansion of these core businesses by making a large-scale capital investment in "OPL Film" twice since 2010 and enhancing EVOH production facilities in the U.S., the promotion of products that could be the new core business following "OPL Film" and "Soarnol" is the challenge. As the Company's core products represent non-commodity high-end products, at this moment, sales are concentrated in the developed markets and the emerging markets have not yet been cultivated.

The Company has reviewed the segmentation in the current fiscal year and integrated industrial chemicals and fine chemicals away from the old organic synthesis segment into the old synthetic resins segment, and started reporting as the chemical products segment. The sales of industrial chemicals and fine chemicals in the 1st half of FY2015-3 amounted to 4.9 billion yen with net operating loss of 300 million yen, and the sales of the new chemical products segment increased by about 13% relative to the old synthetic resins segment. While the impact of the change in segmentation on the operating income is small because of a thin operating margin of both industrial chemicals and fine chemicals, the operating margin of chemical products was 14.2% compared with synthetic resins' 16.8% for the 1st half of FY2015-3 due to an increase in sales.

#### ◆Composition for Chemical Products



<FY2015-3 2Q business results (cumulative)>			
(mil yen)	(A)	(B)	(A)+(B)
	Synthetic Resins	Industrial Chemicals / Fine Chemicals	Chemical Products
Revenue	38,754	4,932	43,686
Operating income	6,517	(303)	6,214
Operating margin	16.8%	-6.1%	14.2%
Share	88.7%	11.3%	100.0%

Source: summary of financial results

#### b. Quarterly

Strong performance of "Soarnol" in Europe, achieving more-than-expected sales

#### ◆Demand for "Soarnol" in Europe remains solid

The sales of the chemical products segment in Q2 FY2016-3 amounted to 44.2 billion yen, an increase by about 500 million yen year-on-year. The segment income also increased from 6.2 billion yen in the same period of the previous year to 6.8 billion yen, an increase of about 500 million yen.

The quarterly sales have not significantly changed, remaining around 2.1-2.3 billion yen. By product, however, while the sales related to the withdrawn business such as ethyl acetate (industrial chemicals) and imidazole (fine chemicals) decreased from the current fiscal year, the sales of "Soarnol"(EVOH) increased, achieving an increase in the aggregate sales year-on-year.

As for the segment income, in the previous fiscal year, the price of vinyl acetate



Secured an increase in the segment income year-on-year as a surge in the price of vinyl acetate monomers in Europe receded

monomers temporarily surged due to the withdrawal from business by local makers, forcing a contraction of the operating margin, but entering in the current fiscal year, the operating margin has improved as the surge in the price has receded. The segment operating margin started slightly low at 13.5% in Q1 FY2016-3 due to the remaining effect of moving average differences of inventories, but has improved to 17.0% in Q2, securing the higher operating margin of 15.3% on a cumulative basis than the same period of the previous year, despite an increase in fixed costs such as a depreciation burden for the new facilities of "OPL Film" (the 6th line).

#### ◆OPL Film

In Q1 FY2016-3, the sales were forced to modestly decrease due to inventory shortage caused by regular repairs at the Kumamoto Plant and inventory adjustment made by some customers. As the inventory shortage was solved in Q2, the sales for the 1st half recovered to the same level with the corresponding period of the previous year. The sales may be somewhat lower in Q3 than Q2 due to inventory adjustment made by customers, but are expected to recover in Q4, securing larger sales volume for the full year than the previous year.

#### ◆Soarnol

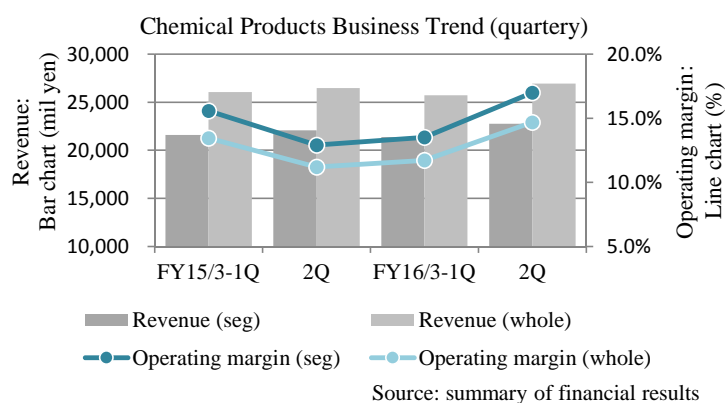
EVOH resin "Soarnol" maintained a strong demand in Europe, securing an increase in the sales volume year-on-year, and the price of vinyl acetate monomers which are used as raw materials stabilized again, resulting in better performance in Europe with both sales and income increasing year-on-year.

Although the demand is also strong in the U.S., the bargain sale by Chang Chun Petrochemical continues. In addition, full-scale operations of the new facility in the U.S. NOLTEX (15,000 ton/year) which had been expected to start operations from Q2 has delayed to December 2015 due to prolonged regular repairs at energy supply companies and raw material supply plants. While the delay in operations of the new facility in the U.S. has been covered by raising the operating rate of the European plant, all three lines in the U.S. plant are expected to start fully-fledged production from December 2015. Going forward, the Company will seek to maximize profits of the overall group by preferentially raising the operating rate of the U.S. facilities with lower utility cost.

#### ◆Chemical Products Business Trend (quarterly)

	FY2015-3		FY2016-3		(mil yen)		
	1Q	2Q	1Q	2Q	2015/3 2Q(cum)	2016/3 2Q(cum)	change
Revenue (seg)	21,608	22,078	21,373	22,782	43,686	44,155	469
Operating income (seg)	3,365	2,849	2,886	3,872	6,214	6,758	544
Operating margin (seg)	15.6%	12.9%	13.5%	17.0%	14.2%	15.3%	1.1%

Source: summary of financial results



## 【Reference】 Results of old synthetic resins segment

◆(Old) Organic Synthesis Business Trend (Annual) (mil yen)

	Mar-11	Mar-12	Mar-13	Mar-14*	Mar-15	change	y/y
Revenue (seg)	22,932	22,034	20,643	21,300	23,371	2,071	109.7%
Operating income (seg)	(131)	35	174	0	5	5	-
Operating margin (seg)	-0.6%	0.2%	0.8%	0.0%	0.0%	0.0%	-
Revenue share	25.1%	25.3%	22.4%	21.3%	22.2%	1.0%	-

\*FY2014-3's values exclude the impacts by accounting period change of some subsidiaries.

FY2014-3's actual values are: Revenue: 23,754M JPY, Segment profit: 49M JPY.

