

# The Nippon Synthetic Chemical Industry Co., Ltd.

(4201: Tokyo 1st)

Issue Date: February 24, 2015

## Two Main Products Dominate Market with Rival Kuraray

### Duopoly continues to create high barrier to entry

The Nippon Synthetic Chemical Industry is a specialty chemical manufacturer focusing on acetic acid-type synthetic resins with a long history since establishment in 1927.

"OPL Film" and "SOARNOL" are two main products. "OPL Film" is used to make a "polarizing plate", an indispensable element of liquid crystal displays (LCD), and "SOARNOL" is a synthetic resin mainly used in food packaging. "OPL Film" has a high technological barrier to entry, leading to a duopoly by the Company and Kuraray which maintain 30% and 70% market share, respectively. "SOARNOL" also has a high technological barrier to entry and requires a large initial investment, which is likely to make the duopoly persist going forward. These highly customized non-commodity products are unlikely to suffer from price competition, also making them attractive.

Current challenge is to foster the third pillar product following the two main products. "COPONYL" and "SHIKOH", pressure sensitive adhesives used in polarizing plates and touch panels, are growing well in tandem with diffusion of smartphones. Going forward, sales of "Hi-Selon" used in packaging materials for liquid detergents are also expected. As the Company's products are high-end products, a mid- to long-term growth is expected as the emerging markets will become a full-scale target going forward.

### Mixed Q3 results with higher revenues and lower profits, expect new line to add revenues

The Company reported mixed Q3 results, as revenues increased by about 3.0B yen y/y to 78.2B yen, while the operating income declined from 11.3B yen (operating margin of 15%) in the previous year to 8.6B yen (11%). Lower income was caused by two obstacles: one was a delay in full-scale operation of the new OPL Film facilities due to a defect of the instable quality, and the other was higher cost due to a sharp increase in prices of vinyl acetate monomers (raw material of SOARNOL) in Europe. Profitability is expected to improve as both obstacles are already about to be removed. In addition, a new SOARNOL production line under construction in the US plant is scheduled to start operation in Q2 FY2015, which is expected to add to revenues. However, from the cost perspectives, considering the resulting increase in depreciation as well as a plan to implement optimization of the production system in domestic factories, extraordinary costs may squeeze the margin.

### Basic Report

(FY2015-3, 3rd Quarter)

SQUADD Research &amp; Consulting, Inc.

Tomoko Okuyama / Sadao Sakamoto

#### Company Information

Name	NIPPON GOHSEI
Equity Code	4201
Market Section	TSE's 1st Section
Location	Komatsubara-cho, Kita-ku, Osaka
President	Katsumi Kimura
Foundation Date	1927/3/30
Capital	17.989 B JPY
Listed Date	1949/5
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 2015/1/31

Stock Price	728 JPY
Yearly High	989 JPY (2014/1/20)
Yearly Low	656 JPY (2014/10/31)
Shares Outstanding	98,369,186 Share
Unit of Trading	1,000 Share
Market Cap	71.613 B JPY
Dividend (Est)	18.00 yen (FY2015-3)
Div-Yield (Est)	2.47 % (FY2015-3)
EPS (Est)	73.92 JPY (FY2015-3)
EPS (Act)	82.32 JPY (FY2014-3)
PER (Est)	9.85 times (company)
PBR (Act)	0.88 times

JPY(M)

FY		Revenue	y/y	Operating Income	Operating Margin	Ordinary Profit	Ordinary Profit Margin	Net Income	Net Margin	EBITDA	EPS (JPY)
Mar-12	Actual	87,243	95.6%	7,117	8.2%	6,763	7.8%	3,154	3.6%	13,714	32.38
Mar-13	Actual	91,976	105.4%	11,859	12.9%	12,375	13.5%	8,158	8.9%	18,792	83.75
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	Company Estimate	104,500	94.0%	11,000	10.5%	11,300	10.8%	7,200	6.9%	n.a.	73.92
Cumulative		Revenue	q/q	Operating Income	Operating Margin	Ordinary Profit	Ordinary Profit Margin	Net Income	Net Margin	EBITDA	EPS (JPY)
2014/3-3Q	Actual	74,898	109.1%	11,373	15.2%	12,082	16.1%	7,810	10.4%	n.a.	n.a.
2015/3-3Q	Actual	78,191	104.4%	8,620	11.0%	8,917	11.4%	5,845	7.5%	n.a.	n.a.
2015/3-3Q	Progress Rate	74.8%	n.a.	78.4%	n.a.	78.9%	n.a.	81.2%	n.a.	n.a.	n.a.

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## Brief Investor Summary

JPY(M)

Name(J)	日本合成化学工業株式会社	Company Name(E)	NIPPON GOHSEI	Foundation Date	1927/3/30
Location	2-4,Komatsubara-cho, Kita-ku, Osaka	URL	<a href="http://www.nichigo.co.jp/">http://www.nichigo.co.jp/</a>	President	Katsumi Kimura
Market Section	TSE's 1st Section	Equity Code	4201	Company Rating	A- (R&I)
Industry	Material > Chemistry > Synthetic Resins	Capital	17,989 mil yen	Number of Employees	non-consolidated 1,037
Underwriter	SMBC Nikko Sec	Main Bank	Mizuho Bank, Ltd.	(permanent staff)	consolidated 1,665
Auditor	Ernst & Young ShinNihon LLC	Going concern note	none	Average Salary	non-consolidated (thousand yen) 7,336
Business Profile	NIPPON GOHSEI manufactures and sells chemical products specialized in acetic acid-type resins, broadly in three segments: "Synthetic Resins", "Organic Synthesis" and "Others". Synthetic Resins is a key segment, contributing to about 75% of revenues and over 95% of operating income. The segment develops Polyvinyl alcohol (PVOH), Ethylene-vinyl alcohol copolymer (EVOH) and Specialty Polymer (pressure sensitive adhesive business). Among them, PVOH film for polarizing plate "OPL Film" and EVOH resin "SOARNOL" are two core products, where the company dominates the market with Kuraray, maintaining a position as the second supplier.				
Future Outlook	Given solid demand for two core products, the company has been active in capital investment since FY2013-3 to expand the business through enhancement of its production capacity. In addition to the polarizing plate market, demand for products for touch panels is expected to increase, along with diffusion of tablets and smartphones. Demand for EVOH resin currently centered in the developed markets is also expected to expand in the emerging markets. While cultivating demand for the existing products through expansion of applications, the company focuses on fostering another core products following two core products as the next challenge.				



As of 2015/1/31

Close Price	Market Cap	EV	PER*	PBR	Div-Yield*
728	71,613	71,613	9.85	0.88	2.47%
FY	Mar-11	Mar-12	Mar-13	Mar-14	Latest
FYE Price	513	509	839	741	n.a.
High Price	683	573	869	1,306	989
Low Price	392	367	408	686	656
EPS	62.94	32.38	83.75	82.32	n.a.

\* Forecast

Income Statement	Mar-11	Mar-12	Mar-13	Mar-14
Revenue	91,260	87,243	91,976	111,151
Gross Profit	23,939	21,278	26,662	32,893
Operating Income	10,087	7,117	11,859	16,229
Ordinary Profit	9,460	6,763	12,375	16,712
Net Income	6,131	3,154	8,158	8,018
Depreciation	6,645	6,597	6,933	7,129
R & D Expense	2,562	2,824	3,388	3,458
Interest Expenses	420	273	224	200
EBITDA**	16,732	13,714	18,792	23,358
CAPEX***	5,900	8,028	10,772	20,263
EBITDA-CAPEX	10,832	5,686	8,020	3,095

\*\* EBITDA=Operating Income+Depreciation

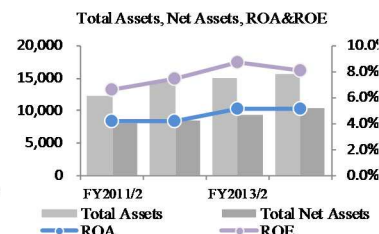
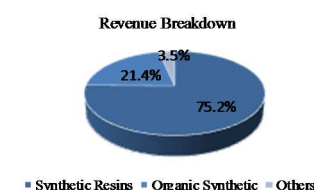
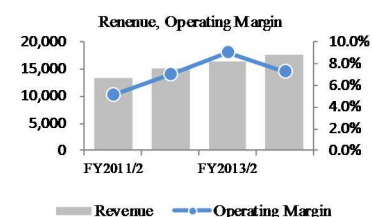
\*\*\*CAPEX=Capital Expenditure on CF Statement

Balance Sheet	Mar-11	Mar-12	Mar-13	Mar-14
Cash and Deposits	8,036	4,879	8,433	5,785
Accounts Receivable	22,897	24,213	25,120	24,478
Inventory	15,674	17,528	19,788	24,134
Other Current Assets	2,091	2,842	3,711	2,510
Total Current Assets	48,699	49,464	57,054	56,907
Tangible Fixed Assets	41,394	43,436	48,762	66,511
Intangible Assets	839	665	489	496
Investments and Other Assets	6,923	6,195	5,873	6,193
Total Fixed Assets	49,157	50,296	55,125	73,200
Total Assets	97,857	99,761	112,180	130,107
Current Liabilities	26,003	28,289	33,148	38,822
Non-Current Liabilities	16,902	15,475	13,587	14,515
Total Liabilities	42,906	43,764	46,735	53,337
Stockholders' Equity	57,367	59,254	66,222	72,481
Other Net Assets	(2,416)	(3,258)	(778)	4,289
Total Net Assets	54,951	55,996	65,444	76,770
Interest Bearing Debt	13,599	11,977	10,040	15,350

Cash flow Statement	Mar-11	Mar-12	Mar-13	Mar-14
CF from Operating Activities	14,132	9,223	16,365	14,150
CF from Investing Activities	(7,761)	(8,575)	(10,557)	(20,033)
Free CF	6,371	648	5,808	(5,883)
CF from Financing Activities	(9,844)	(2,872)	(3,319)	1,996
Translation Adjustments	(329)	(142)	425	954
Net CF	(3,802)	(2,367)	2,914	(2,933)

EV: Enterprise Value, EV=MarketCap + (Interest Bearing Debt—Cash and Deposits—Securities)

Major Shareholders	Share
Mitsubishi Chemical	50.4%
Japan Trust Service TB	5.6%
State Street Bank and Trust	3.6%
Japan Master Trust TB	2.6%
Asset Management Service TB	1.5%
Others	36.3%
Total	100.0%



Segment Information	Revenue	Share%	Net Income	Net Margin
FY2014-3				
Synthetic Resins	83,560	75.2%	16,407	19.6%
Organic Synthetic	23,754	21.4%	49	0.2%
Others	3,836	3.5%	218	5.7%
Adjustment	-	-	(446)	
合計	111,151	100.0%	16,229	14.6%

FY2014-3	1Q	2Q	3Q	4Q	Total
Quarterly					
Revenue	24,242	25,197	25,459	36,253	111,151
Operating Income	3,980	3,822	3,571	4,856	16,229
Operating Margin	16.4%	15.2%	14.0%	13.4%	14.6%

FY2015/3	1Q	2Q	3Q	4Q*	Total*
Quarterly					
Revenue	26,068	26,461	25,662	26,309	104,500
Operating Income	3,504	2,961	2,155	2,380	11,000
Operating Margin	13.4%	11.2%	8.4%	9.0%	10.5%
Revenue Growth y/y	107.5%	105.0%	100.8%	72.6%	94.0%

\*Blue: Company estimate

Key Indicator	Mar-11	Mar-12	Mar-13	Mar-14
Revenue Growth y/y	(%) 1.3%	-4.4%	5.4%	20.8%
Operating Income	(%) 11.1%	8.2%	12.9%	14.6%
Ordinary Profit	(%) 10.4%	7.8%	13.5%	15.0%
Net Income	(%) 6.7%	3.6%	8.9%	7.2%
EBITDA/Revenue	(%) 18.3%	15.7%	20.4%	21.0%
COGS/Revenue	(%) 73.8%	75.6%	71.0%	70.4%
SG&A/Revenue	(%) 15.2%	16.2%	16.1%	15.0%
R&D Expense/Revenue	(%) 2.8%	3.2%	3.7%	3.1%
ROA	(%) 6.0%	3.2%	7.7%	6.6%
ROE	(%) 11.4%	5.7%	13.4%	11.3%
Current Ratio	(%) 187.3%	174.9%	172.1%	146.6%
Capital Ratio	(%) 56.2%	56.1%	58.3%	59.0%
D/E ratio	(times) 0.78	0.78	0.71	0.69
Interest Bearing Debt / EBITDA	0.81	0.87	0.53	0.66

Valuation	Mar-11	Mar-12	Mar-13	Mar-14
Market Cap	(B yen) 50.463	50.070	82.532	72.892
EV	(B yen) 56.026	57.168	84.139	82.457
EV/Revenue	(times) 0.61	0.66	0.91	0.74
EV/EBITDA	(times) 3.35	4.17	4.48	3.53

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## 1. Business Overview

### 1-(1) Segment Composition

Business composition with synthetic resin business as a core

Synthetic resin business generates more than 95% of operating income.

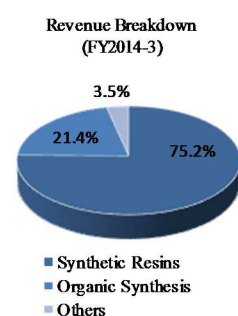
### ◆ Synthetic resins as core business

The Nippon Synthetic Chemical Industry Co., Ltd. (the "Company") is a specialty manufacturer of acetic acid-type resins, comprising of three segments: (i) Synthetic Resins, (ii) Organic Synthesis, and (iii) Others. (i) Synthetic Resins consisted about 75% (83.6B yen) of total revenues in FY2014-3 (111.2B yen), with the remaining 25% divided into (ii) Organic Synthesis (about 21%) and (iii) Others (about 4%).

(i) Synthetic Resins generated about 98% of total operating income, serving as a major source of income. Other two segments are mostly running at a break-even (except in FY2011-3).

A trend over the past five years also shows that (i) Synthetic Resins drive the business as the Company's core segment, contributing to 70-75% of revenues and over 95% of operating income. This business segment stands on three pillars: (1) PVOH (polyvinyl alcohol or PVA), (2) EVOH (ethylene vinyl alcohol copolymer) and (3) Specialty Polymers (pressure sensitive adhesive resins), each consisting 40%+, 40%- and around 20% of the segment revenues, respectively.

Synthetic Resins	<p>■ Production and sales of synthetic resins and processed goods made from basic chemicals.</p> <p>① PVOH business: Optical film for liquid crystal panel, paper coating agent etc.</p> <p>② EVOH business: Food packaging film, resin tank material etc.</p> <p>③ Specialty polymer business: adhesives for polarizing plate of LCD TV, optical film hard coating agent etc.</p>
Organic Synthesis	<p>■ Production and sales of basic chemicals, acetic acid derivative products and their processed goods.</p> <p>"ethyl acetate", "acetic acid salts" are used as raw materials for pharmaceuticals, food additives, aroma and dye chemical, adhesives, of which "vinyl acetate monomer" is used as a material for a core product "Gohsenol" (PVOH).</p>
Others	Logistics service, facility construction and maintenance, environment analysis, insurance agent business



Source: Annual report and financial results briefing materials

### ◆ Business Results by Segment Composition

JPY(M)

		Company estimate*					
		Mar-10	Mar-11	Mar-12	Mar-13	Mar-14	Mar-15
Revenue	Synthetic Resin	65,099	64,946	61,510	67,113	83,560	76,800
	Organic Synthesis	22,747	22,932	22,034	20,643	23,754	24,000
	Others	2,239	3,381	3,699	4,219	3,836	3,700
	Total	90,086	91,260	87,243	91,976	111,151	104,500
Operating Income	Synthetic Resin	10,703	10,234	7,244	11,837	16,407	11,300
	Organic synthesis	262	(131)	35	174	49	0
	Others	14	200	231	243	218	200
	Sub total	10,981	10,303	7,512	12,254	16,675	11,500
	Adjustment	(213)	(216)	(395)	(395)	(446)	(500)
	Total	10,767	10,087	7,117	11,859	16,229	11,000
Operating Margin	Synthetic Resin	16.4%	15.8%	11.8%	17.6%	19.6%	14.7%
	Organic synthesis	1.2%	-0.6%	0.2%	0.8%	0.2%	0.0%
	Others	0.6%	5.9%	6.2%	5.8%	5.7%	5.4%
	Total	12.0%	11.1%	8.2%	12.9%	14.6%	10.5%

\*Each segment composition is based on the SQUADD's estimation.

Source: Annual report and financial results briefing materials.



## 1-(2) Overall Business Picture

### ◆ "Organic Synthesis", "Synthetic Resins" and "Processing Technology" are three techno-fields

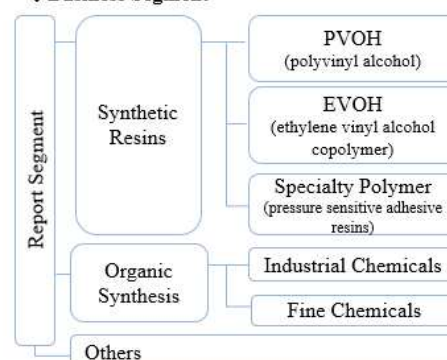
The Company develops the business based on three techno-fields: "Organic Synthesis", "Synthetic Resins" and "Processing Technology". Since successful industrialization of the first "acetic acid" in Japan, the Company has combined and integrated these three fields to expand the business segments, and now continues to try developing high-value-added products.

Out of "Synthetic Resins" which now drive the business, three main businesses - (1) PVOH (polyvinyl alcohol), (2) EVOH (ethylene vinyl alcohol copolymer) and (3) Specialty Polymers (pressure sensitive adhesive resins) - are summarized below.

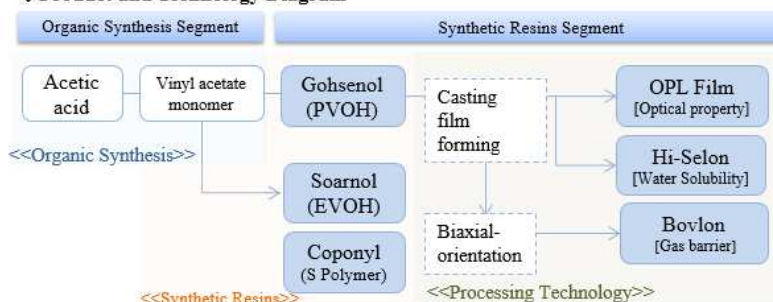
#### ◆Techno-Fields



#### ◆Business Segment



#### ◆Product and Technology Diagram



Source: financial results materials and company HP.

#### ◆Main Product of Synthetic Resin Business

PVOH			EVOH*EVA*		
Gohsenol Gohsenx Gohsenol EG		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.	Soarnol G. Soarnol		Ethylene-vinyl alcohol copolymer. It is used for film, bottles and tubes for food packaging as well as construction material and gasoline tanks.
IT and Electronic-use Materials	OPL Film	Optical-use PVOH film. It is used to make polarizing film, an indispensable element of LCD displays.	Soarlite		EVOH for engineering plastic.
	ORGA	Glass replacement optical sheet. It is a strong plastic sheet with zero optical strain and high heat resistance used to substitute enhanced glass.	Soarblen		EVA that contains more vinyl acetate used for PVC modifier.
Functional Film	Hi-Selon	Water-soluble PVOH film. It is an optimal film for packaging with excellent heat-sealing property and printability.	Soaresin		Resin used as an agent for modifier of resin or as a stabilizer for extrusion.
	Bovlon	Biaxial-orientated PVOH film. It is used for food packaging as well as medical and industrial applications with its high gas barrier property.	Specialty Polymer		
			Coponyl		Acrylic copolymer, used for pressure sensitive adhesives such as sticker and tape as well as to produce polarizing plate for liquid crystal TV.
			Shikoh		UV curable resin. With its high adhesion and solidity it is used as a hard coating compound for plastic and optical film.
			Mowvinyl		Synthetic resin emulsion. It is used for water soluble paint, construction material, pressure sensitive adhesives, paper processing, and functional coating.
			Nichigo Polyester		It has great adhesive property for plastic film, molded products, and metals such as aluminum and copper.

\*EVA: ethylene-acetic acid vinyl alcohol copolymer

\*\*BVOH: Butendiol vinyl alcohol copolymer

Source: Financial results materials and company HP.

### 1-(3) Synthetic Resins:

#### a. GOHSENOL

Also used to produce various synthetic resin products

#### b. OPL Film

A material used to produce a "polarizing plate", an indispensable element of LCD.

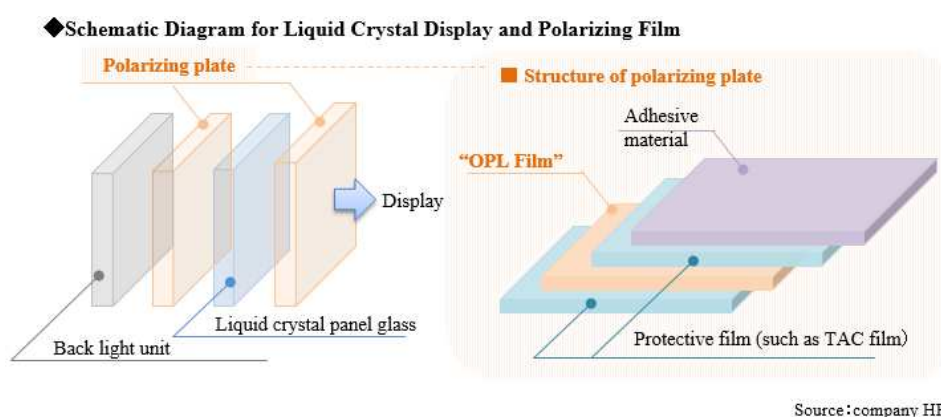
The Nippon Synthetic Chemical Industry and Kuraray are the only manufacturers of optical-use PVOH films in the world.

#### ◆GOHSENOL: water soluble and biodegradable synthetic resins

"GOHSENOL", a base product in the PVOH business, is produced by polymerizing and saponifying vinyl acetate monomers. "GOHSENOL" is one of few water-soluble synthetic resins, has superior features in film formation, adhesiveness, surface activity and safety, and used for a variety of fields and applications including fiber processing, pharmaceuticals and cosmetics, plastics, construction materials, paper processing, raw material for intermediate membrane of automobile front glasses. In addition, the Company's other products such as "OPL Film", "Hi-Selon" and "Bovlon" use "GOHSENOL" as raw material.

#### ◆OPL Film: duopoly by Kuraray (70% market share) and The Nippon Synthetic Chemical Industry (30%)

"OPL Film" is an optical-use PVOH film produced from "GOHSENOL". After development of its application to a "polarizing plate", an indispensable element of LCD, OPL Film has grown as one of the Company's core products as LCD TVs have become popular. As liquid crystals have characteristics to change a molecular sequence and refract the light, by putting liquid crystals between two "polarizing plates" and passing and blocking the light, a screen can be displayed. A "polarizing plate" is produced by clipping "OPL Film", a light polarizer, between protection films (TAC film, acrylic) and processing it to adhesively attach to a liquid crystal panel.



Kuraray and The Nippon Synthetic Chemical Industry are only two companies in the world that produce PVOH films for use in liquid crystal panels, and dominate the market with 70% and 30% share, respectively (estimate based on their production capacity). In addition, for the Company, the industry structure is relatively closed, as the polarizing plate industry, its target market, is also dominated by top three companies (Nitto Denko, LG Chemical (Korea) and Sumitomo Chemical) that hold over 70% market share. In such environment, the Company has established a solid position as a provider of PVOH films, and the "OPL Film" business contributes to the Company as a stable source of income.

However, in August 2014, Nitto Denko, a leading manufacturer of polarizing plates, started in-house production of "Coating polyvinyl alcohol (Coating PVA)" as an alternative product and fully adopting it to its own polarizing plates, which was a sign of shift in the industry structure. Considering time and costs required for renewal of the production facilities, the immediate impact on the performance of the Company is not anticipated, but the Company nonetheless faces unprecedented concerns.

### 1-(4) EVOH

A resin with a high barrier feature, mainly used in food packaging

Kuraray and The Nippon Synthetic Chemical Industry substantially dominate the EVOH resin market.

#### ◆EVOH: synthetic resins bringing innovation in food packaging

Core product of EVOH (ethylene vinyl alcohol copolymer) is "SOARNOL" which is mainly used in food packaging. "SOARNOL" is used, by being added film-lamination after co-extrusion molding with other resins and film processing, for packaging films, bottles, tubes and sheet formation material. "SOARNOL" is highly evaluated in its features not only to prevent spoilage of food and mold, but to preserve the fragrance and flavor of food, as well as excellent transparency and printability to ensure that the food is beautifully presented.

Its high barrier properties not only for oxygen but for a variety of other gases, as well as excellent oil and moisture resistance also enable it to be used for non-food applications such as the plastic fuel tanks for automobiles.

In addition, as "SOARNOL" is composed of carbon, oxygen and hydrogen, it emits no toxic gases when burned with combustion heat of less than half of polyethylene, which has attracted a great deal of attention as an environmentally safe material.

#### ◆Application Examples of Soarnol



Source: company HP.

Kuraray, The Nippon Synthetic Chemical Industry and Chang Chun Petrochemical (Taiwan) are only three manufactures of EVOH resins in the world, with production capacity (ton/year) of 81,000, 51,000 and 10,000, respectively, and the market share measured by the production capacity of 57%, 36% and 7%, respectively (based on 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 technology 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 works as a barrier to new entry.

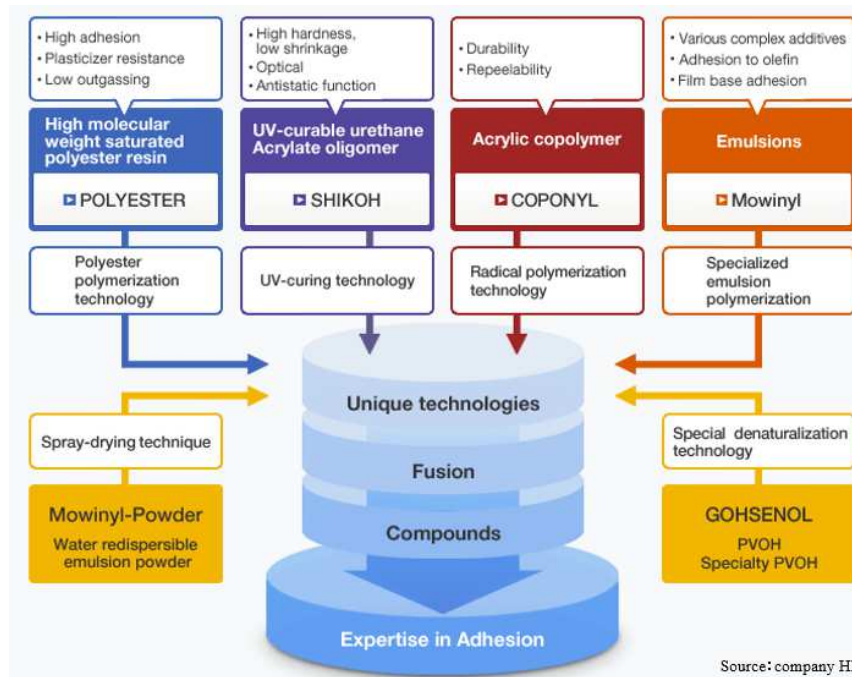
### 1-(5) Synthetic Resins Specialty polymer

Developed into a variety of pressure sensitive adhesive resins in a wide range of applications

World No. 2 player in the field of optical-use pressure sensitive adhesives for polarizing plates

#### ◆Development of a variety of pressure sensitive adhesive resins

The Specialty Polymer business provides a variety of pressure sensitive adhesive resins, under the concept of "Pressure Sensitive Adhesive Skills", by combining and integrating technologies in cohesive, adhesive and coating fields. Representative products include "COPONYL", "SHIKOH", "Mowinyl" and "Polyester" (chart in P5).



#### ◆Strong in optical-use pressure sensitive adhesives for polarizing plates

The Company is particularly strong in the field of "optical-use pressure sensitive adhesives for polarizing plates" used in FPD (flat panel display) of TVs and PC monitors. The industry of optical-use pressure sensitive adhesives for polarizing plates is also dominated by top four companies (combined market share of about 93%), among which the Company ranks the world's No.2 with the market share of about 23% (the Company's estimate).

Products used for "optical-use pressure sensitive adhesives for polarizing plates" are "COPONYL" and "SHIKOH". "COPONYL" is a copolymer resin mainly from acrylic acid ester using solvents such as ethyl acetate and toluene, and is used for optical applications as well as a wide range of applications including masking tapes/protective masking films, labels, vinyl chloride base material, double-sided tapes and other grades.

"SHIKOH" is a urethane acrylate-type UV/electron beam curable resin. As thermosetting time is lower compared with a thermoset-type resin and designing is possible under solventless or water-based conditions, it attracts attention as an environment-friendly resin. A broad range of properties, ranging from ultra-hard types to soft and elasticity types, are available, and by changing the structural design according to applications, products are provided to meet with customers' needs.

#### ◆Products for touch panels also perform well

While the Company has a long track record as a producer of optical-use pressure sensitive adhesives, it also focuses on development and sales of "transparent adhesive for optical appliances" used in bonding materials of touch panels, with a tailwind of

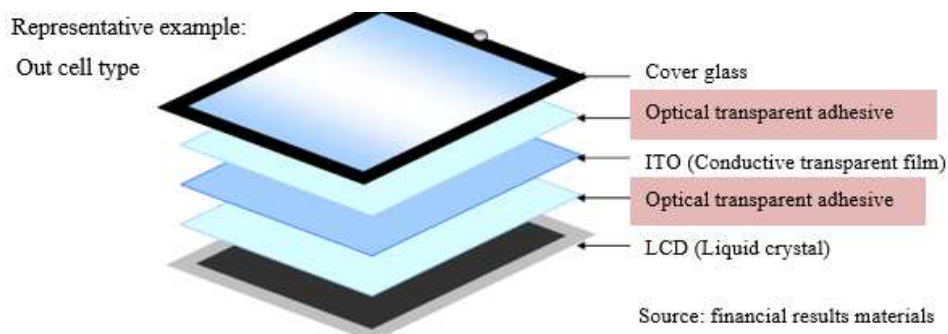


spreading use of smartphones and tablets.

A touch panel has a multi-layer structure, for which "COPONYL" or "SHIKOH" are used as a transparent adhesive for optical appliances to bond materials. Adhesives for touch panels require various properties such as "high transparency", "foam-resistance" and "corrosion-resistance". Required properties include "permittivity" and "elasticity".

Recently, adhesive films have become thinner along with thinner devices, but if adhesive films are simply made thinner, it could cause a malfunction due to a change in capacitance values, and therefore, lower permittivity is required together with thinner films. In these environments, the Company has developed and is already promoting sales of "COPONYL" (permittivity-controlled pressure sensitive adhesives) that can freely control permittivity together with thinner films.

Also, although it is common to set an air gap between a cover glass and a polarizing plate for the purpose of absorbing shocks, by filling this gap with elastic "SHIKOH" (optically elastic UV curable adhesive), it has become possible to make devices thinner while enhancing intensity. In addition, by controlling elasticity, it is possible to provide adhesives to meet with customers' needs.



## 1-(6) Organic Synthesis

### ◆ Sales of residual chemicals not internally consumed

In the organic synthesis business, (i) commodity chemicals such as "acetic acid", "vinyl acetate monomer", "ethyl acetate" and (ii) fine chemicals such as "sodium acetate" and "imidazole derivative" used as raw materials of pharmaceuticals and food additives are produced and sold.

With regard to "vinyl acetate monomer" and other chemicals produced in the organic synthesis business, which are used as raw materials of PVOH and EVOH produced in the synthetic resin business, those portion not internally consumed are structured to be sold externally.

These chemicals are characterized by a low margin and severe price competition due to more commodity chemicals, compared with the synthetic resin business. The Company plans to continue sales of these residual chemicals as an ancillary business to the core business, but review the product portfolio with a view to suspending sales of less profitable products.

## 2. Company Overview

### 2-(1) History

#### ◆ Focus on optical applications since around 1990

Established in 1927, the Company has a long history. FY2015-3 represents the 132nd fiscal term. The Company has developed the business around "acetic acid" as a base product and organic synthetic chemical as a base technology since its origin, started production of "GOHSENOL" (polyvinyl alcohol, PVOH) in 1949 and "SOARNOL" (ethylene-vinyl alcohol copolymer) in 1984.

The Company accelerated development of the overseas business centered on the EVOH business in mid-1990s, acquired EVOH manufacturing equipment from DuPont in 1994 and established NOLTEX (US) as a production base of "SOARNOL". In 1996, the Company started operation in Europe, and subsequently in 2001, established NIPPON GOHSEI UK for production of SOARNOL.

Since mid-2000s, the Company has moved to develop the Asian market, established an office in China in 2006 and a sales subsidiary in Thailand in 2010.

In the technology front, the Company has focused on development of products for optical applications since 1990s, started production of "OPL Film" (PVOH film for optical applications), and subsequently released a series of products including pressure sensitive adhesives for use in touch panels and hard coat resins for optical applications.