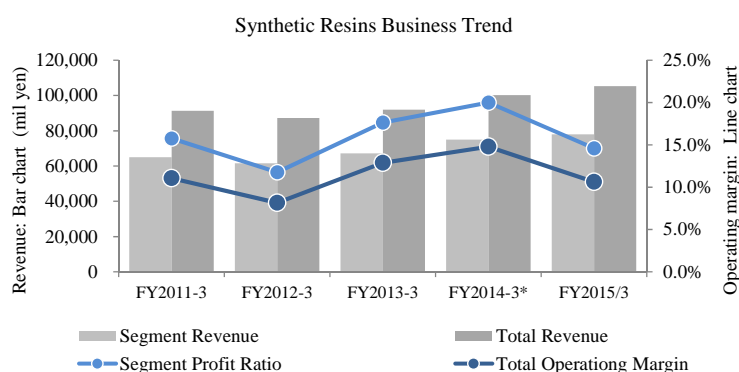
◆(Old) Organic Synthesis Business Trend (First HY)

	2011/3 (HY)	2012/3 (HY)	2013/3 (HY)	2014/3 (HY)	2015/3 (HY)	change	y/y
Revenue (seg)	11,579	11,179	10,493	10,146	11,865	1,719	116.9%
Operating income (seg)	27	55	110	60	15	(45)	25.0%
Operating margin (seg)	0.2%	0.5%	1.0%	0.6%	0.1%	-0.5%	-

◆(Old) Organic Synthesis Business Trend (Second HY)

	2011/3 (HY)	2012/3 (HY)	2013/3 (HY)	2014/3 (HY)	2015/3 (HY)	change	y/y
Revenue (seg)	11,353	10,855	10,150	11,154	11,506	352	103.2%
Operating income (seg)	(158)	(20)	64	(60)	(10)	50	16.7%
Operating margin (seg)	-1.4%	-0.2%	0.6%	-0.5%	-0.1%	0.5%	-

Source: summary of financial statements and financial results materials



\* FY2014-3's value excludes the impacts by accounting period change of some subsidiaries.

Source: financial results briefing materials

## 4-(2) Trading and Others

Despite a slight decrease in the sales, improvement in the trading spread boosted the operating margin.

### 【Reference】 Results of old organic synthesis segment

#### ◆(Old) Organic Synthesis Business Trend (Annual)

	Mar-11	Mar-12	Mar-13	Mar-14*	Mar-15	change	y/y
Revenue (seg)	22,932	22,034	20,643	21,300	23,371	2,071	109.7%
Operating income (seg)	(131)	35	174	0	5	5	-
Operating margin (seg)	-0.6%	0.2%	0.8%	0.0%	0.0%	0.0%	-
Revenue share	25.1%	25.3%	22.4%	21.3%	22.2%	1.0%	-

\*FY2014-3's values exclude the impacts by accounting period change of some subsidiaries.

FY2014-3's actual values are: Revenue: 23,754M JPY, Segment profit: 49M JPY.

#### ◆(Old) Organic Synthesis Business Trend (First HY)

	2011/3 (HY)	2012/3 (HY)	2013/3 (HY)	2014/3 (HY)	2015/3 (HY)	change	y/y
Revenue (seg)	11,579	11,179	10,493	10,146	11,865	1,719	116.9%
Operating income (seg)	27	55	110	60	15	(45)	25.0%
Operating margin (seg)	0.2%	0.5%	1.0%	0.6%	0.1%	-0.5%	-

#### ◆(Old) Organic Synthesis Business Trend (Second HY)

	2011/3 (HY)	2012/3 (HY)	2013/3 (HY)	2014/3 (HY)	2015/3 (HY)	change	y/y
Revenue (seg)	11,353	10,855	10,150	11,154	11,506	352	103.2%
Operating income (seg)	(158)	(20)	64	(60)	(10)	50	16.7%
Operating margin (seg)	-1.4%	-0.2%	0.6%	-0.5%	-0.1%	0.5%	-

Source: summary of financial statements and financial results materials

### ◆Trading and others: Secured the segment operating margin of 2% as the trading spread improved

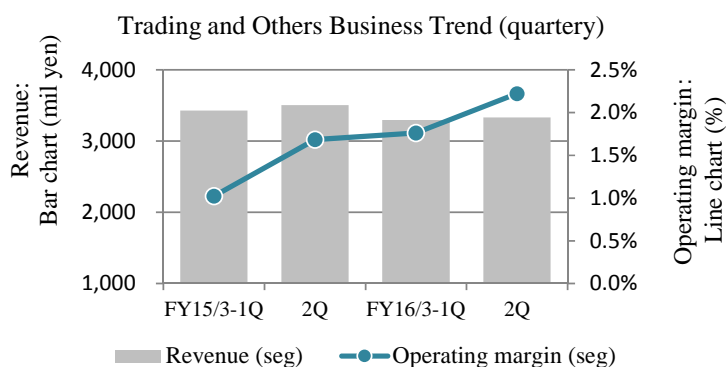
The trading and others segment includes resale products handled by Taisei Kayaku, a consolidated subsidiary, and the business of Kansai Kagaku Kougyo, and recorded the sales of 6.6 billion yen with the operating income of 100 million yen in the 1st half of FY2016-3. The sales and operating income for the 2nd half of FY2016-3 are expected to maintain almost the same level with the 1st half.

While the segment sales decreased by about 300 million yen year-on-year, the segment operating income increased by 38 million yen due to improvement in the trading spread with the segment operating margin also improving to 2.0% from 1.4% for the same period of the previous year.

#### ◆Trading and Others Business Trend (quarterly)

	FY2015-3		FY2016-3		2015/3	2016/3	
	1Q	2Q	1Q	2Q	2Q(cum)	2Q(cum)	change
Revenue (seg)	3,427	3,506	3,296	3,330	6,933	6,626	(307)
Operating income (seg)	35	59	58	74	94	132	38
Operating margin (seg)	1.0%	1.7%	1.8%	2.2%	1.4%	2.0%	0.6%

Source: summary of financial results



Source: summary of financial results

## 5. Financial Analysis

### 5-(1) Cost Overview

The cost to sales ratio improved by about 2.2% along with stabilization of the price of vinyl acetate monomers in Europe

#### ◆ Cost of Sales

The cost to sales ratio has stayed at the level of 70-75%. The cost of goods manufactured (non-consolidated basis) is largely consisted of materials cost (60%), labor cost (15%) and general expenses (25%), indicating a higher weight of raw materials costs. In the previous fiscal year, the cost to sales ratio was forced to deteriorate by about 3.3% to 73.7%, compared to FY2014-3, as the price of domestically-produced naphtha remained close to 70,000 yen per kl until Q3 and the price of vinyl acetate monomers surged in Europe. Entering in FY2016-3, as the surge in the price of vinyl acetate monomers in Europe has receded and the price of domestically-produced naphtha has been stable at the level below 50,000 yen/kl since Q3 FY2015-3, the cost to sales ratio for the 1st half improved by about 2.2% to 71.5%, compared to the full year result of the previous year.