#### ◆ Company History

Year	Category	Note
1927	General	Four wood-vinegar-manufacturing companies jointly established Nippon Gohsei Kagaku Kenkyusho.
1928	General	Changed the company's name to The Nippon Synthetic Chemical Industry Co., Ltd, succeeded in industrialization of the first organic composition acetic acid in Japan.
1949	General	Listed shares at the Tokyo & Osaka Stock Exchanges.
	PVOH	<u>Completed construction of "GOHSENOL" production plant at the Ogaki Plant.</u>
1963	General	Cooperated with Mitsubishi Kasei Kogyo (currently Mitsubishi Chemical Corp) for conversion of petrochemicals and jointly established Mizushima Gohsei Kagaku Kogyo.
1971	General	Merged with Mizushima Gohsei Kagaku Kogyo, and made it the Mizushima Plant.
1984	EVOH	<u>Started full-scale production of "SOARNOL" at the Mizushima Plant.</u>
1987	EVOH	Established NIPPON GOSEI (USA) Co., Ltd.
1989	S Polymer	<u>Start production of "SHIKOH", a ultraviolet ray and electronic line hardening type resin.</u>
1994	EVOH	<u>Planned the U.S. business development for SOARNOL</u> and purchased a plant in Huston Texas from E.I. DuPont Nemours & Co.; Established NOLTEX LLC.
1996	EVOH	Established SOARUS LLC in the US to expand sales of SOARNOL.
	EVOH	Established NIPPON GOHSEI Europe GmbH as a European sales office.
2001	EVOH	Established NIPPON GOHSEI UK Ltd. for manufacturing SOARNOL.
2003	PVOH	<u>Started full-scale production of "OPL Film" (optical PVOH film) at the Ogaki Plant.</u>
2004	S Polymer	Acquired all shares in Clariant Polymer Co., Ltd. (Nichigo-Mowinyl Co., Ltd.) and made it a subsidiary.
2006	General	Established a Shanghai office in China.
2010	General	Incorporated the Shanghai office in China and established NICHIGO SHANGHAI Co., Ltd.
	General	Established NIPPON GOHSEI (THAILAND) CO., LTD. In Bangkok, Thailand.

※PVOH: Polyvinyl alcohol, EVOH: Ethylene-vinyl alcohol copolymer, S. polymer: Specialty polymer (pressure sensitive adhesive)

Source : Annual report, Company HP

## 2-(2) Ownership

Mitsubishi Chemical Corporation holds the majority of shares.

Corporate ownership is high at around 90%.

### ◆"Keiretsu" relationship with Mitsubishi Chemical as the largest shareholder, since 1963

The largest shareholder is Mitsubishi Chemical Corporation, which increased shares in FY2013-3 from 46.1% to 50.4%, since then maintained the majority ownership. "Keiretsu" (capital-tied) relationship with Mitsubishi Chemical started in 1963 when Mizushima Gohsei Kagaku Kogyo Co., Ltd. was established under joint management.

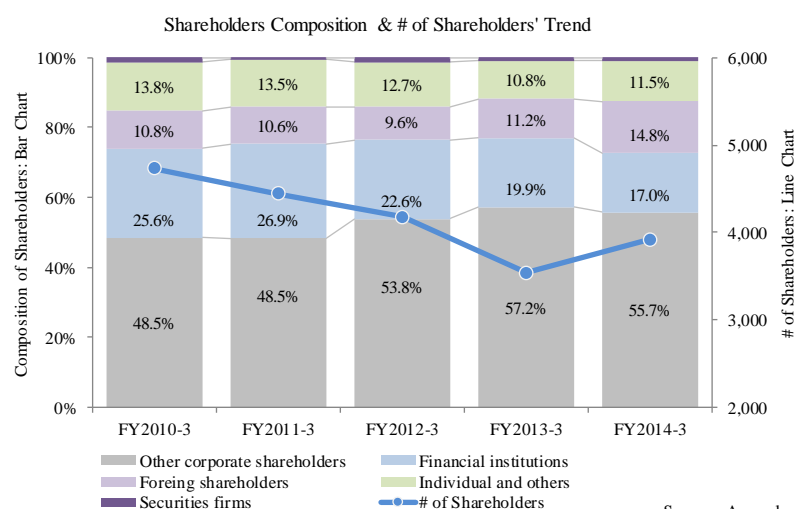
Over the recent five years, some financial institutions decreased ownership, while others increased the ownership, and so top ten shareholders has been kept around 70%.

By type of shareholders, corporates (including financial institutions and foreign corporations) have higher shares around 90%, and the ownership of individual shareholders is at the level of about 10%. Number of shareholders has decreased to about 3,500, as stock prices went up from 400s to 800s yen during FY2013-3, leading to sell-offs primarily by individual shareholders to take profits. However, in June 2013, the stock price went up to 1,149 yen, and subsequently stayed at the high level, leading to an increase in the number of shareholders to about 4,000 as of the end of FY2014-3. (refer to P35 for details of stock prices)

#### ◆Major Shareholders

As of FY 2014-3		Mar-10	Mar-11	Mar-12	Mar-13	Mar-14
Rank	Major shareholders					
1	Mitsubishi Chemical Corporation	40.1%	40.7%	46.1%	50.4%	50.4%
2	Japan Trusty Service Trust Bank	13.6%	13.7%	11.2%	8.7%	5.6%
3	State Street Bank and Trust Company	n.a.	0.9%	1.6%	1.7%	3.6%
4	Japan Master Trust Trust Bank	3.1%	4.7%	3.0%	2.6%	2.6%
5	Trust & Custody Services Bank	1.4%	1.5%	1.8%	1.4%	1.5%
6	Northan Trust Company (AVFC)	n.a.	n.a.	n.a.	1.4%	1.3%
7	Mizuho Bank	1.2%	1.2%	1.2%	1.2%	1.2%
8	Marubeni Corporation	1.7%	1.0%	1.0%	1.0%	1.0%
9	Treasury Stock	1.0%	1.0%	1.0%	1.0%	1.0%
10	Risona Bank	n.a.	n.a.	n.a.	n.a.	0.9%
	Mitsubishi Corporation	2.0%	2.0%	2.0%	2.0%	n.a.
	Mizuho Securities	n.a.	n.a.	1.0%	n.a.	n.a.
	Morgan Stanley and Company International PLC	n.a.	0.9%	n.a.	n.a.	n.a.
	HSBC Bank PLC Clients UK Tax Treaty	1.0%	n.a.	n.a.	n.a.	n.a.
	Mellon Bank, N.A. as Agent for its Client	0.9%	n.a.	n.a.	n.a.	n.a.
	Mellon omnibus US Pension					
	Top 10 stockholders total	66.0%	67.6%	69.8%	71.4%	69.0%
	Others	34.0%	32.4%	30.2%	28.6%	31.0%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%

Source : Annual report



## 2-(3) Officers

## ◆ Current president Kimura has technology background

Current president Kimura, who took the office in June 2013, has a technology background and an intensive knowledge about the Company's core product, "OPL Film". Also, one Executive Officer from Mitsubishi Chemical Corp serves as an outside director. All of the current directors are from the Company or Mitsubishi Chemical's affiliated companies, and no director has been invited from outside of the group.

## ◆ Officers (as of June 18, 2014)

Title	Name	Age	Job title etc.	Previous jobs
President (Representative director)	Katsumi Kimura	58	Assumed the current office in June 2013	Executive Director, Specialty Materials Segment Manager
Director (Representative director) Senior Managing Executive Officer	Keiji Ishizaki	62	Research and Development Division Manager In charge of Environment, Safety and Quality Assurance Dept., New Business Development Div., and Intellectual Property Dept.	Director, Senior Executive Officer, R&D Division Manager
Director Managing Executive Officer	Tomoyuki Mori	58	R&D Division Central Research Laboratory Chief	Executive Officer, President of Mitsubishi Chemical Group Science and Technology Research Center, Inc.
Director Executive director	Keiichi Takahashi	58	General Affairs and Human Resources Dept. Manager, in charge of Management Efficiency Promotion Office	Managing Executive Officer, General Affairs & Human Resources Dept. Manager
Director Executive Officer	Kazunori Takada	57	Corporate Planning Office Manager, in charge of Audit Office and Accounting Dept.	Corporate Planning Office Manager
Director	Masayuki Waga	56	External director	Executive Officer and Performance Chemicals Div. Manager of Mitsubishi Chemical Corp
Auditor	Michiro Oda	62	Full-time	Director, R&D Div. Manager
Auditor	Junichi Akagi	59	Full-time	Director
Auditor	Shinji Taya	53	External auditor	Group Manager of Mitsubishi Chemical Corp, Performance Products Administration Dept.
Auditor	Takayoshi Yoshino	67	External auditor	Chief of the Osaka Court

Source: Annual report

2-(4) Employees  
Status

## ◆ Number of employees in the entire group is about 1,600, unchanged from the previous year

As of the end of FY2014-3, consolidated number of (regular) employees was 1,665. Breakdown by segment was: Synthetic Resins: 1,156 (70%); Organic Synthesis: 265 (16%); Others: 220 (13%); and Shared: 24 (1%). While number of employees increased in the synthetic resin business, the number in the organic synthesis business decreased due to withdrawal from some products. There was no significant change in total number of employees, despite a slight positive trend.

## ◆ Number of employees

		Mar-10	Mar-11	Mar-12	Mar-13	Mar-14
Consolidated	Synthetic Resins	1,358	1,020	1,051	1,085	1,156
	Organic Synthesis		326	295	291	265
	Others	234	221	213	220	220
	Entire company (Shared)		16	25	29	24
Consolidated	# of Regular employee	1,592	1,583	1,584	1,625	1,665
JPY(M)						
Consolidated	Revenue / Regular employee	56.6	57.7	55.1	56.6	66.8
	Operating profit / Regular employee	6.8	6.4	4.5	7.3	9.7
	Net income / Regular employee	3.6	3.9	2.0	5.0	4.8
Non-consolidated	Average age	41.4	41.8	42.4	42.5	42.4
	Ave. duration of service (year)	20.0	20.4	20.9	21.1	20.9
	Ave. annual salary (1,000Yen)	7,107	7,342	7,375	7,111	7,336

Source: Annual report etc.



## 2-(4) Affiliates and Major Facilities

### a. Affiliates

Along with the restructuring of the businesses within the Mitsubishi Chemical Group, the synthetic resin emulsion manufacturing division was transferred to Chuo Rika Kogyo Co., Ltd ("Chuo Rika"). in October 2014 via company split.

### ◆Core businesses are developed by the parent, two domestic subsidiaries and six overseas subsidiaries

The Nippon Synthetic Chemical Industry belongs to the Mitsubishi Chemical Holdings Group, and is positioned as a listed subsidiary of Mitsubishi Chemical Corp. Also, Mitsubishi Chemical Corp. supplies ethylene and other raw materials (trade volume in FY2014-3 was 9.9B yen, accounting for 13% of costs of goods sold).

The Company has 15 subsidiaries and one affiliated company (see below chart). Out of 15 subsidiaries, 6 provide "Other" services such as logistics services and maintenance of equipment, and one serves as a holding company, which means that the core businesses are developed by a group of 10 companies, consisting of the parent, 8 subsidiaries and one affiliated company.

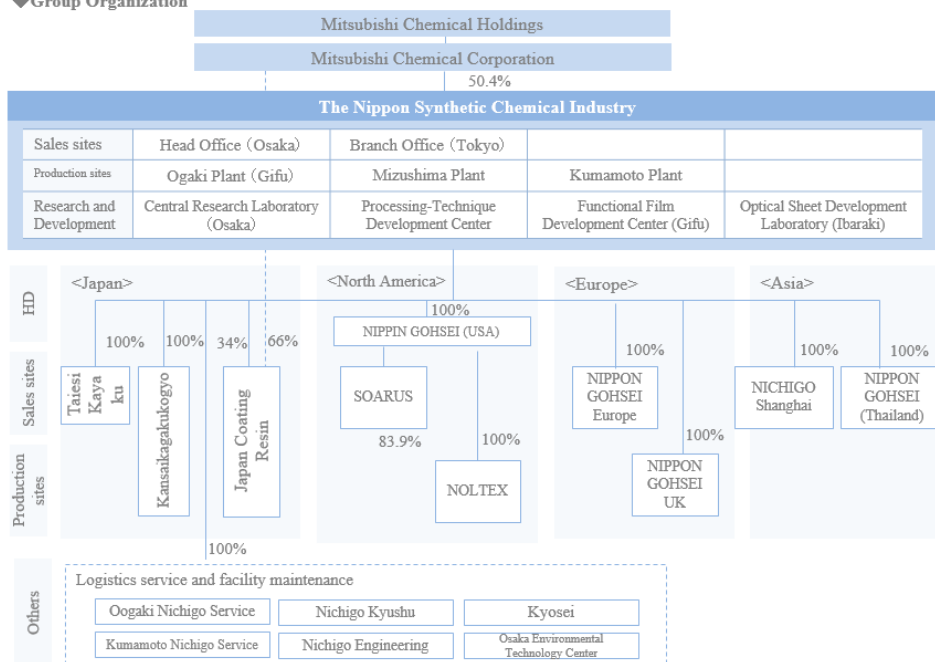
In Japan, The Nippon Synthetic Chemical Industry is a primary entity of manufacturing and sales, while Taisei Kayaku (revenues: 25.4B yen) is mainly engaged in sales as a trading company specialized in chemical products and Kansaikagakukogyo manufactures and distributes film products (organic synthetic business).

Overseas business is centered on EVOH (synthetic resin business) through sales subsidiaries in North America, Europe and Asia (China and Thailand), as well as manufacturing bases in the US and the UK.

### ◆In August 2014, integration of synthetic resin emulsion business within the Mitsubishi Chemical Group was determined

In August 2014, integration of the synthetic resin emulsion business<sup>1</sup> was determined. In this connection, as of October 1, 2014, the synthetic resin emulsion manufacturing division of The Nippon Synthetic Chemical Industry was transferred to "Chuo Rika" (pure manufacturer of synthetic resin emulsion) via company split. At the same time, "Chuo Rika" changed its company name to "JCR Co., Ltd. (Japan Coating Resin)". JCR is now owned by Mitsubishi Chemical Corp (66%) and The Nippon Synthetic Chemical Industry (34%). Even after the company split, the Company plans to continue R&D and marketing activities, aiming to improve profitability by seeking the synergy effect.

#### ◆Group Organization



Source: Annual report etc.

## b. Major facilities

Large-scale capital investment has been made to expand the core businesses.

<sup>1</sup> The synthetic resin emulsion business is categorized in Synthetic Resins (Specialty Polymer) within The Nippon Synthetic Chemical Industry.

### ◆ Large-scale capital investment made particularly in core businesses

The Company has three production sites in Japan - "Kumamoto Plant", "Mizushima Plant" and "Ogaki Plant", and one each in the US and the UK; five plants in total. Those two overseas plants specialize in production of EVOH.

The Company is actively promoting additional and new construction of production facilities, particularly of OPL Film and EVOH, and expanded the production facility of OPL Film (15,000K m<sup>2</sup>/y) during FY2013-3 and also of OPL Film (18,000K m<sup>2</sup>/y) during Q1 the current FY both in the Kumamoto Plant.




As for EVOH, NOLTEX in the US completed expansion of the production facility by 15,000 ton/y during Q1 FY2016-3 (April-June 2015), which will bring the total production capacity of EVOH in the group from the current 51,000 ton/y to 66,000 ton/y, representing about 30% increase.

In addition, in July 2014, the Company decided to expand the production facility of acrylic solvent-based pressure sensitive adhesives "COPONYL" and PVOH Film "Hi-Selon" in anticipation for the demand grown and more applications (see P31).

### ◆ Major production site

Production site	Location	Book value (FYE 2014-3) (B Yen)	Production capacity (2014-9)		
			PVOH (ton/y)	OPL film (1,000m <sup>2</sup> /y)	EVOH (Ton/y)
Kumamoto Plant	Uto-shi, Kumamoto	18.630	30,000	63,000	-
Mizushima Plant	Kurashiki-shi, Okayama	6.898	40,000	-	10,000
Ogaki Plant	Ogaki-shi, Gifu	6.185	-	25,000	-
NOLTEX(USA)	Texas, USA	30.871	-	-	23,000
NIPPON GOHSEI UK (UK)	Hull, UK		-	-	18,000
Total		62.584	70,000	88,000	51,000

Source: Annual report and financial results briefing materials.

Kumamoto Plant	Mizushima Plant	Ogaki Plant
Production of PVOH, PVOH film, Fine chemicals, etc.	Production of PVOH, EVOH, Vinyl acetate monomer, etc.	Production of PVOH film, Adhesive resin, Fine chemicals, etc.
		
Kumamoto Plant was founded in 1939 as the second plant following Ogaki Plant, with the largest site area. It now produces "Gohsenol (PVOH)", "OPL Film/Bovron (PVOH film)" and intermediates for pharmaceuticals and agriculture.	Mizushima Plant was founded in 1963 as the third plant in the Mizushima Industrial Complex for conversion to petrochemicals. It now produces vinyl acetate monomer, "Gohsenol (PVOH)", "Soamol (EVOH)", etc.	Ogaki Plant was founded in 1927, where the Company succeeded in the first production of acetic acid in Japan. It now produces "OPL Film", Specialty Polymer products, intermediates for pharmaceuticals and agriculture.

Source: Company brochure, company HP

The Company is looking to the restructuring of plants including redeployment of production lines.

#### ◆Production Facility Expansion Status

Production site	Amount of CAPEX	Start of const	Completion	Planned	Production Facility
Kumamoto Plant	6B JPY	Oct-10	2013-3 Q1 (2012-4~6)	-	OPL film (+15M m <sup>2</sup> /y)
NOLTEX(USA)	8.1M USD (1B JPY)*	Oct-10	Oct. 2011	-	EVOH reinforcement (+3,000ton/y)
NIPPON GOHSEI UK (UK)	8.8M £ (1.6B JPY)*	Jan-11	Sep. 2012	-	EVOH reinforcement (+3,000ton/ y)
Kumamoto Plant	6.5B yen	Jan-13	2015-3 Q1 (2014-4~6)	-	OPL film (+18 M m <sup>2</sup> / y)
NOLTEX(USA) (plan)	180M USD (21.2B JPY)*	Jul-13	-	FY2016-3 1Q (2015-4~6)	EVOH (+15,000 ton/ y)
Kumamoto Plant (plan)	2.9B JPY	Jul-14	-	FY2016-3 3Q (2015-9~12)	PVOH film [HI-SELON]
Oogaki Plant (plan)	2.6B JPY	Jul-14	-	FY2016-3 3Q (2015-9~12)	Acrylic pressure sensitive adhesives solvent type [COPONYL]

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

Source: Press release and financial results briefing materials.

#### ◆Plan to restructure plants in next fiscal year and beyond

On the other hand, as for the vacant lots after stopping production of some products (fine chemical products, etc.), the plan is to promote the restructuring of the plant including redeployment of production lines in the next fiscal year and beyond. While this can be regarded as a positive investment contributing to the performance in mid- to long-term, particularly in the next fiscal year (FY2016-3), costs expected to arise from removal of facilities are likely to cause a temporary deterioration of profitability.

### 3. Performance Highlight

#### 3-(1) Consolidated Results Highlight

#### ◆Revenues steadily expanded since the bottom in FY2012-3

In FY2014-3, revenues significantly increased by about 20% on the surface to 111.2B yen due to the impact of the fiscal year-end change of some consolidated subsidiaries (from end of December to end of March). Adjusted revenues after excluding the impact of a change in the accounting period (about 10.9B yen) would be 100.2B yen, which would still show a strong growth by about 9% y/y (about +8.2B yen). While sales volume of "SOARNOL" was about the same as that in the previous year, full-year operation of a new wide-film production facility (fifth line) of "OPL Film" significantly contributed to the sales increase. In addition, the operating margin improved to 14.6% from 12.9% in the previous year, as the sales increase absorbed the fixed costs.

In recent years, in addition to expansion of production facilities of core products "OPL Film" and "SOARNOL", the Company has been aggressive in R&D to foster the third pillar products, and R&D expenses in FY2014-3 increased to 3.5B yen, about 1.5 times larger than that in FY2010-3.

Given the global business development already underway, such as plants in the US and the UK, overseas revenues exceed 50% of total. While the sharp sales increase in the US and the UK in FY2014-3 was largely attributable to a change in the accounting period and the yen's depreciation, water-soluble PVOH film "Hi-Selon" which started overseas business has steadily grown.

Expansion of demand for the Company's products in the emerging markets has yet been seen, but the Company plans to promote the market development for some products, including the possibility of local OEM production.

## ◆ Financial Statements Summary (Annual)

JPY(M)

◆ Income Statement	Mar-10	Mar-11	Mar-12	Mar-13	Mar-14
Revenue	90,086	91,260	87,243	91,976	111,151
Gross Profit	24,244	23,939	21,278	26,662	32,893
Operating Income	10,767	10,087	7,117	11,859	16,229
EBITDA*	17,542	16,732	13,714	18,792	23,358
Ordinary Profit	10,012	9,460	6,763	12,375	16,712
Income before Income Taxes	9,615	9,223	5,276	12,660	16,155
Net Income	5,753	6,131	3,154	8,158	8,018
Depreciation	6,775	6,645	6,597	6,933	7,129
R & D Expense	2,332	2,562	2,824	3,388	3,458
Interest Expenses	636	420	273	224	200
CAPEX**	4,824	5,900	8,028	10,772	20,263
EBITDA-CAPEX	12,718	10,832	5,686	8,020	3,095

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

◆ Balance Sheet	Mar-10	Mar-11	Mar-12	Mar-13	Mar-14
Total Assets	106,696	97,857	99,761	112,180	130,107
Total Liabilities	52,709	42,906	43,764	46,735	53,337
Total Net Assets	53,987	54,951	55,996	65,444	76,770
Interest Bearing Debt	22,735	13,599	11,977	10,040	15,350
Cash and Deposits	9,908	8,036	4,879	8,433	5,785
Net Interest Bearing Debt	12,827	5,563	7,098	1,607	9,565

◆ Key Indicators	Mar-10	Mar-11	Mar-12	Mar-13	Mar-14
Total Revenue Growth	-10.8%	1.3%	-4.4%	5.4%	20.8%
Gross Margin	26.9%	26.2%	24.4%	29.0%	29.6%
Operating Margin	12.0%	11.1%	8.2%	12.9%	14.6%
EBITDA Margin	19.5%	18.3%	15.7%	20.4%	21.0%
Ordinary Profit Margin	11.1%	10.4%	7.8%	13.5%	15.0%
Net Margin	6.4%	6.7%	3.6%	8.9%	7.2%
ROA	5.4%	6.0%	3.2%	7.7%	6.6%
ROE	11.6%	11.4%	5.7%	13.4%	11.3%
Capital Ratio	49.2%	56.2%	56.1%	58.3%	59.0%

◆ Share Information	Mar-10	Mar-11	Mar-12	Mar-13	Mar-14
Net Income per Share	59.06	62.94	32.38	83.75	82.32
Net Assets per Share	538.53	564.07	574.83	671.84	788.11

## ◆ Revenue Trend by region

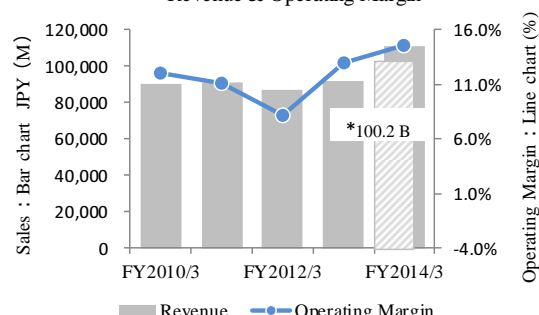
JPY(M)

	Mar-11	Mar-12	Mar-13	Mar-14	change	y/y
Japan	50,499	46,922	46,482	51,727	5,245	111.3%
Korea	10,502	8,972	13,081	13,455	374	102.9%
US	10,295	9,515	8,344	12,211	3,867	146.3%
Europe	11,663	12,170	11,922	18,066	6,144	151.5%
Others	8,300	9,662	12,145	15,690	3,545	129.2%
Total	91,260	87,243	91,976	111,151	19,175	120.8%

## ◆ Revenue Composition by region

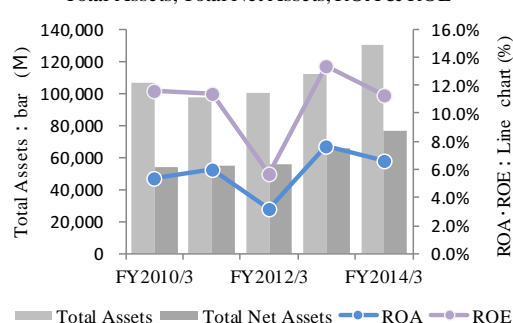
	Mar-11	Mar-12	Mar-13	Mar-14
Japan	55.3%	53.8%	50.5%	46.5%
Korea	11.5%	10.3%	14.2%	12.1%
US	11.3%	10.9%	9.1%	11.0%
Europe	12.8%	13.9%	13.0%	16.3%
Others	9.1%	11.1%	13.2%	14.1%
Overseas total	44.7%	46.2%	49.5%	53.5%
Total	100.0%	100.0%	100.0%	100.0%

## Revenue &amp; Operating Margin

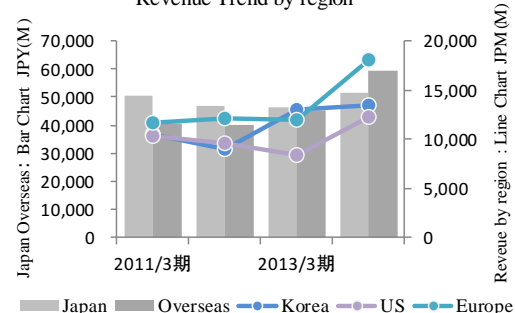


\* The impacts by accounting period change for the consolidated subsidiary is not included.

## Total Assets, Total Net Assets, ROA &amp; ROE



## Revenue Trend by region



Source : Annual report.

3-(2) Recent  
Quarter ResultsEnded with higher revenues  
and lower profits

## ◆ Profitability worsened due to higher raw material costs despite revenue growth

The current Q3 results ended with (cumulative) revenue of 78.2B yen and operating income of 8.6B yen. Although the Company has struggled to achieve the initial plan as the guidance was revised downward twice, on a fiscal-year-to-date basis (cumulative through the end of Q3), revenues ensured an increase by about 3.0B yen y/y, while operating income was lower than 11.3B yen of the same period in the previous year.

Two factors prevented achievement of the plan: (i) delay in operations of a new wide-film production facility (the sixth line) of "OPL Film", and (ii) a rise in prices of vinyl acetate monomers used as a raw material of EVOH resin "SOARNOL" in Europe



Polarizing plate market is expected to continue growing

(see P22 for details).

As for (i), while the delay was caused by a defect of the instable quality (lower conforming rate), as the issue is poised to be solved, full-year operation is scheduled in the next fiscal year. As for (ii), the sharp increase in prices has started running off, as the demand/supply balance of vinyl acetate monomers has improved. However, as the challenge of "stable supply of raw materials" has come to the fore as a matter of fact, the cost control including operational adjustment on a global basis and optimization of the supply chain should become more important as critical drivers to maintain the stable margin and to improve profitability.

The polarizing plate market that creates demand for the core product "OPL Film" is considered to continue growing globally, and total demand width is expected to increase by around 5% p.a. from about 150 million m<sup>2</sup> in 2013 and to around 200 million m<sup>2</sup> by 2019<sup>1</sup>. Increase of demand for polarizing plates should lead to sales expansion of "OPL Film" as well as optical-use pressure sensitive adhesives used for polarizing plates "COPONYL". In addition, as the touch panel market has been quickly expanding along with popularization of tablets and smartphones, further growth should be expected in products used for touch panels such as "SHIKOH" going forward.

<sup>1</sup> Based on materials on financial results, and "2013 Current Status and Outlook of Display-related Market", Fuji Chimera Research Institute, Inc.

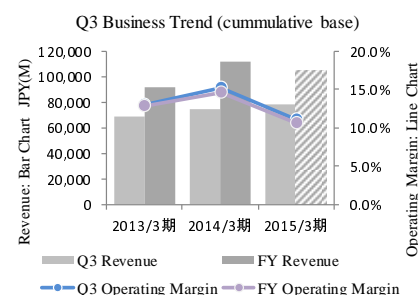
JPY(M)									
◆ Quarterly Business Trend	3Q Cumulative			Whole Year (act)			Progress Ratio		
	2013/3	2014/3	2015/3	2013/3	2014/3	2015/3*	2013/3	2014/3	2015/3
Revenue (segment)	68,652	74,898	78,191	91,976	111,151	104,500	74.6%	67.4%	74.8%
Gross Profit	19,783	23,199	20,813	26,662	32,893	n.a.	74.2%	70.5%	n.a.
Operating Income	8,885	11,373	8,620	11,859	16,229	11,000	74.9%	70.1%	78.4%
Ordinary Profit	9,151	12,082	8,917	12,375	16,712	11,300	73.9%	72.3%	78.9%
Net Income	6,077	7,810	5,845	8,158	8,018	7,200	74.5%	97.4%	81.2%

◆ Major index	3Q Cumulative			Whole Year (act)		
	2013/3	2014/3	2015/3	2013/3	2014/3	2015/3*
Gross Margin	28.8%	31.0%	26.6%	29.0%	29.6%	n.a.
Operating Margin	12.9%	15.2%	11.0%	12.9%	14.6%	10.5%
Ordinary Profit Margin	13.3%	16.1%	11.4%	13.5%	15.0%	10.8%
Net Margin	8.9%	10.4%	7.5%	8.9%	7.2%	6.9%

\*Blue figures: company's planned value

Source: Summary of Financial Statements



## 4. Market Environment

### 4-(1) Trend in Naphtha Prices

Most products use "ethylene" as raw material

#### ◆ Naphtha prices has stayed at high level since 2013

Most products developed by the Company use "ethylene" as a raw material. Ethylene is one of the most basic raw materials in the petrochemical industry (organic chemical industry), and serves as a base material for plastics and chemical fibers. While ethylene is produced from natural gas-derived ethane in the US and some other countries, about 95%<sup>1</sup> of ethylene are produced from naphtha in Japan. Naphtha is one of oil products derived by refining crude oil (others include heavy oil, light oil, heating oil), so naphtha prices move in tandem with oil prices. Although naphtha is domestically produced, about 56%<sup>2</sup> of domestic consumption rely on import from Kuwait, Saudi Arabia, etc. Prices of domestically-produced naphtha are determined, by using CIF prices in "Trade

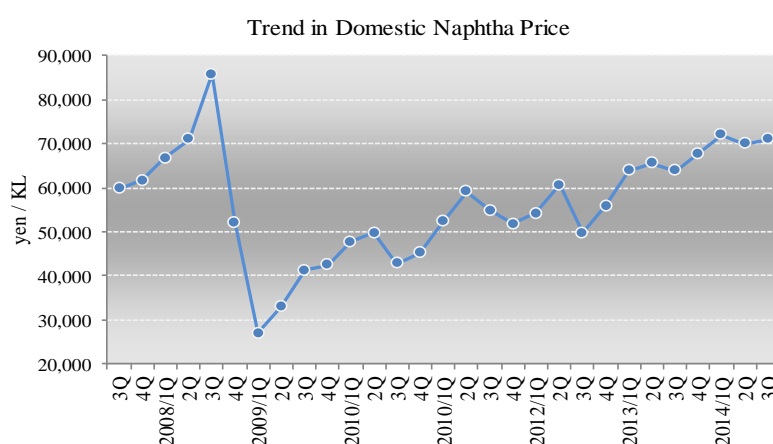
Ethylene prices stay at a high level since 2013

Mitsubishi Chemical supplies ethylene at prices linked to the market

Statistics" published by the Ministry of Finance as a benchmark, to be the amount obtained by adding 2,000 yen/KL to the average import naphtha prices on a quarterly basis.

1 2011, Japan Petrochemical Industry Association. 2 2012, Japan Petrochemical Industry Association.

Higher crude oil prices lead to higher naphtha prices. Also, as ethylene prices are determined in tandem with domestically-produced naphtha prices, higher naphtha prices directly lead to higher ethylene prices, which translates into higher raw material cost for the Company. Domestically-produced naphtha prices sharply dropped from the peak of 85,800 yen/KL to 27,000 yen/KL in March 2009 in the wake of the Lehman shock, but then has continued to rise gradually to recover 60,000s yen/KL in 2013 and 70,000s yen/KL in 2014.



Note : Quarter is based on calendar year basis

Source: Financial results briefing materials and trade statistics of Japan Ministry of Finance.

The Company purchases ethylene from the parent Mitsubishi Chemical at the prices linked to the market prices. The Company tries to pass the fluctuation of raw material prices onto the sales prices, and has raised a price several times over the last 2-3 years (see table below). However, 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 bears the increase in raw material prices.

◆Price Hike History of the Company products (excerpt)

	2012			2013				2014			
	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
PVOH Film	+10%				+10%			+5%			
Gohsenol Yen/Kg				+20			+20		+50		
Soarnol Yen/Kg	+50			+60				+30			
Vinyl acetate monomer Yen/Kg			+10	+10			+15		+15		

Note : Quarter is based on calendar year basis.

Source : Press release.

◆International ethylene prices are expected to fall due to emergence of non-naphtha-derived ethylene

In recent years, along with emergence of shale gas, supply of ethylene derived from ethane and other raw materials than naphtha has been increasing. With this background,

it is viewed that the supply capacity of ethylene will become globally excessive, international prices will fall, and Japan's import volume of ethylene will increase. Also, while domestic ethylene prices are currently linked to naphtha prices, given a shift in the international ethylene supply structure, some view that the pricing mechanism would be replaced by the pricing system linked to the international prices. In these environment, Japanese integrated chemical manufacturers which have the ethylene center (e.g. Mitsubishi Chemical, Sumitomo Chemical, Asahi Chemical) could shift the strategy towards a production cut of ethylene.

For the Company, lower ethylene prices are positive, but how to procure raw materials on a global level and control costs going forward should become a key in terms of improvement in profitability and price competition.

## 5. Segment Overview and Business Model

### 5-(1) Synthetic Resins

#### a. Outline

#### ◆ "OPL Film" and "SOARNOL" are two pillars of income generation

The synthetic resin segment, consisting about 75% of the Company's total revenues and more than 95% of operating income, runs the business broadly in three lines; (i) PVOH (polyvinyl alcohol), (ii) EVOH (ethylene-vinyl alcohol copolymer) and (iii) Specialty Polymer (pressure sensitive adhesives). Composition of revenues is generally (i) PVOH: 40%+, (ii) EVOH: 40%-, and (iii) Specialty Polymer: 20%. Composition of income is not clear but "OPL Film (PVOH business)" and "SOARNOL (EVOH business)" are top two core products in terms of both size and income.