Nippon Gohsei purchases ethylene from its parent Mitsubishi Chemical at the prices linked to the market prices. Ethylene prices are determined in tandem with prices of domestically-produced naphtha. While the Company makes an effort to pass the fluctuation of ethylene prices on sales prices, as there is a time lag between the fluctuation of ethylene (and naphtha) prices and revision of sales prices, if naphtha prices sharply rise all of a sudden, the Company temporarily bear the increase in raw material prices on some occasions. In addition, while the Company often receives a request for price cut from customers, the Company aims to further improve the cost to sales ratio through the cost reduction and provision of high-value-added products, etc.

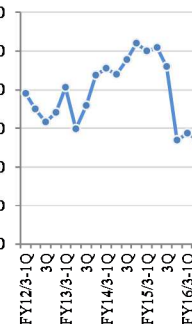
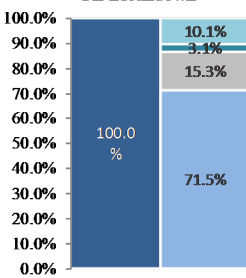
#### ◆ Selling, General and Administrative Expenses

Major expense items within SG&A expenses are (1) transportation and storage costs, (2) salaries and (3) R&D expenses, each accounting for about 20% of SG&A expenses and about 60% in total, which continues to be the cost structure. The SG&A expenses to sales ratio has remained at the level of 15-16%. In the 1st half of FY2016-3, R&D expenses increased by about 250 million yen year-on-year, but there has been no significant move in the total SG&A expenses which amounted to 8.0 billion yen, about the same with the corresponding period of the previous year.

#### ◆ Extraordinary Gain/Loss

Investment securities (book value of about 1.9 billion yen) were sold during the 1st half of FY2016-3, posting gains from sales of investment securities for 1.0 billion yen. Additionally, loss of 400 million yen was incurred from disposal of fixed assets.

During FY2015-3, the Company decided to withdraw from biaxially-oriented PVOH film "Bovlon" and glass-substitute optical sheet "ORGA" within the old synthetic resins business and some fine chemical products within the old organic synthesis business. Centered on the related facilities, the impairment loss (620 million yen) and loss from disposal of fixed assets (560 million yen) were posted. In addition, the extraordinary loss of 370 million yen was posted as costs of measures to deal with a defect in products which occurred during the period until the stabilization of the quality of products in the new "OPL Film" production line (the 6th line) at the Kumamoto Plant which completed construction during Q1 FY2015-3.

					(mil yen)				
◆ PL Summary	Mar-12	Mar-13	Mar-14	Mar-15	2015/3-2Q	2016/3-2Q	composition	change	y/y
Revenue	87,243	91,976	111,151	105,202	52,529	52,665	100.0%	136	100.3%
Cost of sales	65,965	65,313	78,258	77,489	38,129	37,640	71.5%	(489)	98.7%
Gross profit	21,278	26,662	32,893	27,713	14,400	15,025	28.5%	625	104.3%
Selling, general and administrative expenses									
Transportation and storage	2,592	2,568	3,012	2,973	1,465	1,455	2.8%	(10)	99.3%
Salaries	3,257	3,331	3,970	3,877	1,718	1,815	3.4%	97	105.6%
Provision for allowance for possible loan losses	(7)	3	(12)	(47)	(13)	(16)	0.0%	(3)	123.1%
Provision for accrued bonuses	309	367	381	438	388	358	0.7%	(30)	92.3%
Provision for officers' bonuses	51	84	107	63	n.a.	n.a.	n.a.	n.a.	n.a.
Retirement benefit expenses	230	253	198	180	90	66	0.1%	(24)	73.3%
Provision of reserve for retirement benefits for officers	22	25	23	21	10	12	0.0%	2	120.0%
Tax and dues	133	165	170	161	n.a.	n.a.	n.a.	n.a.	n.a.
Depreciation	113	133	190	174	n.a.	n.a.	n.a.	n.a.	n.a.
R&D expenses	2,824	3,388	3,458	3,575	1,625	1,878	3.6%	253	115.6%
Others	4,637	4,486	5,167	5,112	2,652	2,487	4.7%	(165)	93.8%
Total	14,161	14,803	16,664	16,527	7,935	8,055	15.3%	120	101.5%
Operating income	7,117	11,859	16,229	11,186	6,465	6,970	13.2%	505	107.8%
Non-operating income	342	892	883	387	195	236	0.4%	41	121.0%
Non-operating expenses	697	375	400	277	113	73	0.1%	(40)	64.6%
Ordinary profit	6,763	12,375	16,712	11,296	6,547	7,133	13.5%	586	109.0%
Extraordinary gain	34	538	9	169	0	1,027	2.0%	1,027	n.a.
Extraordinary loss	1,521	253	566	1,602	244	383	0.7%	139	157.0%
Income before income taxes	5,276	12,660	16,155	9,863	6,303	7,777	14.8%	1,474	123.4%
Income taxes etc.	2,003	4,397	7,975	3,087	2,051	2,370	4.5%	319	115.6%
Net income	3,273	8,262	8,180	6,776	4,252	5,407	10.3%	1,155	127.2%
Net income attributable to non-controlling interests	118	104	162	128	63	74	0.1%	11	117.5%
Net income attributable to owners of parent	3,154	8,158	8,018	6,648	4,189	5,333	10.1%	1,144	127.3%
◆ Key Indicators	Mar-12	Mar-13	Mar-14	Mar-15	Sep-14	Sep-15	Domestic Naphtha Price		
COGS/ Revenue	75.6%	71.0%	70.4%	73.7%	72.6%	71.5%	(yen/ KL)		
SG&A/ Revenue	16.2%	16.1%	15.0%	15.7%	15.1%	15.3%			
R&D Expense/ Revenue	3.2%	3.7%	3.1%	3.4%	3.1%	3.6%			
Operating margin	8.2%	12.9%	14.6%	10.6%	12.3%	13.2%			
Ordinary profit margin	7.8%	13.5%	15.0%	10.7%	12.5%	13.5%	Source: financial results materials and trade statistics of Japan (MOF)		
Net margin	3.6%	8.9%	7.2%	6.3%	8.0%	10.1%			
◆ Details of other PL	Mar-12	Mar-13	Mar-14	Mar-15	Sep-14	Sep-15	PL Breakdown		
									
■ Revenue ■ Cost of sales ■ SG&A ■ Other profit									
■ Net income									

Source: annual report and summary of financial results



## 5-(2) Balance Sheet Overview

Repaid borrowings and sold investment securities in the 1st half of FY2016-3

### ◆ Assets

Cash and Deposits amounted to 9.8 billion yen, an increase by about 2.5 billion from March 2015. As a result of cash flow from operating activities of 13.7 billion yen and proceeds of 1.9 billion yen from a sale of investment securities, despite a cash-out of 4.9 billion yen to purchase fixed assets and repayment of 6.8 billion yen (net) of borrowing, the liquidity reached close to 10.0 billion yen.

Notes Receivable and Accounts Receivable modestly expanded to 27.4 billion yen as of the end of March 2015 and 24.8 billion yen as of the end of September 2015, but they normally remain around 25.0 billion yen with Days Sales Outstanding around three months. Distribution channels include both via trading companies and direct sales to end users. As measures such as money on deposit are taken in accordance with the creditworthiness of customers, no default has occurred over more than the last five years.

Inventory of 23.1 billion yen was consisted of finished products and goods (16.5 billion yen), work-in-process (0.3 billion yen) and raw materials and supplies (5.4 billion yen). As a production cycle is short at around five days, the weight of work-in-process is low.

Within Tangible Fixed Assets, construction-in-progress has significantly increased since the end of FY2014-3 as the large-scale expansion of EVOH production facilities in the U.S. NOLTEX (total investment of 180 million dollars) has started construction in July 2013. Though these facilities have completed construction during Q2 FY2016-3, they were posted as construction-in-progress as of the end of September 2015 due to a delay in operations to Q3. Upon the start of operations in December 2015, they will be rebooked to machineries and equipments, etc. and depreciation will start.

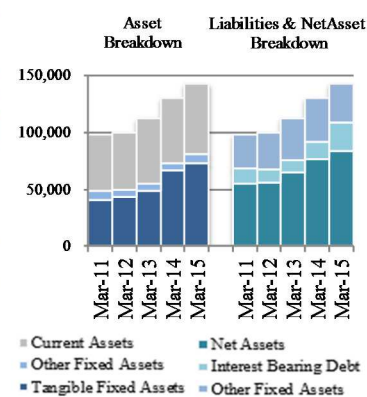
Investment and Other Assets amounted to 6.3 billion yen as of the end of September 2015, which are mostly consisted of investment securities. The balance decreased by about 1.6 billion yen from 7.9 billion yen as of the end of March 2015 due to the sale of investment securities for about 1.9 billion yen. In addition, of an increase by about 1.7 billion yen from the end of March 2014 (6.2 billion yen) to the end of March 2015 (7.9 billion yen), about 1.1 billion yen came from the acquisition of shares of Japan Coating Resin (affiliated company accounted for by the equity method) in association with the company split of the synthetic resin emulsion business.

### ◆ Liabilities

Notes Payable and Accounts Payable amounted to 16.0 billion yen as of the end of September 2015 well in a range of 14.0-16.0 billion yen over the last several years. Cash Disbursement Outstanding remained around 2.5 months, a slightly shorter than Days Sales Outstanding (around 3.0 months) of receivables. The largest supplier is Mitsubishi Chemical, a parent company, with which transactions amounted to 10.0 billion yen (accounting for about 13% of COGS) in FY2015-3 with outstanding payable of 1.3 billion yen. Two overseas production subsidiaries obtain raw materials locally.

Interest Bearing Debt more than doubled from 10.0 billion yen as of the end of March 2013 to 25.2 billion yen as of the end of March 2015, because part of the capital investment was funded by borrowing. However, the balance of interest bearing debt decreased to 18.0 billion yen after repayment of about 6.8 billion yen (net) during the 1st half of FY2016-3. The Company plans to make capital investment for about 74.0 billion yen over five years from the next fiscal year (FY2017-3) and may fund part of the capital investment with borrowing in the future, but given EBITDA maintaining the level of more than 15.0 billion yen over the last five years (except for FY2012-3), the Company has a high solvency and no concern about cash flow.