As shown by a large-scale capital investment made twice over the recent five years in the OPL Film and expansion of production facilities of EVOH in the US (see P14-15), the Company has focused on expansion of these core businesses, but fostering products that could be the third pillar following "OPL Film" and "SOARNOL" is the challenge.

While the Company has developed the new products such as "Nichigo G-polymer" and "ORGA", it should take more time for them to take off as business. On the other hand, the Company also focuses on expansion of demand for the existing products by developing more applications. In recent years, water-soluble PVOH film "Hi-Selon" and acrylic solvent-based pressure sensitive adhesives "COPONYL" have shown a solid growth, which is expected to add to revenues and improve profitability (see P31).

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 has not yet been cultivated. While the Company has already penetrated into China in 2006 and Thailand in 2010, there is sufficient room to expand sales.

In addition, both markets for "OPL Film" and "SOARNOL" are dominated by the Company and Kuraray, making it unlikely to induce to the price competition, which is one of attractiveness of the synthetic resin business.

#### b. Business flow

PVOH:  
Produced in domestic three plants.

#### ◆ PVOH

"GOHSENOL", a base product in the PVOH business, is produced by creating vinyl acetate from raw materials such as ethylene, and polymerizing and saponifying vinyl acetate monomers. "GOHSENOL" includes commodity products and specialty products, and the Company focuses on sales of specialty products. Also, by adding the process like cast roll film forming, functional films such as "OPL Film", "Hi-Selon" and "Bovlon" are formed and sold. While application of "OPL Film" is limited to that for liquid crystal panels, other products can be used for a variety of applications such as auto parts, construction materials, packaging materials, and production of plastics.

**EVOH :**

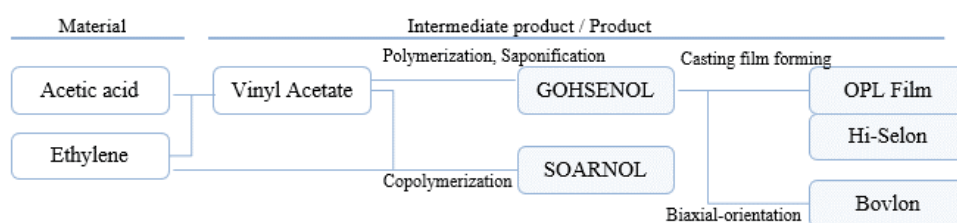
Raw materials are locally procured by each plant.

PVOH products are produced in domestic three plants (Ogaki, Kumamoto and Mizushima), and are sold domestically as well as exported particularly to Asia.

**◆EVOH**

Production sites are Mizushima Plant, NOLTEX (US) and Nippon Gohsei UK (UK), with production capacity of 10,000 ton (20%), 23,000 ton (45%) and 18,000 ton (35%), respectively (51,000 ton in total). When adding a new production capacity in NOLTEX of 15,000 ton scheduled to complete during Q1 FY2016-3, total production capacity will be 66,000 ton, comprising of Mizushima Plant (15%), the US (58%) and the UK (27%), making NOLTEX (US) take the majority share.

Raw materials are locally procured by each plant. Vinyl acetate monomer, an intermediate material, is also internally produced in the domestic plant, but not in the overseas sites. Products produced in each site are sold, respectively, by the parent or subsidiaries in Japan, by SOARUS (US) in the US, and by Nippon Gohsei Europe (Germany) in Europe.

**◆Summary of Production Process**

Source: financial results materials and company HP.

**c. Performance trend****◆Both revenues and income improved from the bottom reached in FY2012-3**

The following is a review of the performance trend. The Company secured revenues of 6.5B yen, the operating income of 10B yen and the operating margin of around 16% both in FY2010-3 and in FY2011-3.

In FY2012-3, while EVOH resin "SOARNOL" maintained a good performance in the European market and achieved a sales expansion in the Asian market, optical-use PVOH film "OPL Film" suffered from a decrease in sales due mainly to the inventory adjustment by polarizing plate makers and the sluggish demand in the LCD market. As a result, revenues of the entire segment dropped by about 5% y/y to 61.5B yen, and the margin deteriorated from 16% to 12%.

Subsequently in FY2013-3, as the inventory adjustment of polarizing plates took a round and a new wide-film production facility (the fifth line) started operation in July 2012 (Kumamoto Plant), "OPL Film" improved, and revenues increased by 9% y/y to 67.1B yen and the margin significantly recovered to about 18%.

In FY2014-3, while the sales volume of "SOARNOL" was about the same with that in the previous year, revenues increased due to the effect of weaker yen. As for "OPL Film", the new wide-film production facility (the fifth line) operated for a full year, and a thin film product (30μ) was successfully put into practical use. As a result, revenues significantly increased by 12% y/y to 75.0B yen<sup>1</sup>. While there were some negative factors in terms of costs including an increase in raw material costs and increased burden on maintenance expenses, a sales increase in "OPL Film" and a decrease in



depreciation due to a change in the depreciation method<sup>2</sup> led to an increase in the segment income from 11.8B to 15.0B yen with the margin of 20%, higher than that in the previous year.

1 Values excluding the impact of a change in the accounting period of some subsidiaries.

2 The Nippon Synthetic Chemical Industry and some domestic subsidiaries consolidated the depreciation method to a straight-line method.

#### ◆Synthetic Resins Business Trend

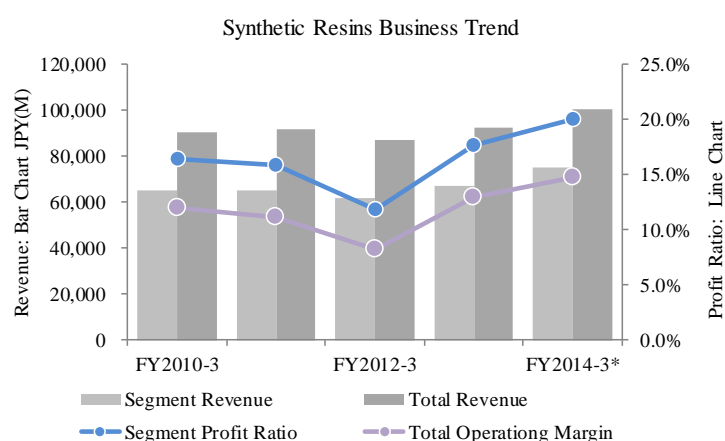
JPY(M)

	Mar-10	Mar-11	Mar-12	Mar-13	2014-3*	change	y/y
Revenue (segment)	65,099	64,946	61,510	67,113	75,000	7,887	111.8%
Operating Income	10,703	10,234	7,244	11,837	15,000	3,163	126.7%
Operating Margin	16.4%	15.8%	11.8%	17.6%	20.0%	2.4%	
Revenue Share	72.3%	71.2%	70.5%	73.0%	74.9%		
Operating Income Share	97.5%	99.3%	96.4%	96.6%	98.7%		

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

FY2014-3's actual values are: Revenue: 83,560M JPY, Segment profit: 16,407M JPY.

Source: Annual report and financial results briefing materials.



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

Source: Annual report.

#### d. Quarter update

#### ◆Higher revenues and lower income due to delay in operation of new OPL Film production facility, and sharp rise in raw material prices in Europe

During the current Q3, revenues (cumulative) of the synthetic resin segment was 57.6B yen, 0.9B yen larger than 56.7B yen in the previous year. On the other hand, the operating income decreased from 11.5B yen (margin of 20%) in the same period of the previous year to 8.7B yen (15%), resulting in higher revenues and lower income.

As discussed in the Performance Highlight, etc., the lower income was broadly attributable to two factors. First, a full-scale operation of a new wide-film production facility of "OPL Film" (the sixth line in Kumamoto Plant) that was scheduled in Q1 delayed until November due to a defect of instable quality. Second, the profitability deteriorated due to a sharp rise in prices of a vinyl acetate monomer, a raw material of EVOH resin "SOARNOL" in Europe.

**【OPL Film】**

Although the "OPL Film" sixth line has come to a temporary suspension of production due to a lower conforming rate, the situation has now improved, and it is scheduled to operate for a full year in the next fiscal year (FY2016-3). The sixth line is a wide-film production line following the fifth line, and is intended to expand sales by enhancing products to better meet with users' needs for wider films. Also in the current fiscal year, a failure of a full-scale operation of facilities due to a delay in start-up after the regular maintenance in the Kumamoto Plant partially caused a decline in revenues. The Company suffered from a failure to capture the strong demand due to the capacity constraint, while the LCD industry as a whole has been doing well since the last spring.

**【EVOH】**

A sharp rise in prices of vinyl acetate monomers in Europe also unexpectedly impacted negatively on the performance. Tighter supply/demand situation due to a withdrawal from the business by some local makers and a trouble in facilities caused a sharp rise in prices of vinyl acetate monomers, resulting in the deterioration of profitability due to higher costs. Entering into Q4, the supply/demand balance has turned towards an improvement, so prices has started calming down.

Although the sharp rise in prices of vinyl acetate in Europe has started cooling down, in order to promptly respond to this type of situation, the Company plans to newly establish the Business Management Department to promote optimization of the supply chain in the overall industry. In addition, if the things move smoothly, as the US subsidiary, NOLTEX, will start operation of the new production facility (15,000 ton/y) in Q2 FY2016-3, the Company looks to improvement in profitability, taking into consideration the adjustment of operations including heavier operation in the US.

**◆Synthetic Resins Business Trend (Quarterly)**

JPY(M)

	FY2013-3				FY2014-3				FY2015-3			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q*	1Q	2Q	3Q	4Q**
Revenue (segment)	15,810	16,684	17,484	17,135	18,286	19,070	19,340	18,304	19,032	19,722	18,870	19,176
Operating Income	2,437	2,964	3,403	3,033	4,072	3,778	3,695	3,455	3,525	2,992	2,195	2,588
Operating Margin	15.4%	17.8%	19.5%	17.7%	22.3%	19.8%	19.1%	18.9%	18.5%	15.2%	11.6%	13.5%

**◆Synthetic Resins Business Trend (3Q cumulative)**

	3Q Cumulative			Whole Year (act)			Progress Ratio		
	2013-3	2014-3	2015-3	2013-3	2014-3*	2015-3**	2013-3	2014-3	2015-3
Revenue (segment)	49,978	56,696	57,624	67,113	75,000	76,800	74.5%	75.6%	75.0%
Operating Income	8,804	11,545	8,712	11,837	15,000	11,300	74.4%	77.0%	77.1%
Operating Margin	17.6%	20.4%	15.1%	17.6%	20.0%	14.7%	n.a.	n.a.	n.a.

\*FY2014-3 4Q's values exclude the impacts by accounting period change of some subsidiaries. (the same applies to the whole year data below)

Actual values are Revenue: 26,864M JPY, Segment Profit: 4,862M JPY (Whole Year Revenue: 83,560M JPY, Segment Profit: 16,407M JPY.)

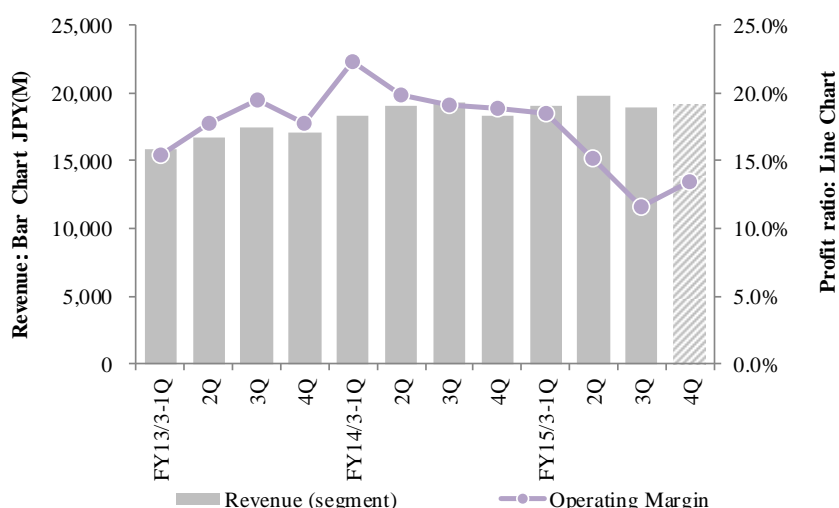
\*\*SQUADD Estimation based on the company business forecast announced on Feb. 3, 2015

Source: Summary of Financial Statements.

## 5-(2) Organic Synthesis

### c. Performance trend

Synthetic Resins Business Trend (Quarterly)



\* FY2014-3 4Q's value excludes the impacts by accounting period change of some subsidiaries.

Source: Summary of Financial Statements etc

### ◆ Revenues of 20B yen, maintaining a break-even income

Revenues of the organic synthesis segment has stayed at the level of around 20B yen over the past five years, and the segment income maintains a break-even with expenditures. The organic synthesis segment is structured to produce "vinyl acetic monomer" to be used as a raw material in the synthetic resin business, and therefore, it is positioned as an ancillary business rather than running the organic synthesis as a core business.

### ◆ Organic Synthesis Business Trend

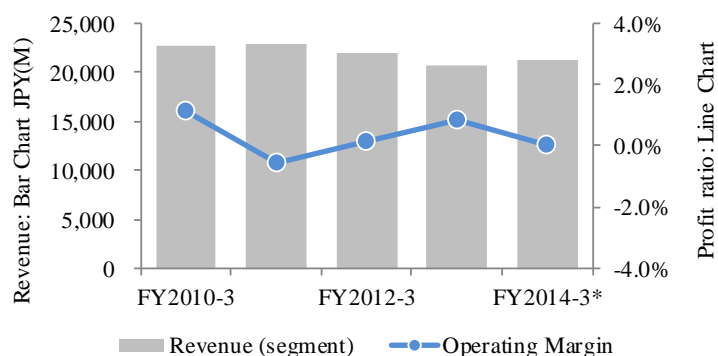
	Mar-10	Mar-11	Mar-12	Mar-13	2014-3*	change	y/y
Revenue (segment)	22,747	22,932	22,034	20,643	21,300	657	103.2%
Operating Income	262	(131)	35	174	0	(174)	0.0%
Operating Margin	1.2%	-0.6%	0.2%	0.8%	0.0%	-0.8%	
Revenue Share	25.3%	25.1%	25.3%	22.4%	21.3%	-1.2%	

\*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.

Source: Annual report and financial results briefing materials.

Organic Synthesis Business Trend



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

Source: Annual report and financial results briefing materials.

## d. Quarter update

## ◆Competitors started handling cheap commodity products

As for the quarterly results, while the margin in Q2 FY2014-3 temporarily exceeded 2%, as in the case of annual results, over the past three years, they have kept almost unchanged without any significant volatility.

Entering in Q3 of the current fiscal year, a domestic competitor started operation of a new facility to sell cheap commodity chemicals. As a result, it is expected that a shift in customers should cause a decrease in sales of some chemicals. A change in the competitive environment in the organic synthesis business also partially caused the downward revision of the Company's guidance in February 2015.

## ◆Organic Synthesis Business Trend (Quarterly)

JPY(M)

	FY2013-3				FY2014-3				FY2015-3			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q*	1Q	2Q	3Q	4Q**
Revenue (segment)	5,426	5,067	5,121	5,029	4,840	5,306	5,222	5,932	6,002	5,863	5,815	6,320
Operating Income	66	44	47	17	(64)	124	(65)	5	(12)	27	11	(26)
Operating Margin	1.2%	0.9%	0.9%	0.3%	-1.3%	2.3%	-1.2%	0.1%	-0.2%	0.5%	0.2%	-0.4%

\*FY2014-3 4Q's values exclude the impacts by accounting period change of some subsidiaries. (the same applies to the whole year data below)

Actual values are Revenue: 8,386M JPY, Segment Profit: 54M JPY

\*\*SQUADD Estimation based on the company business forecast announced on Feb. 3, 2015

Source: Summary of Financial Statements etc.

## 5-(3) Cost Analysis

## ◆Cost of sales ratio stayed in a range of 70-75%, focus is also put on R&amp;D

Cost of sales ratio has stayed in a range of 70-75%. The cost of goods manufactured (non-consolidated basis) consisted of materials cost (61%), labor cost (16%) and general expenses (25%) in FY2013-3, indicating a higher weight of raw materials costs. However, as fixed costs including capital spending take a considerable weight, the cost of sales ratio in FY2012-3 when sales were sluggish exceeded 75%, while the cost of sales ratio in FY2013-3 and FY2014-3 when sales recovered improved to around 70%.

Among SG&A expenses three major items including transportation and storage costs (20%-), salaries (20%-), R&D expenses (20%+) account for around 60% of total.