					(mil yen)			
◆ BS Summary	Mar-12	Mar-13	Mar-14	Mar-15	Sep-15	composition	change	y/y
Cash & deposits	4,879	8,433	5,785	7,312	9,768	6.9%	2,456	133.6%
Notes and accounts receivable	24,213	25,120	24,478	27,375	24,820	17.5%	(2,555)	90.7%
Inventory	17,528	19,788	24,134	23,074	22,711	16.0%	(363)	98.4%
Deferred tax assets	977	1,326	1,211	1,135	n.a.	n.a.	n.a.	n.a.
Allowance for doubtful accounts	(36)	(44)	(42)	(9)	(4)	0.0%	5	44.4%
Others	1,901	2,429	1,341	1,829	2,768	1.9%	939	151.3%
Total current assets	49,464	57,054	56,907	60,716	60,063	42.3%	(653)	98.9%
Buildings & structures	9,554	11,619	11,528	12,969	13,188	9.3%	219	101.7%
Machinery & equipment and vehicles	20,671	28,326	28,313	29,812	29,108	20.5%	(704)	97.6%
Land	4,478	4,512	4,540	4,567	4,561	3.2%	(6)	99.9%
Lease assets	27	6	632	655	n.a.	n.a.	n.a.	n.a.
Construction in progress	7,273	2,625	19,722	23,327	25,787	18.2%	2,460	110.5%
Others	1,429	1,671	1,776	1,748	2,580	1.8%	832	147.6%
Total tangible fixed assets	43,436	48,762	66,511	73,078	75,224	53.0%	2,146	102.9%
Intangible assets	665	489	496	407	385	0.3%	(22)	94.6%
Investment & other assets	6,195	5,873	6,193	7,909	6,341	4.5%	(1,568)	80.2%
Total fixed assets	50,296	55,125	73,200	81,394	81,950	57.7%	556	100.7%
Total asset	99,761	112,180	130,107	142,110	142,013	100.0%	(97)	99.9%
Notes and accounts payable	14,648	16,018	15,254	14,827	16,046	11.3%	1,219	108.2%
Short-term debt	4,365	6,072	10,868	18,899	16,098	11.3%	(2,801)	85.2%
Lease obligations	9	1	44	52	n.a.	n.a.	n.a.	n.a.
Accrued expenses	2,773	2,510	2,275	2,684	n.a.	n.a.	n.a.	n.a.
Income tax payable	618	2,646	4,472	318	1,507	1.1%	1,189	473.9%
Accrued bonuses	1,125	1,229	1,364	1,273	1,282	0.9%	9	100.7%
Others	4,749	4,669	4,545	3,939	6,595	4.6%	2,656	167.4%
Total current liabilities	28,289	33,148	38,822	41,992	41,528	29.2%	(464)	98.9%
Long term debt	7,584	3,962	3,850	5,689	1,695	1.2%	(3,994)	29.8%
Accrued expenses	19	5	588	597	n.a.	n.a.	n.a.	n.a.
Deferred tax liabilities	1,256	1,944	2,562	2,554	n.a.	n.a.	n.a.	n.a.
Provision for retirement benefits	5,687	5,935	5,481	5,314	5,320	3.7%	6	100.1%
Others	924	1,736	2,034	2,244	5,445	3.8%	3,201	242.6%
Total non-current liabilities	15,475	13,587	14,515	16,398	12,460	8.8%	(3,938)	76.0%
Total liabilities	43,764	46,735	53,337	58,390	53,988	38.0%	(4,402)	92.5%
Capital stock	17,989	17,989	17,989	17,989	17,989	12.7%	0	100.0%
Capital surplus	13,879	13,879	13,879	13,879	13,879	9.8%	0	100.0%
Retained earnings	27,581	34,550	40,815	45,446	49,902	35.1%	4,456	109.8%
Treasury stock	(195)	(197)	(202)	(203)	(204)	-0.1%	(1)	100.5%
Total stockholders' equity	59,254	66,222	72,481	77,111	81,566	57.4%	4,455	105.8%
Other comprehensive income	(3,260)	(780)	4,283	6,604	6,452	4.5%	(152)	97.7%
Non-controlling interests	2	2	6	5	7	0.0%	2	140.0%
Total net assets	55,996	65,444	76,770	83,720	88,025	62.0%	4,305	105.1%
Total Liabilities and Total Net Assets	99,761	112,180	130,107	142,110	142,013	100.0%	(97)	99.9%
Interest Bearing Debts	11,977	10,040	15,350	25,237	17,793			
EBITDA	13,714	18,792	23,358	18,238	10,808			
Net income attributable to owners of parent	3,154	8,158	8,018	6,648	5,333			
◆ Key Indicators	Mar-12	Mar-13	Mar-14	Mar-15	Sep-15			
Current Ratio	174.9%	172.1%	146.6%	144.6%	144.6%			
Capital Ratio	56.1%	58.3%	59.0%	58.9%	62.0%			
D/E ratio (times) *	0.21	0.15	0.20	0.30	0.20			
Interest Bearing Debts / EBITDA	0.87	0.53	0.66	1.38	n.a.			
*Interest bearing debts/ Net assets								
ROA	3.2%	7.7%	6.6%	4.9%	n.a.			
ROE	5.7%	13.4%	11.3%	8.3%	n.a.			
Days Sales Outstanding (M)	3.2	3.2	2.7	3.0	3.0			
Days Sales in Inventories (M)	3.0	3.4	3.4	3.7	3.6			
Cash Disbursement Outstanding (M)	2.6	2.8	2.4	2.3	2.5			
Days Sales Outstanding = (Average Trade Receivables at beginning & end of FY / Revenue) × 12 (or 6)								
Days Sales in Inventories = (Average Inventories at beginning & end of FY / COGS) × 12 (or 6)								
Cash Disbursement Outstanding = (Average Accounts Payable at beginning & end of FY / COGS) × 12 (or 6)								



Source: summary of financial results

## 6. Management Plan and Growth Strategy

### 6-(1) Management Plan

Target sales of 140.0 billion yen and operating income of 20.0 billion yen in FY2021-3, the last fiscal year of the new mid-term management plan "NICHIGO 20"

#### ◆ Announced a new mid-term management plan "NICHIGO 20"

Given the completion of the existing mid-term management plan "Double 15" (from FY2012-3 to FY2016-3) in the current fiscal year, the Company announced a new mid-term management plan "NICHIGO 20" (from FY2017-3 to FY2021-3) in November 2015. Under "NICHIGO 20" the Company sets three basic policies: (1) to enhance business portfolio through continued growth of existing business, selection and concentration of business, and acceleration of new product development, (2) to strengthen competitive advantage from mid- and long-term perspectives, and (3) to further enhance credibility with society (see next page).

The Company sets the numerical target for the fifth year FY2021-3 to be the sales of 140.0 billion yen (+29.6% from FY2016-3 forecasts), the operating income of 20.0 billion yen (+42.9%) and the operating margin of 14.3%. The Company seeks to achieve the increase in sales and income, centered on the effect of new and additional production facilities of "OPL Film", "Soarnol" and "Hi-Selon" implemented under "Double 15" during the first half, and with a launch of new business and capital investment to be newly implemented during the latter half. While the Company has injected the capital investment of 68.0 billion yen in aggregate and R&D expenses of 19.0 billion yen under "Double 15", the Company plans to spend more under "NICHIGO 20" than "Double 15" with the capital investment of 74.0 billion yen and R&D expenses of 23.0 billion yen.

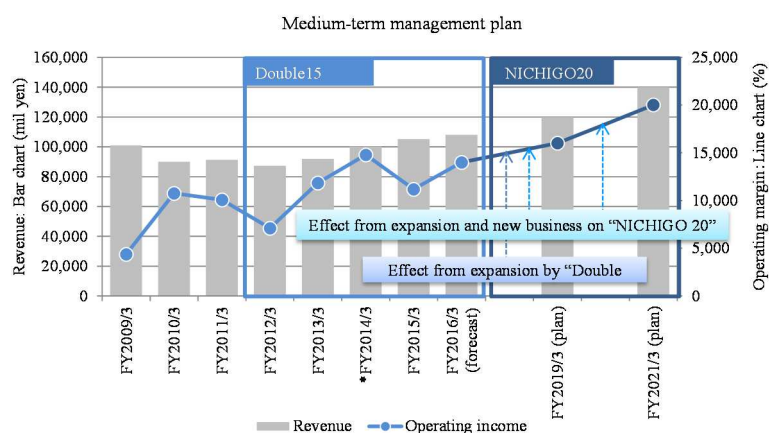
#### ◆ Medium-term management plan

(mil yen)	Double15					NICHIGO20	
	act	act	act	act	forecast	plan	plan
	FY2012/3	FY2013/3	*FY2014/3	FY2015/3	FY2016/3	FY2019/3	FY2021/3
Revenue	87,243	91,976	100,200	105,202	108,000	120,000	140,000
Operating income	7,117	11,859	14,800	11,186	14,000	16,000	20,000
Operating margin	8.2%	12.9%	14.8%	10.6%	13.0%	13.3%	14.3%
Depreciation	6,597	6,933	7,129	7,052	8,200	n.a.	n.a.
EBITDA	13,714	18,792	21,929	18,238	22,200	n.a.	n.a.
EBITDA margin	15.7%	20.4%	21.9%	17.3%	20.6%	n.a.	n.a.