The Company has four R&D facilities: (i) Central Research Laboratory (Ibaraki, Osaka) as a nucleus of product developments, (ii) Processing-Technique Development Center (Kurashiki, Okayama) engaged in development of EVOH resins, (iii) Functional Film Development Center (Ogaki, Gifu) engaged in PVOH films, and (iv) Optical Sheet Development Laboratory (Ushiku, Ibaraki) engaged in development of "ORGA" (glass replacement optical sheet). The Company promotes further enhancement of the R&D system. For example, the Company established Optical Sheet Development Laboratory in April 2012, and plans to complete construction of an advanced laboratory in Central Research Laboratory during the current Q4 (total investment: 1.35B yen).

As for extraordinary P&L, in FY2012-3, the Company booked a loss of about 900M yen from disposal of machineries and equipment in association with suspension of production of ketene products (organic synthesis business), and in the current Q2, recognized an impairment loss related to the production facility of some organic synthetic products which the Company decided to suspend operation.

Also in FY2014-3, the Company booked the accrued corporate taxes for about 2.6B yen based on a correction order made by Osaka Taxation Bureau under the transfer price taxation in relation to the royalty paid by the subsidiaries in the US and the UK which produce "SOARNOL". The Company has filed for a petition to the authority, and a mutual consultation is currently underway to avoid the double taxation.



							JPY(M)		
◆ PL Summary	Mar-10	Mar-11	Mar-12	Mar-13	Mar-14	Composition	2015/3-3Q	Composition	vs. Prev. year
Revenue	90,086	91,260	87,243	91,976	111,151	100.0%	78,191	100.0%	70.3%
Cost of Sales	65,841	67,320	65,965	65,313	78,258	70.4%	57,378	73.4%	73.3%
Gross Profit	24,244	23,939	21,278	26,662	32,893	29.6%	20,813	26.6%	63.3%
Selling, General and Administrative Expenses									
Transportation and Storage	2,672	2,693	2,592	2,568	3,012	2.7%	n.a.	n.a.	n.a.
Salaries	3,190	3,261	3,257	3,331	3,970	3.6%	n.a.	n.a.	n.a.
Provision for Allowance For Possible Loan Losses	3	28	(7)	3	(12)	0.0%	n.a.	n.a.	n.a.
Provision for Accrued Bonuses	339	325	309	367	381	0.3%	n.a.	n.a.	n.a.
Provision for Officers' Bonuses	73	71	51	84	107	0.1%	n.a.	n.a.	n.a.
Retirement Benefit Expenses	198	150	230	253	198	0.2%	n.a.	n.a.	n.a.
Provision of Reserve for Retirement Benefits for Officers	14	12	22	25	23	0.0%	n.a.	n.a.	n.a.
Tax and Dues	148	154	133	165	170	0.2%	n.a.	n.a.	n.a.
Depreciation	100	102	113	133	190	0.2%	n.a.	n.a.	n.a.
R&D Expenses	2,332	2,562	2,824	3,388	3,458	3.1%	n.a.	n.a.	n.a.
Others	4,408	4,494	4,637	4,486	5,167	4.6%	n.a.	n.a.	n.a.
Total	13,477	13,852	14,161	14,803	16,664	15.0%	12,193	15.6%	73.2%
Operating Income	10,767	10,087	7,117	11,859	16,229	14.6%	8,620	11.0%	53.1%
Non-Operating Income	383	333	342	892	883	0.8%	402	0.5%	45.5%
Non-Operating Expenses	1,138	960	697	375	400	0.4%	105	0.1%	26.3%
Ordinary Profit	10,012	9,460	6,763	12,375	16,712	15.0%	8,917	11.4%	53.4%
Extraordinary Gain	114	158	34	538	9	0.0%	2	0.0%	22.2%
Extraordinary Loss	511	394	1,521	253	566	0.5%	407	0.5%	71.9%
Income before Income Taxes	9,615	9,223	5,276	12,660	16,155	14.5%	8,512	10.9%	52.7%
Income Taxes etc.	3,496	2,585	2,003	4,397	7,975	7.2%	2,579	3.3%	32.3%
Income before Minority Interests	6,119	6,638	3,273	8,262	8,180	7.4%	5,933	7.6%	72.5%
Minority Interests	365	507	118	104	162	0.1%	88	0.1%	54.3%
Net Income	5,753	6,131	3,154	8,158	8,018	7.2%	5,845	7.5%	72.9%

◆ Details of other PL Items	Mar-10	Mar-11	Mar-12	Mar-13	Mar-14	2015/3-3Q
Non-Operating Income						
Interest and Dividends Income	101	107	107	100	105	97
Gain On Valuation Using Equity Method of Accounting	-	-	-	-	-	13
Rent Income	135	124	125	111	109	94
Insurance Income	66	25	14	88	69	-
Gain on Sales of Securities	-	31	36	38	39	-
Gain on Foreign Exchange Translation	-	-	-	487	507	74
Others	79	42	59	65	54	124
Total	383	333	342	892	883	402
Non-Operating Expenses						
Interest Expenses	636	420	273	224	200	48
Depreciation Expenses of Fixed Assets Lent	44	41	39	33	31	25
Loss on Foreign Exchange Translation	239	339	281	-	-	-
Loss on Valuation Using Equity Method of Accounting	150	80	45	61	-	-
Compensation for Damage	-	-	-	-	133	-
Others	67	77	56	55	36	32
Total	1,138	960	697	375	400	105
Extraordinary Gain						
Gain on Sale of Fixed Asset	0	1	30	3	5	2
Gain on Sale of Investments in Securities	1	4	0	417	3	-
State Subsidy	107	153	-	117	1	-
Others	4	-	3	-	-	-
Total	114	158	34	538	9	2
Extraordinary Loss						
Loss on Disposal of Fixed Asset	491	350	936	243	556	297
Loss on Valuation of Investment Securities	15	40	513	4	-	-
Impairment Loss	-	-	-	-	-	53
Others	4	3	70	5	10	57
Total	511	394	1,521	253	566	407

Source: Annual reports and Summary of Financial Statements

## 5-(4) Financial Overview

Tangible fixed assets consist about 50% of total assets.

While the Company funded part of capital investment by borrowing, the company relies less on debt and has a sufficient ability to repay debt.

### ◆ While the Company funded part of capital investment by borrowing, the Company relies less on debt

Total assets have expanded since FY2014-3 as a result of a large-scale capital investment and a fluctuation in converted yen amount of assets of overseas subsidiaries due to a weaker yen. Total assets increased from 112.2B yen as of March 31, 2013 to 149.3B as of December 31, 2014, representing an increase of 37.1Bn yen (+33%) in less than two years (see P39 for return on invested capital).

#### 【Assets】

Cash and deposits increased by 3.7B yen to 9.5B yen as of December 31, 2014 from 5.8B yen as of March 31, 2014, partly because the Company funded part of the capital investment in NOLTEX (US) by borrowing.

Notes receivable and accounts receivable remained around 25.0B yen with a turnover around three months. While sales channels include a trading company channel and a direct sales to end users, the largest customer is Mitsubishi Corporation, to which the Company sold 12.1B in FY2014-3, consisting about 11% of the total revenues. Past annual reports disclosed Mitsubishi Corp and some trading companies specialized in chemicals such as Tsuritani Corporation and Miki & Co. as large trade debtors.

Inventory (25.3B yen) was consisted of finished products and goods (19.4B yen), work-in-process (0.4B yen) and raw materials and supplies (5.6B yen). As a production cycle is short at around five days, the weight of work-in-process is low. Inventory increased by about 20% from 19.8B yen as of March 31, 2013 to 24.1B yen as of March 31, 2014 due to a weaker yen.

Tangible fixed assets of 74.2B yen as of December 31, 2014 accounted for about 50% of total assets, given a heavy burden of production facilities. Also, construction-in-progress significantly increased from 2.6B yen as of March 31, 2013 to 19.7B as of March 31, 2014 due to expansion of production facilities in the Kumamoto Plant and NOLTEX (US). Entering into FY2015-3, as construction of a new facility in the Kumamoto Plant completed, machineries and equipment increased from 28.3B yen at the end of the previous fiscal year to 32.2B yen (about +4.0B yen) due to a transfer from construction-in-progress. Construction-in-progress also increased to 23.1B (about +3.4B yen) along with progress in the NOLTEX (US) plant. A construction of the new facility in NOLTEX (US) is scheduled to be completed in Q1 FY2016-3, which should have an impact on P&L in the next fiscal year and beyond through an increase in depreciation.

Investment and other assets were 7.9B yen as of December 31, 2014, of which the composition is not clear, but the major items out of 6.2B yen as of the end of the last fiscal year included investment securities (3.1B yen) and deferred taxes (2.0B yen).

#### 【Liabilities】

Notes payable and accounts payable were 19.0B yen as of December 31, 2014, up from 15.3B at the end of the previous fiscal year, partly due to a rise in raw material prices in Europe. Trade amount with and payables to Mitsubishi Chemical, the parent company and the largest supplier, were 9.9B yen and 2.0B yen, respectively, as of March 31, 2014.

Interest-bearing debt increased by about 12.0B yen from 15.4B yen as of March 31, 2014 to 27.4B yen as of December 31, 2014. Over the past five years, EBITDA was at the level exceeding 15.0B yen (except in FY2012-3), and, though interest-bearing debt significantly increased, the Company has a strong debt service ability and no funding concern.

							JPY(M)	
◆BS Summary	Mar-10	Mar-11	Mar-12	Mar-13	Mar-14	Composition	Dec-14	Composition
Cash & Deposits	9,908	8,036	4,879	8,433	5,785	4.4%	9,477	6.3%
Notes and Accounts Receivable	24,845	22,897	24,213	25,120	24,478	18.8%	28,248	18.9%
Inventory	15,786	15,674	17,528	19,788	24,134	18.5%	25,331	17.0%
Deferred Tax Assets	1,050	1,150	977	1,326	1,211	0.9%	n.a.	n.a.
Allowance for Doubtful Accounts	(99)	(80)	(36)	(44)	(42)	0.0%	(29)	0.0%
Others	3,055	1,021	1,901	2,429	1,341	1.0%	3,754	2.5%
Total Current Assets	54,548	48,699	49,464	57,054	56,907	43.7%	66,781	44.7%
Buildings & Structures	9,545	9,426	9,554	11,619	11,528	8.9%	11,966	8.0%
Machinery & Equipment and Vehicles	27,150	22,375	20,671	28,326	28,313	21.8%	32,231	21.6%
Land	4,327	4,332	4,478	4,512	4,540	3.5%	4,570	3.1%
Lease Assets	24	31	27	6	632	0.5%	n.a.	n.a.
Construction In Progress	1,749	3,778	7,273	2,625	19,722	15.2%	23,076	15.5%
Others	1,510	1,450	1,429	1,671	1,776	1.4%	2,334	1.6%
Total Tangible Fixed Assets	44,307	41,394	43,436	48,762	66,511	51.1%	74,177	49.7%
Intangible Assets	900	839	665	489	496	0.4%	447	0.3%
Investment & Other Assets	6,940	6,923	6,195	5,873	6,193	4.8%	7,917	5.3%
Total Fixed Assets	52,148	49,157	50,296	55,125	73,200	56.3%	82,541	55.3%
Total Asset	106,696	97,857	99,761	112,180	130,107	100.0%	149,322	100.0%
Notes and Accounts Payable	14,065	13,673	14,648	16,018	15,254	11.7%	18,954	12.7%
Short-Term Debt	7,318	3,954	4,365	6,072	10,868	8.4%	20,241	13.6%
Lease Obligations	6	9	9	1	44	0.0%	n.a.	n.a.
Accrued Expenses	2,822	2,191	2,773	2,510	2,275	1.7%	n.a.	n.a.
Income Tax Payable	1,581	1,504	618	2,646	4,472	3.4%	n.a.	n.a.
Accrued Bonuses	1,181	1,165	1,125	1,229	1,364	1.0%	757	0.5%
Others	2,770	3,504	4,749	4,669	4,545	3.5%	6,819	4.6%
Total Current Liabilities	29,747	26,003	28,289	33,148	38,822	29.8%	46,771	31.3%
Long Term Debt	15,392	9,613	7,584	3,962	3,850	3.0%	7,194	4.8%
Accrued Expenses	19	23	19	5	588	0.5%	n.a.	n.a.
Deferred Tax Liabilities	1,196	1,028	1,256	1,944	2,562	2.0%	n.a.	n.a.
Provision for Retirement Benefits	5,605	5,477	5,687	5,935	5,481	4.2%	5,739	3.8%
Others	748	757	924	1,736	2,034	1.6%	5,514	3.7%
Total Non-Current Liabilities	22,962	16,902	15,475	13,587	14,515	11.2%	18,447	12.4%
Total Liabilities	52,709	42,906	43,764	46,735	53,337	41.0%	65,218	43.7%
Capital Stock	17,989	17,989	17,989	17,989	17,989	13.8%	17,989	12.0%
Capital Surplus	13,879	13,879	13,879	13,879	13,879	10.7%	13,879	9.3%
Retained Earnings	20,632	25,692	27,581	34,550	40,815	31.4%	44,643	29.9%
Treasury Stock	(192)	(194)	(195)	(197)	(202)	-0.2%	(202)	-0.1%
Total Stockholders' Equity	52,309	57,367	59,254	66,222	72,481	55.7%	76,309	51.1%
Other Comprehensive Income	152	(2,420)	(3,260)	(780)	4,283	3.3%	7,788	5.2%
Minority Interests	1,525	4	2	2	6	0.0%	7	0.0%
Total Net Assets	53,987	54,951	55,996	65,444	76,770	59.0%	84,104	56.3%
Total Liabilities and Total Net Assets	106,696	97,857	99,761	112,180	130,107	100.0%	149,322	114.8%
Interest Bearing Debts*	22,735	13,599	11,977	10,040	15,350		27,435	
EBITDA	17,542	16,732	13,714	18,792	23,358		n.a.	

\*Lease Obligations value as of 2014-12 is not available.

◆Key Indicators	Mar-10	Mar-11	Mar-12	Mar-13	Mar-14	Dec-14
Current Ratio	183.4%	187.3%	174.9%	172.1%	146.6%	142.8%
Capital Ratio	49.2%	56.2%	56.1%	58.3%	59.0%	56.3%
D/E ratio (times)	0.98	0.78	0.78	0.71	0.69	0.33
Interest Bearing Debts /EBITDA	1.30	0.81	0.87	0.53	0.66	n.a.
ROA	5.4%	6.0%	3.2%	7.7%	6.6%	5.6%
ROE	11.6%	11.4%	5.7%	13.4%	11.3%	9.7%
Days Sales Outstanding (M)	2.9	3.1	3.2	3.2	2.7	3.3
Days Sales in Inventories (M)	3.3	2.8	3.0	3.4	3.4	4.0
Cash Disbursement Outstanding (M)	2.4	2.5	2.6	2.8	2.4	3.0

Days Sales Outstanding = (Average Trade Receivables at beginning & end of FY / Revenue) × 12 (or 9)

Days Sales in Inventories = (Average Inventories at beginning & end of FY / COGS) × 12 (or 9)

Cash Disbursement Outstanding = (Average Accounts Payable at beginning & end of FY / COGS) × 12 (or 9)

Source : Annual reports and Summary of Financial Statements

## 5-(5) Cash Flow Overview

### ◆ Negative free CF in FY2014-3 due to a large-scale capital investment

CF from operating activities fell below 10.0B yen in FY2012-3 as the operating income declined due to an impact of the inventory adjustment by polarizing plate makers and a slowdown in exports of commodity products along with a weaker yen, but generally remained around 15.0B in other years.

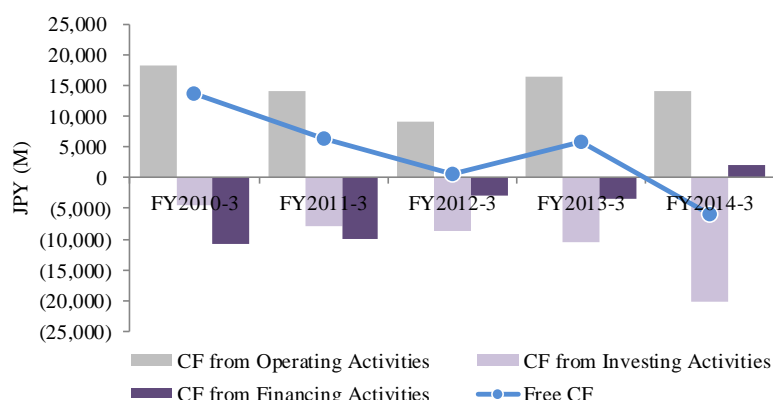
CF from investing activities significantly increased to about 20.0B yen in FY2014-3 as a result of a large-scale capital investment to OPL film production facility in the Kumamoto Plant (total investment: 6.5B yen) and EVOH production facility in NOLTEX (US) (total investment: 180M yen). Free CF generally remains positive, but turned to negative (about -5.9B yen) in FY2014-3, as CF from investing activities exceeded CF from operating activities.

As for CF from financing activities, interest-bearing debt of around 40B yen had been reduced to one third at about 13.6B yen in FY2011-3 by repayment over about five years. While the capital investment has been self-funded since then, as the capital investment in NOLTEX (US) was partially funded by borrowing, CF from financing activities was positive in FY2014-3.