	FY2012/3	FY2013/3	*FY2014/3	FY2015/3	FY2016/3	FY2019/3	FY2021/3
Revenue growth (Lower: vs FY3016/3)	(4,017)	4,733	8,224	5,002	2,798	12,000	20,000
Revenue growth y/y (Lower: vs FY3016/3)	-4.4%	5.4%	8.9%	5.0%	2.7%	11.1%	16.7%
Operating income growth (Lower: vs FY3016/3)	(2,970)	4,742	2,941	(3,614)	2,814	2,000	4,000
						2,000	6,000

\* Value excludes the impacts by accounting period change of some subsidiaries.

Source: annual report and new medium-term management plan



\* Value excludes the impacts by accounting period change of some subsidiaries.

Source: annual report and new medium-term management plan

## 6-(2) Growth Strategy

Maintain the existing policy for "OPL Film" and "Soarnol" to expand business scale by adding higher functionality to products and constructing new and additional facilities

Target development and establishment of new business groups with the operating income of around 1.0 billion yen

### ◆Enhancement of business portfolio: Core businesses

To enhance business portfolio, the Company seeks to achieve the plan based on (1) further expansion of core businesses and (2) establishment of new core (third pillar) businesses.

With regards to "OPL Film" and "Soarnol," two core businesses, the Company continues to take the existing measures to seek expansion of the business scale by adding higher functionality to products and enhancing the production capacity to meet the growing demand.

As for "OPL Film," the Company will focus on development of products with higher functionality to meet demands from customers for thin, low shrinkage and high transmittance-contrast film. The polarizing plate market (user of "OPL Film") continues an expanding trend, and is expected to grow at a CAGR of about 5% from 2014 to 2018 (square measure base, estimate by Fuji Chimera Research Institute). However, as the price of polarizing plates is also declining particularly for the large-scale TV panels, the Company will seek to cut costs through further improvement in productivity and secure the profit margin. A competitor Kuraray decided to expand facilities with the capacity of 20 million m<sup>2</sup>/year to meet growing demand in October 2015 (scheduled to start operations in early 2017), which will result in the expansion of Kuraray's production capacity from the current 212 million m<sup>2</sup>/year to 232 million m<sup>2</sup>/year (for reference: Nippon Gohsei's production capacity is 88 million m<sup>2</sup>/year).

As for "Soarnol," the Company will seek to further develop new applications such as substitute to aluminum pouch to expand demand in the existing market, and also aims for further growth by looking to business development in the emerging markets which are expected to increase demand going forward. As properties (gas barrier and molding flexibility) of EVOH resins vary depending on the ethylene content, in order to provide products that meet customer needs, insights of resins to be combined and technical support will be indispensable. Therefore, Nippon Gohsei will seek differentiation from low-end products by enhancing customer services, and aim for expansion of sales through addition of higher value and improvement of quality.

### ◆Enhancement of business portfolio: Establishment of new core business

In an effort to establish new core business, the Company seeks to proactively invest in prospective products and establish business groups with operating income of 1.0 billion yen within 5 years. The Company also considers to expand the scope and scale of business by acquiring external management resources through business alliance and M&A, not just internal development. Prospective products include "Coponyl" and "Shikoh" (pressure sensitive adhesives), "Hi-Selon" (water-soluble PVOH film), "Nichigo G-Polymers" (BVOH) and sodium acetate.

#### <Pressure sensitive adhesives: "Coponyl" and "Shikoh">

Further growth is expected in pressure sensitive adhesives for use in electronic materials and optical materials such as "Coponyl" and "Shikoh", as the polarizing plate market remains strong and the touch panel market is rapidly expanding along with dissemination of tablet devices and smartphones. Particularly, "Shikoh," a UV curable resin, is increasingly applied for smartphones and other devices, as filling an air gap between a cover glass and a polarizing plate of a touch panel with Shikoh allows to make a panel both thinner and stronger, as well as enhance visibility and achieve higher contrast. As Nippon Gohsei is the only company which offers two types of adhesive resins, i.e. an acrylic resin ("Coponyl") and a UV curable resin ("Shikoh"), the Company will seek to expand the customer base by flexibly providing products that meet customer needs.



**<Water-soluble PVOH film "Hi-Selon">**

Production of "Hi-Selon" started in 1973, and it has been so far used for packaging of chemicals and a film for curved transfer printing. In recent years, the demand expanded along with the requirement for packaging of agricultural chemicals, and the demand for transfer printing films for use in automobile interiors remains solid. An application for use in packaging materials for liquid detergent is expected to grow as a new application. It is a growing field in which demand is expanding centered on the U.S. and Europe. In addition, as the industry leader has higher shares in films for use in packaging of liquid detergent, the Company hears users' intention to diversify supply sources. Therefore, right after starting operations of the new facility (1,600 ton/year) which is currently under construction, Hi-Selon is expected to contribute to the sales.

**<BVOH: "Nichigo G-Polymer">**

"Nichigo G-polymer" is the first amorphous vinyl alcohol resin in the world with excellent gas barrier property, as well as both heat-resisting and water-soluble properties, which other products may not achieve. Although it took several years to achieve commercial use, the Company brought "MelFil," a water-soluble filament for use in 3D printers, into the market in July 2015. In addition, as the use of hydrogen gains momentum with the introduction of fuel-cell vehicles into the market, Nichigo G-Polymer attracts attention as a material with superior hydrogen barrier property, and a joint project between industry and academia toward the practical use is under way.

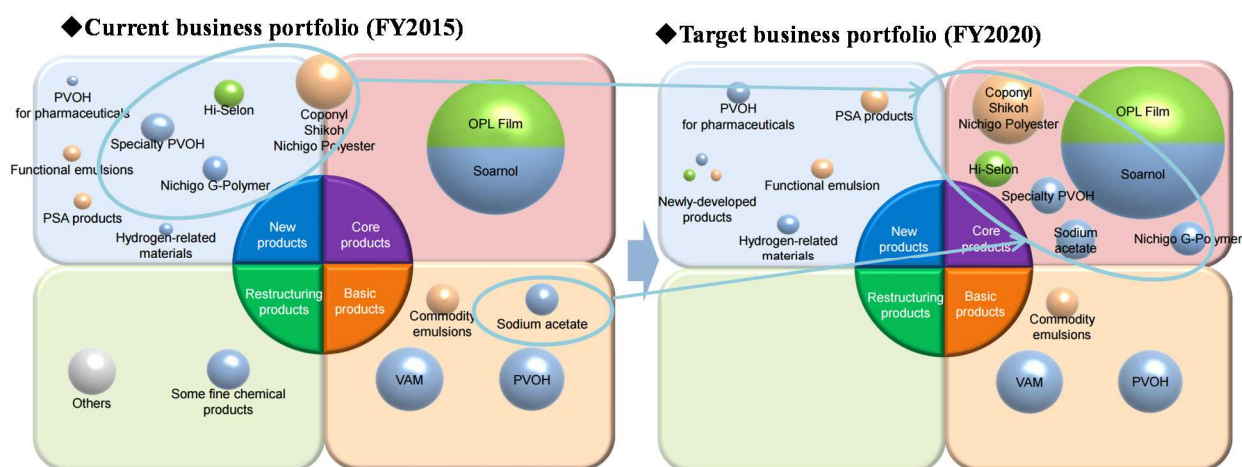
**<Sodium acetate>**

Sodium acetate has been historically handled as one of fine chemical products. The Company seeks to expand demand for applications in kidney dialysis and food additives by developing high quality products through the new process. In the mid-term, the Company seeks to promote sodium acetate as a core business with a view to expansion of production lines.

**◆Strengthening competitive advantage**

As measures to strengthen competitive advantage, the Company will promote (1) reorganization of domestic plants, (2) global, stable procurement of basic raw materials and (3) development of human resources.

With regards to (1), the Company is reorganizing the Ogaki Plant where production facilities of the withdrawn business remains, and plans to establish a grand design for a state-of-the-art plant and install and enhance new production facilities. More specifically, the plan includes new (7th and 8th) lines for "OPL Film" or facilities for sodium acetate.



Source: new mid-term management plan



## 7. Stock Price Trend and Investment Return Analysis

### 7-(1) Stock Price Trend

The Company's stock outperformed TOPIX and peers in FY2013-3, as the business performance recovered.

In FY2015-3, after weakness due to sluggish financial results caused by special factors, clear sign of return to uptrend driven by the prospect of solving problems

In FY2016-3, despite weakness after announcement of Q1 results, stock prices picked up driven by improved Q2 results

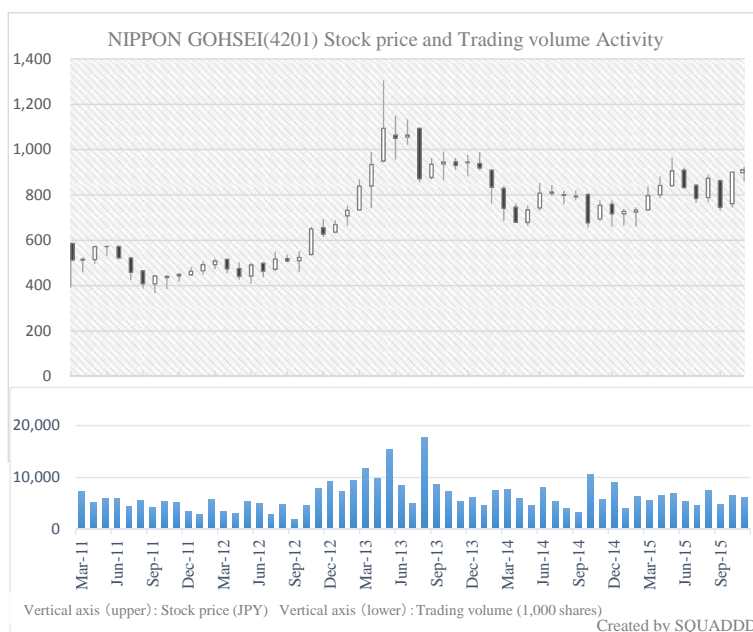
#### ◆After temporary weakness, recent stock price is shifting to uptrend

Stock price has shown the following trend. In the recent five fiscal terms from FY2012-3 to Q2 FY2016-3, the sales have maintained an expanding trend (excluding the impact of the change in the accounting period of consolidated subsidiaries). The operating income has also shown an increasing trend except in FY2015-3, and ROE and other profitability measures remained relatively solid without no sign of significant deterioration.

As for the stock price, in FY2013-3, the Company outperformed TOPIX and peers including Kuraray (3405.T), led by the bullish market driven by Abenomics later in the year and recovery of the business performance. Also, the liquidity (per day on amount basis; the same shall apply hereinafter) remained around 400 million yen, indicating an expansion of market participants.

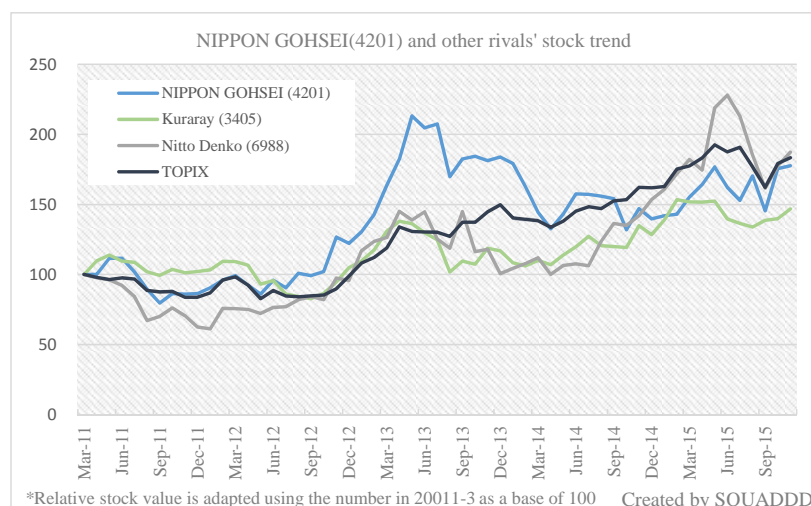
In FY2015-3, after going up for some time early in the period, the stock price gradually weakened due to a temporary deterioration in the financial results caused by special factors, resulting in underperformance relative to TOPIX and peers including Kuraray (3405.T). Later in the period, the stock price recovered, driven by the prospect for resolution of the main factors that had caused deterioration in the financial results, i.e. (i) a defect in stability of the product quality in the new OPL Film facility (the 6th line) and (ii) a sharp rise in the price of vinyl acetate monomers in Europe and an improvement in the income level was felt confident. The liquidity also lowered from 300 million yen to around 200 million yen in the first half of FY2015-3, but turned to an increasing trend along with the recovery of the stock price later in the period.

In Q1 FY2016-3, the financial results were sluggish as the operating income decreased year-on-year due to supply shortage of "OPL Film" along with regular repairs and the gap between delivery of inventory, as a result, the stock price has remained weak around 700s-800s yen level during July-September after announcement of the Q1 results. In Q2, the stock price picked up again given the strong financial results, and the liquidity has remained at the higher end of 200-300 million yen range since October 2015, although it temporarily fell below 200 million yen.



## 7-(2) Investment Return Analysis

Valuation (PBR) relative to the industry average remains cheap; for valuation to improve going forward, expansion of scale and better liquidity through IR activities will be a key.