	JPY(M)				
◆ CF Summary	Mar-10	Mar-11	Mar-12	Mar-13	Mar-14
CF from Operating Activities	18,272	14,132	9,223	16,365	14,150
CF from Investing Activities	(4,509)	(7,761)	(8,575)	(10,557)	(20,033)
Free CF	13,763	6,371	648	5,808	(5,883)
CF from Financing Activities	(10,621)	(9,844)	(2,872)	(3,319)	1,996
Adjustments	(23)	(329)	(142)	425	954
Net Cash Flow	3,117	(3,802)	(2,367)	2,914	(2,933)
Cash & Cash equivalents at the beginning of period	8,689	11,807	8,005	5,637	8,677
Increase/Decrease in cash by change of consolidated entity	-	-	-	125	-
Cash & Cash equivalents at the end of period	11,807	8,005	5,637	8,677	5,744
CAPEX					
Synthetic Resin	4,566	6,088	9,408	9,850	19,902
Organic Synthesis	585	712	414	660	462
Others	35	46	106	55	93
Adjustment	(33)	(73)	(139)	(77)	(195)
Total	5,153	6,773	9,790	10,489	20,263

Source: Summary of Financial Statements

Cash flow Trend



Source: Summary of Financial Statements



## 6. Management Plan and Growth Strategy

### 6-(1) Management Plan

Mid-term management plan "Double 15" is underway.

#### ◆Target of FY2016-3: revenues of 130B yen and operating income of 20B yen

Currently, mid-term management plan "Double 15" is underway in the fourth year, and the next fiscal year will be the last year.

The Company defines where it wants to be in 2025 as "a company that exploits its strengths to provide specialty products, thereby contributing to a sustainable society and maintaining a visible presence on the global market", and has been taking initiatives under the mid-term management plan "Double 15" as specific measures to achieve that goal. The Company also sets forth numerical targets to achieve "revenues of 130B yen, operating income of 20B yen and operating margin of 15% or more in FY2015 (FY2016-3)".

Although the original plan of the current fiscal year was "revenues of 109.0B yen, operating income of 15.8B yen and operating margin of 14.5%", due to drags including a sharp increase in raw material prices, the Company revised the guidance downward to "revenues of 104.5B yen (-4.5B yen or about -4% from the original plan), operating income of 11.0B yen (-4.8B yen or about -28%) and operating margin of 10.5% (about -4% points).

In order to achieve the target revenues of 130B yen and operating income of 20B yen in the next fiscal year, the Company needs to add 22.5B yen (about +25%) to revenues and 9.0B yen (about +80%) to operating income relative to the forecast results of the current fiscal year. Target revenues of 130B yen are within an achievable scope when considering a full-year operation of the sixth OPL film production facility and a start of operation of a new EVOH production line in the US scheduled in Q2.

It is also not impossible to achieve the target operating income, given the operating margin of 14.8% (excluding the impact of a change in the accounting period) achieved in FY2013 (FY2014-3). However, the target operating margin of 15% is hard to achieve in the next fiscal year, due to an anticipated increase in expenses in relation to removal of vacant lots associated with restructuring of the plant lines and an increase in depreciation in relation to operation of a new production line.



Note: The values in FY2013 exclude the impact of a change in the accounting period for the consolidated subsidiaries.  
The values for FY2014 are based on projection.

Source: Created by SQUADD based on the company materials.

## 6-(2) Growth Strategy

Basic policies are:

- (i) Expansion of core businesses
- (ii) Establishment of the third pillar
- (iii) Enhancement of competitive advantage
- (iv) Acceleration of overseas expansion
- (v) Assurance of safety, quality, environment and compliance

### ◆ While expanding core businesses, focus is on new source of income

Basic policies of the mid-term management plan "Double 15" are: (i) Aggressive expansion of core businesses, (ii) Establishment of the third pillar and strengthening of new product development, (iii) Enhancement of competitive advantage, (iv) Acceleration of overseas expansion and (v) Assurance of safety, quality, environment and compliance (see below table).

(i) Aggressive expansion of core businesses has been well in progress, centered on expansion of production capacity. In particular, EVOH resin "SOARNOL" is currently sold mostly in the developed markets where the requirement level for safety and freshness of food is high, but it is likely that the similar needs to the developed markets would arise in the emerging markets along with higher income level, and further growth is expected in this field. Also in Europe, there still remain a lot of foodstuff for which glass container is a mainstream, leaving a sufficient room for cultivation of demand.

As for (iii) Enhancement of competitive advantage, now that suspension of production of unprofitable products has already implemented particularly in the organic synthesis business, the most important challenge now is to foster the third pillar following "OPL Film" and "SOARNOL".

The Company has started distribution of "Nichigo G-polymer" and "ORGA", in an effort to promote new product development towards establishment of the third pillar. "Nichigo G-polymer" is the first amorphous vinyl alcohol resin in the world with excellent gas barrier property and water-solubility. Although diffusion is slower than initially estimated, it is expected to be put in practical use for food packaging and non-woven fabric applications from FY2016-3.

"ORGA" is an optical plastic sheet developed from "SHIKOH (UV curable resin)" as a base. As substitution to the reinforced glass for smartphones has not come along as aimed, the Company strives to cultivate needs, taking other applications in perspective.

#### ◆ Mid-Term Management Plan "Double 15": Basic Policy and Progress

Priorities	Basic policy	Initiatives
( i ) Aggressive expansion of core businesses	<ul style="list-style-type: none"> <li>■ Quality improvement and sales expansion of "OPL Film" and "Soamol"</li> <li>■ Steady increase in production capabilities</li> </ul>	<ul style="list-style-type: none"> <li>✓ Wider/thinner OPL Film</li> <li>✓ New application of Soamol e.g. retort package</li> <li>✓ Operation of fifth/sixth lines for OPL Film</li> <li>✓ Expansion of EVOH facilities in the US/UK</li> </ul>
( ii ) Establishment of the third pillar and strengthening of new product development	<ul style="list-style-type: none"> <li>■ Early realization of the 3rd pillar</li> <li>■ Promotion of new product development by enhancement of R&amp;D activities</li> </ul>	<ul style="list-style-type: none"> <li>✓ Practical use of Nichigo G-polymer</li> <li>✓ Complete ORGA mass production facility</li> <li>✓ Build an advanced R&amp;D Wing in the Central R&amp;D Lab. (Completion scheduled in 4Q)</li> </ul>
( iii ) Enhancement of competitive advantage	<ul style="list-style-type: none"> <li>■ Investment in growth areas</li> <li>■ Selection and concentration</li> <li>■ Enhancement of cost competitiveness</li> </ul>	<ul style="list-style-type: none"> <li>✓ Withdraw from non-profitable business such as Ketene product/Gum base resin etc.</li> <li>✓ Re-organization of synthetic resin emulsion business within Mitsubishi Group</li> </ul>
( iv ) Acceleration of overseas expansion	<ul style="list-style-type: none"> <li>■ Cultivate emerging markets</li> <li>■ Accelerate overseas development incl. local production</li> <li>■ Nurture global talents</li> </ul>	<ul style="list-style-type: none"> <li>✓ Overseas development of Hi-Selon</li> <li>✓ Sales expansion of existing products in the overseas markets</li> </ul>
( v ) Assurance of safety, quality, environment and compliance	<ul style="list-style-type: none"> <li>■ Safe and steady production</li> <li>■ Reduction of chemical emission</li> <li>■ Energy saving</li> </ul>	<ul style="list-style-type: none"> <li>✓ Introduction of biomass boiler</li> <li>✓ Installation of solar power generation system</li> </ul>

Source : Annual report and financial results briefing materials, etc.

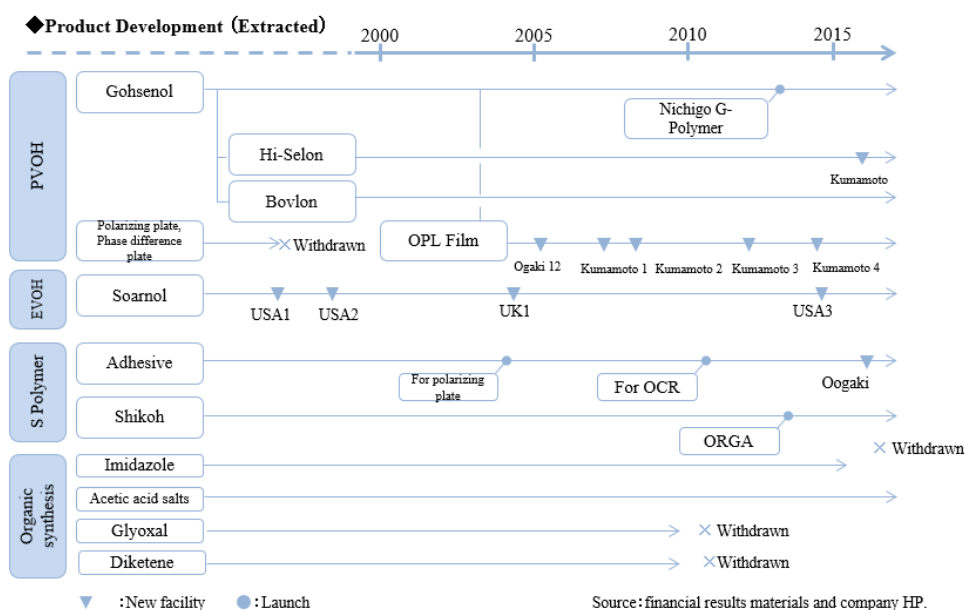
### ◆Aggressive in expanding applications of existing products

It still takes time for new products such as "Nichigo G-polymer" and "ORGA" to become another pillar of business, but among existing products, PVOH film "Hi-Selon" and optical-use pressure sensitive adhesive "COPONYL" are selling well.

"Hi-Selon" is a water-soluble PVOH film and is used for unit packaging of pharmaceuticals, agricultural chemicals and detergents as well as film for curved transfer printing. Demand has rapidly expanded for individual packaging of liquid detergents centered in Europe and the US, as well as for agricultural chemicals of which packaging was made compulsory in overseas. Also, transfer printing film for use in automobile interiors remains solid.

Demand for "COPONYL" increased in application for electronics and optical materials along with expansion of touch panel and display markets. In addition, demand in the emerging markets, particularly in Asia, is expected to grow.

As both products are expected to grow, the Company decided to expand production facilities in July 2014. Operation is scheduled to start in Q4 FY2016-3 (January-March 2016) for "Hi-Selon" and in Q1 FY2017-3 (April-June 2016) for "COPONYL". Higher revenues from new facilities will contribute to the full-year results from FY2017-3, but a step should have been made towards establishment of the third pillar.



## 7. Competitive Analysis

### 7-(1) Competitive Environment

#### a. Optical-use PVOH film

#### ◆PVOH: technical hurdle serves as barrier to entry

The competitive environment for the optical-use PVOH Film (product name: OPL Film), one of the Company's mainstay products, is discussed as follows.

Kuraray and The Nippon Synthetic Chemical Industry are only two producers. Kuraray in its disclosure materials estimates its market share to be about 80%, but in the Company's view, the respective market share is: Kuraray: about 70% and The Nippon Synthetic Chemical Industry: about 30%.

Although Kuraray initially had a monopolistic position, in 2003 the Company entered into the optical-use PVOH film field with its PVOH processing technology of the world-top level. After an initial difficult period, the Company has been evaluated for its efforts such as an extension of the film length from the previous 2,700 m per roll to 5,000 m, and came to establish the current position.

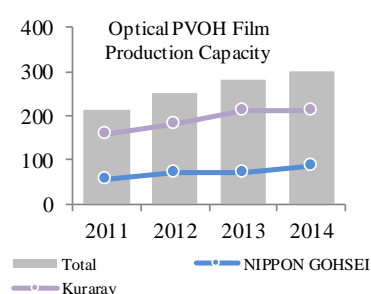
As production of the optical-use PVOH film requires a high level of precision processing technology as well as an advanced know-how of refining PVOH, technical hurdle for a new entry to this field is very high. Also, the polarizing plate industry, a demand source of PVOH films, is dominated by top three companies (Nitto Denko, LG Chemical (Korea) and Sumitomo Chemical) that hold over 70% market share. Considering the long-standing structure of two makers and several buyers, in addition to a technical barrier to entry, an emergence of companies that newly enter into the optical-use PVOH film business should be highly unlikely.

While the Company and Kuraray continue to compete with each other for a market share, how to expand the production capacity in anticipation of the mid- to long-term demand will become critical.

In the meantime, Nitto Denko, a top polarizing plate producer, started in-house production of "coating polyvinyl alcohol" as an alternative product to PVOH film, which was a sign of shift in the industry structure. There are a lot of uncertainties in to what extent the coating PVOH will be put in practical use, the upcoming trend needs to be closely monitored.

#### ◆Optical PVOH Film Production Capacity

	2011	2012	2013	2014
Kuraray	160	180	212	212
NIPPON GOHSEI	55	70	70	88
Total	215	250	282	300
<u>Production Capacity Comparison</u>				
Kuraray	74.4%	72.0%	75.2%	70.7%
NIPPON GOHSEI	25.6%	28.0%	24.8%	29.3%



Source: Kuraray release and company financial results briefing materials

#### b. EVOH resins

#### ◆EVOH: high initial cost serves as barrier to entry

The competitive environment for the EVOH resins (product name: SOARNOL) is summarized below.

As discussed in Business Overview (P7), (i) Kuraray, (ii) The Nippon Synthetic Chemical Industry and (iii) Chang Chun Petrochemical (Taiwan) are only three producers of EVOH resins in the world,

(iii) Chang Chun Petrochemical (Taiwan), one of core companies in the ChangChun

Group, a leading chemical company in Taiwan, has entered into the business to open a crack in the duopoly by Kuraray and The Nippon Synthetic Chemical Industry, but it has not been successful in grabbing market share, and Kuraray and The Nippon Synthetic Chemical Industry remain holding over 90% share (on a production capacity basis, see below table). Also in the past, DuPont (US) tried unsuccessfully to start the EVOH resin business, and The Nippon Synthetic Chemical Industry acquired DuPont's plant in Houston, Texas in 1994.

In addition to a high technical barrier to entry, provision of products according to applications and forming methods is required. Initial entry costs such as the required capital investment for around one million yen per ton are also high.

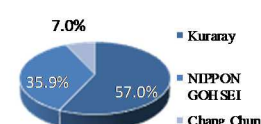
Kuraray successfully started the EVOH resin business in 1972, and The Nippon Synthetic Chemical Industry started a feasibility study in 1974 and started a full-scale operation in 1984. As such, both companies with a long history have dominated the market for many years.

#### ◆Both The Nippon Synthetic Chemical Industry and Kuraray expand EVOH resin production facilities

Both The Nippon Synthetic Chemical Industry and Kuraray are seeking to expand the production facilities in anticipation of growth in demand for EVOH resins. The Company plans to complete expansion of the production facility in the US (+15,000 ton/y) during Q1 FY2016-3 (April-June 2015), which will bring the total production capacity from the current 51,000 ton/y to 66,000 ton/y. On the other hand, Kuraray is adding 11,000 ton/y to the capacity in Belgium by the end of FY2016, which is expected to increase the production capacity to 92,000 ton/y. Kuraray estimates its market share to be about 65%, but when considering the expansion of the production capacity, the gap between two companies should be narrowed.

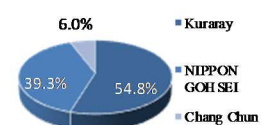
##### ◆EVOH Resin Production Capacity (Current)

	US	Europe	Japan	Taiwan	Total	Share
Kuraray	47,000	24,000	10,000	-	81,000	57.0%
NIPPON GOHSEI	23,000	18,000	10,000	-	51,000	35.9%
Chang Chun	-	-	-	10,000	10,000	7.0%
Total	70,000	42,000	20,000	10,000	142,000	100.0%



##### ◆EVOH Resin Production Capacity (Plan to reinforce)

	US	Europe	Japan	Taiwan	Total	Share
Kuraray	47,000	35,000	10,000	-	92,000	54.8%
NIPPON GOHSEI	38,000	18,000	10,000	-	66,000	39.3%
Chang Chun	-	-	-	10,000	10,000	6.0%
Total	85,000	53,000	20,000	10,000	168,000	100.0%



Source: Company's release data and the hearing results from the company.



## 7-(2) Performance Comparison

### ◆Margin on the entire company basis exceeds that of Kuraray, but inferior to Kuraray in segment profitability

Performance relative to Kuraray which competes in the optical-use PVOH film and EVOH resin is as follows.

While Kuraray with revenues of 413.5B (FY2014-3) overwhelms The Nippon Synthetic Chemical Industry in terms of size, the operating margin on the entire company basis of The Nippon Synthetic Chemical Industry is 14.6% v.s. Kuraray's 12.0%.

However, when focusing on the synthetic resin business (vinyl acetate business), Kuraray is superior both in terms of size and profitability. Given the gap in the revenue size as much as twice, assuming no difference in prices of both companies' products, an advantage in size appears to be reflected in a difference in profitability. Considering the difference in size, it is not easy for the Company to achieve the similar level of margin with that of Kuraray, but there should be enough room to seek improvement in the margin through an expansion of the market share and a cost control.