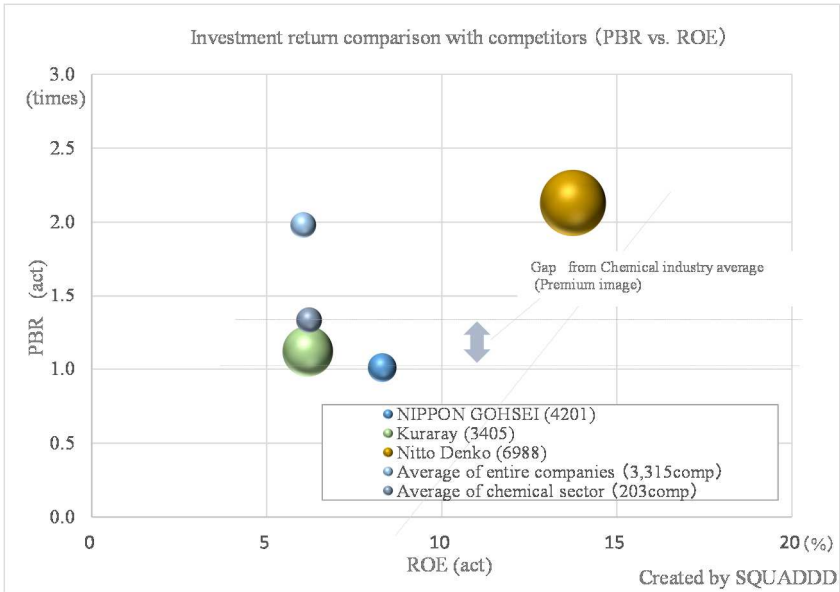
### ◆Profitability measures such as ROE and PBR remain attractive relative to industry average

As of November 27, 2015, the Company's market capitalization was about 89.6 billion yen, PBR was 1.0x, ROE (actual basis) was 8.3% and dividend yield (company estimate) was 2.2%. Compared with the chemical industry average (203 names) for PBR (1.3x) and ROE (6.2%), the Company's valuation (PBR) remains cheap. In the chemical industry which is consisted of many large-cap companies, the average market capitalization of about 172.9 billion yen is twice as large as that of Nippon Gohsei and there is a more than 2-fold gap between the market liquidity (liquidity per day, amount basis) of Nippon Gohsei (300 million yen) and the market average (700 million yen). It varies by industry, but particularly in the chemical industry, the data confirms that stock prices are highly correlated with the size factor such as sales and assets and profitability after considering the capital efficiency such as ROE and operating income relative to capital. For the stock price to move higher (and remove premiums over the market average) going forward, further expansion of institutional (professional) investor base by increasing the liquidity per day, while seeking to expand the sales size and improve the capital efficiency, and enhancing the courteous disclosure and IR activities, should be critical.

### ◆Valuation is cheap relative to peers, expect re-rating of stock price this year

The Company's stock is compared with peers as follows. In terms of the market capitalization, Kuraray is the largest (558.5 billion yen, TSE1) followed by Nippon Gohsei (89.6 billion yen, TSE1) (a size of bubbles representing individual companies in the chart illustrates the market cap of each company). PBR of Kuraray (1.1x) and Nippon Gohsei (1.0x) are both lower (cheaper) than the average of the chemical industry (1.3x). On the other hand, in terms of profitability indicators, while Kuraray's dividend yield (2.5%) is slightly higher than Nippon Gohsei's (2.2%), Nippon Gohsei's ROE (8.3%) is higher than Kuraray's (6.2%) by nearly 2%, indicating relative attractiveness of Nippon Gohsei from the value investment perspective.

The stock price of Nippon Gohsei turned to an uptrend after the announcement of the Q2 FY2016-3 financial results, outperforming Kuraray. Going forward, it is likely that re-rating of the Company's stock continues, resulting in the gradual consolidation of stock prices with the industry average.



## Disclaimer

### Disclaimer

- This report is prepared by SQUADD Research & Consulting Inc. ("SQUADD") for the purpose of providing information to investors for fees under a contract with a covered company, and not for solicitation of securities trading.
- Although, in preparing the report, SQUADD has obtained information through interviews with the covered company, assumptions and views set forth in the report are not of the said company but are in principle based on analysis and evaluation by SQUADD.
- Although the report is written based on the information and materials that SQUADD judged reliable, there is no guarantee of accuracy, credibility, completeness, suitability and timeliness. Also, views and forecasts set forth in the report represent judgment by SQUADD at the time of issue of the report, and may be changed without notice.
- SQUADD shall not take any responsibility whatsoever for any results including direct or indirect damage arising from the use of, or reliance to, this report. Investors should take their own responsibility for securities and other transactions.
- The intellectual property right of this report belongs to SQUADD, and any copy, transmission or quote of any contents without permission is legally prohibited.

### About "ANALYST NET"

- ANALYST NET is a name of report services issued and distributed by Toward the Infinite World, Inc. (hereinafter "TIW"). TIW serves as a delivery platform for providing information and a secretariat function.
- Reports issued in the "ANALYST NET" brand name are intended to provide introductions to and descriptions of industries and companies by the different approach from the existing analyst reports, and mainly prepared by analysts outside of "TIW" and business partners (hereinafter "authors").
- TIW shall not review nor approve contents of the reports in principle (provided, however, that only in the case of clear mistakes or inadequate expressions, they are pointed to authors).
- TIW may directly or indirectly receive fees from the company covered by this report in compensation for planning and proposal for issuing the report and provision of the delivery platform function.
- Authors may directly or indirectly receive fees from the covered company other than for preparation of the report. Authors are also likely to hold securities issued by the covered company. TIW shall not manage these in principle, nor take responsibility. Please review separate disclaimer by authors.
- The report is prepared only for the purpose of providing information relevant to the investment decisions, and is not intended for solicitation of securities and other transactions. Investors should make final decision on securities and other transactions in their own judgment and responsibilities.
- Although, in preparing the report, authors have obtained information through interviews with the covered company, assumptions and views set forth in the report are not of the said company but are in principle based on analysis and evaluation by authors.
- Although the report is written based on the information and materials that authors judged reliable, there is no guarantee of accuracy, credibility, completeness, suitability and timeliness. Also, views and forecasts set forth in the report represent judgment by authors at the time of issue of the report, and may be changed without notice.
- TIW and authors shall take no responsibility for direct, indirect, incidental or special damage that may be incurred by investors as a result of reliance on the information or analysis set forth in the report.
- The copyright of the report belongs to TIW or authors in principle. With respect to the information provided in the report, copy, sale, indication, delivery, publication, amendment, dissemination or commercial use of such information without approval of TIW are against the law.
- "ANALYST NET" is a registered trademark owned by TIW.