Kuraray acquired the vinyl acetate business from DuPont (US) in June 2014 for about 543 million dollar. As the synergy effect from the acquisition has not yet materialized, the segment margin has significantly deteriorated from about 30% in December 2013 to about 18% in December 2014 (nine months results).

						JPY(M)
◆Competitive Comparison						9months
Company		Mar-10	Mar-11	Mar-12	Mar-13	Mar-14 2014/4-12
Kuraray (entire company)	Revenue	332,880	363,191	368,975	369,431	413,485
	Operating Income	30,451	53,095	54,733	49,197	49,545
	Operating Margin	9.1%	14.6%	14.8%	13.3%	12.0%
NIPPON GOHSEI (entire company)	Revenue	90,086	91,260	87,243	91,976	111,151
	Operating Income	10,767	10,087	7,117	11,859	16,229
	Operating Margin	12.0%	11.1%	8.2%	12.9%	14.6%

						9months
Company/Segment		Mar-10	Mar-11	Mar-12	Mar-13	Mar-14 2014/4-12
Kuraray (vinyl acetate)	Revenue (segment)	111,961	116,905	119,125	126,133	155,503
	Operating Income	39,153	50,848	49,904	48,877	46,658
	Operating Margin	35.0%	43.5%	41.9%	38.8%	30.0%
NIPPON GOHSEI (synthetic resin)	Revenue (segment)	65,099	64,946	61,510	67,113	83,560
	Operating Income	10,703	10,234	7,244	11,837	16,407
	Operating Margin	16.4%	15.8%	11.8%	17.6%	19.6%

Source : Company financial results briefing materials

## 8. Stock Price Trend and Investment Return Analysis

### 8-(1) Stock Price Trend

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

In FY2015-3, as the business performance has leveled off, stock price lost a momentum and later moved lower.

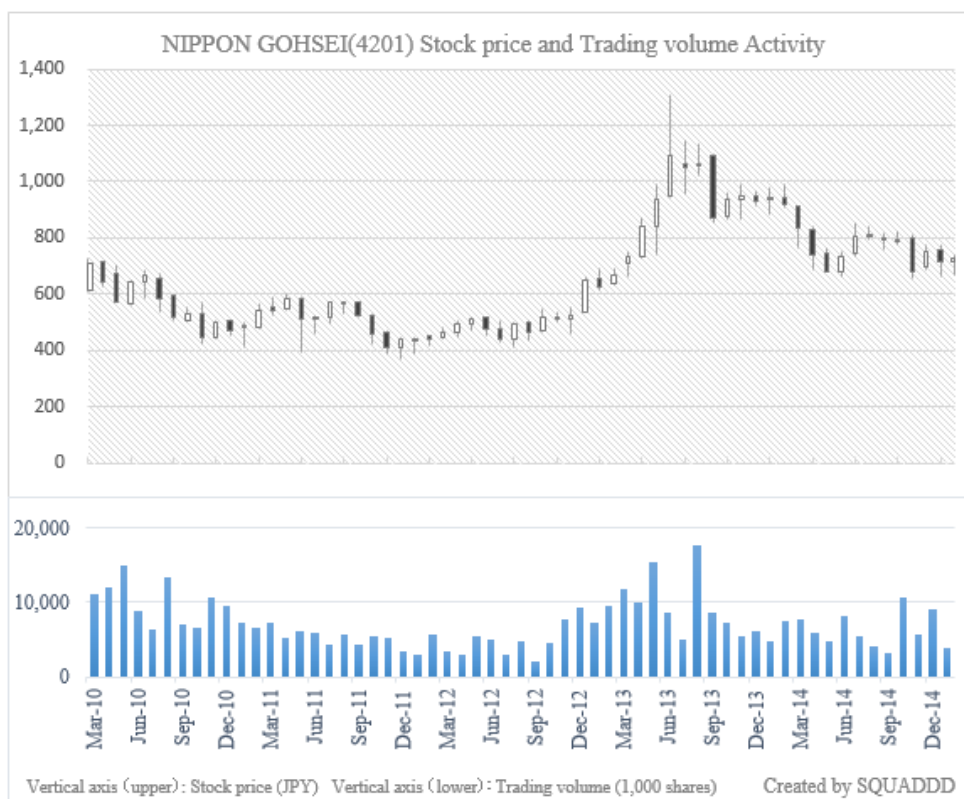
#### ◆Business maintains expanding trend over the recent five years, temporary weak stock price is expected to recover

Stock price has shown the following trend. The Company's revenues temporarily leveled off in FY2012-3 when the inventory adjustment in the LCD TV market prolonged due to an impact of the European debt crisis, but remained in an expanding trend over the recent five years from FY2010-3 to FY2014-3. Profitability indicators such as operating margin and ROE confirmed a strong business performance. In FY2015-3, the business performance has been largely disappointing, as special factors such as a delay in restart of production after the regular maintenance early in the period and a defect of new facilities caused a slowdown again.

The liquidity per day (amount basis), which had remained around 200M yen, fell below 100M yen and recorded a bottom around the time of reporting financial results for FY2012-3. The stock underperformed TOPIX and peers including Kuraray (3405.T).

Subsequently in FY2013-3, a bullish market driven by “Abenomics” early in the year and recovery of the Company's business led to the stock's outperformance relative to TOPIX and peers including Kuraray (3405.T). Also, the liquidity (per day on amount basis) remained at 400M yen level, indicating expansion of market participants.

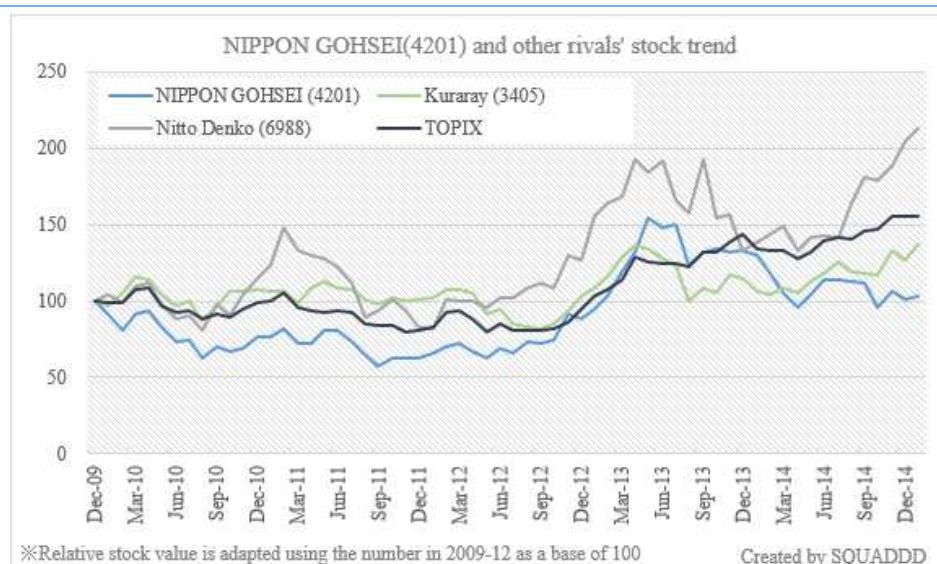
In FY2015-3, the stock price went up for some time before moving down in later in the year, driven by a temporary worsening in the business due to the special factors. The stock also underperformed TOPIX and peers including Kuraray (3405.T). In addition, the liquidity per day (amount basis) which had remained around 300M yen went down to a slightly over 200M yen.



## 8-(2) Investment Return Analysis

Stock price (PBR) remains cheap relative to the industry average.

For valuation to improve going forward, expansion of size and better liquidity through IR activities will be a key.



### ◆ Stock price with PBR at 0.9x is cheap relative to industry average

Based on figures up to the financial results in Q3 FY2015-3, market capitalization was about 72.4B yen, PBR was 0.9x, ROE (actual basis) was 11.35% and dividend yield (company estimate) was 2.5% (as of February 20, 2015). Compared with the chemical industry average (200 names) of PBR (1.3x) and ROE (5.5%), the Company's stock (PBR) remains cheap. For the stock price to move higher in the future, solving the following challenges will be a key.

In the chemical industry which is consisted of many large-cap companies, there exist gaps in size (the average market cap of the industry is 160B yen, twice large than that of the Company) and the market liquidity (liquidity per day (amount basis) of the Company is 200M yen v.s. market average of 700M yen; more than three times).

It varies by industry, but particularly in the chemical industry, the recent data confirmed 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 (removal of premiums relative to the market average) going forward, efforts to expand sales and improve the capital efficiency, enhancement in courteous disclosure and IR activities, and further expansion of institutional (professional) investors through more liquidity per day should be critical.

### ◆ Profitability was highly evaluated and successfully selected in "JPX Nikkei Index 400"

As specific measures to achieve the above, approach to both passive investors and active investors should be critical.

First, the approach to passive investors includes "JPX Nikkei Index 400" which started operation in January 2014. "JPX Nikkei Index 400" is an equity index composed of "top 400 companies with high appeal for investors", which meet requirements of global investment standards, such as efficient use of capital and investor-focused management perspectives. The index was developed to promote the appeal of Japanese corporations domestically and abroad, while encouraging continued improvement of corporate value, thereby aiming to revitalize the stock market.

The stock ranks 813rd in terms of market cap, but was selected in "JPX Nikkei Index 400" driven by its profitability.

The Nippon Synthetic Chemical Industry ranks 813rd out of 3,313 companies in terms of market capitalization (921st in liquidity), but was successfully selected in the JPX Nikkei Index 400 driven by its profitability. Competitor Kuraray (3405.T) is also selected in the index. As Kuraray ranks within top 400 companies in terms of market capitalization (197th out of 3,313) and the liquidity (191st) and meets a certain level of profitability, it seems relatively easy to select Kuraray in the index.

As it is anticipated that passive investors represented by GPIF will adopt this index and increase allocation to the index, resulting incremental flow to the Company's stock is expected to improve the liquidity.

Secondly, as to the approach to active investors, along with the above-mentioned improvement in additional liquidity, support from new active investors that could not select it in the investment universe should be expected. While the Company with the market capitalization raking 813rd out of 3,313 (921st in liquidity) is out of the sell-side coverage, it is positioned as an attractive value stock with profitability superior to the industry top Kuraray (3405.T). It should be critical to steadily cultivate active investors with large investment size by appealing to institutional (professional) investors through steady IR activities such as small meetings.

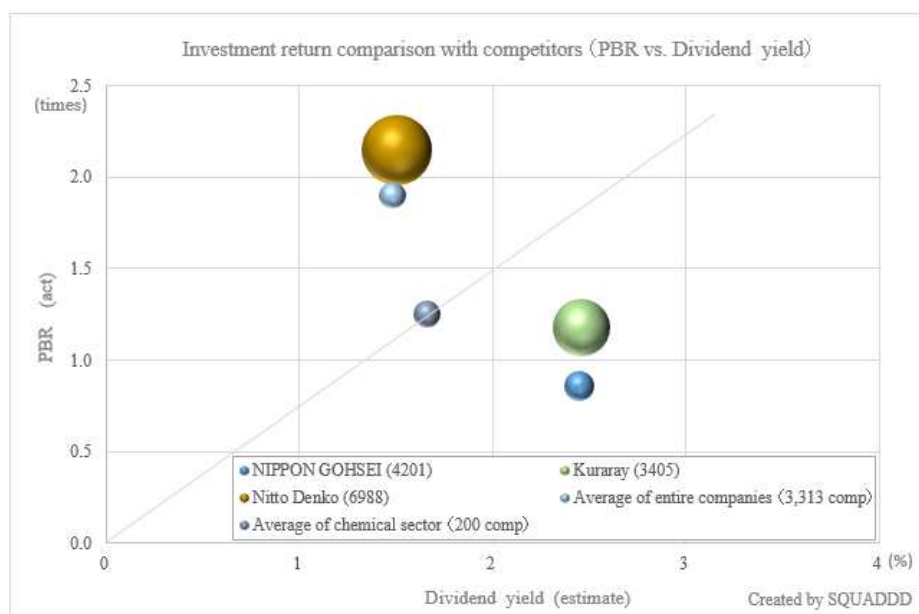
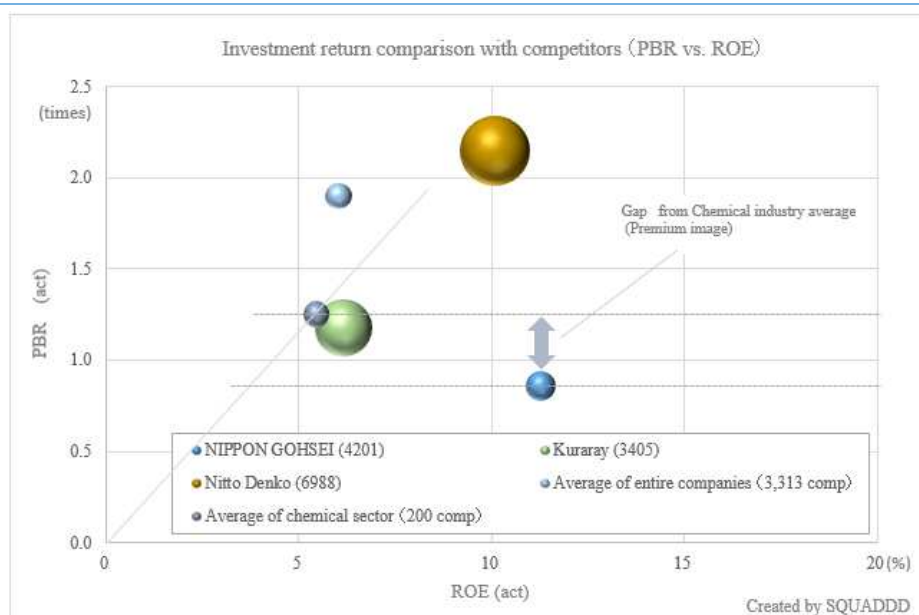
#### ◆ Attractive from the value investment perspective, compared with Kuraray

The Company is compared with peers as follows. The market capitalization of the Company is 72.4B yen v.s. Kuraray's 560B yen. The chemical industry average of the market capitalization is 160B yen with ROE of 5.5% (a size of bubbles representing individual companies in the chart illustrates the market capitalization of each company).

In terms of profitability indicators, as shown by ROE (Company: 11.3% v.s. Kuraray's 6.2%) and dividend yield (Company: 2.5% v.s. Kuraray's 2.5%), the Company is predominantly attractive from the value investment perspective.

The Company has already dominated the PVOH film market together with Kuraray, and is firmly positioned as the second supplier. Also, considering further increase in demand for the Company's products and its stable market share, the steady growth of the business is anticipated. In addition, along with these trends, going forward, it is expected that institutional (professional) investors will actively adopt the "JPX Nikkei Index 400" and the stock price and liquidity will move higher in mid- to long-term.

### 8-(3) Return to Shareholders & Dividend Policy



#### ◆ Raised dividends three times over past five years

The Company puts return to shareholders one of the important initiatives, and pays dividends considering the business trend, while seeking to secure internal reserves for the business investment and to maintain the financial conditions.

Dividend per share was raised from 12 yen to 15 yen in FY2013-3, and by 3 yen to 18 yen in FY2014-3. Although the business is slow in FY2015-3 as the guidance was revised downward, the Company currently plans to pay dividends of 18 yen, the same with that in the previous fiscal year. Payout ratio has remained around 20% except in FY2012-3 when the Company experienced low net profits.



### 8-(4) Capital Cost/ROIC

#### ◆Shares Outstanding / Share Information

company estimate

		Mar-10	Mar-11	Mar-12	Mar-13	Mar-14	Mar-15
Shares outstanding at the end of the period	1,000 stock	98,369	98,369	98,369	98,369	98,369	n.a.
# of shareholders	(person)	4,731	4,440	4,179	3,536	3,922	n.a.
Stock price at the end of the period	(JPY)	643	513	509	839	741	n.a.
Market Cap	(JPY (M))	63,251	50,463	50,070	82,532	72,892	n.a.
Earnings per share (EPS)	(JPY)	59.06	62.94	32.38	83.75	82.32	73.92
Book value per share (BPS)	(JPY)	538.53	564.07	574.83	671.84	788.11	n.a.

#### ◆Shareholder Return Information

company estimate

		Mar-10	Mar-11	Mar-12	Mar-13	Mar-14	Mar-15
Dividend per share at the half of the period	(JPY)	4.00	5.00	6.00	6.00	9.00	9.00
Dividend per share at the end of the period	(JPY)	6.00	7.00	6.00	9.00	9.00	9.00
Dividend per share (DPS)	(JPY)	10.00	12.00	12.00	15.00	18.00	18.00
Dividend payout ratio	(%)	16.9%	19.1%	37.1%	17.9%	21.9%	24.4%
Dividend yield	(%)	1.6%	2.3%	2.4%	1.8%	2.4%	n.a.

Source: Annual reports and Summary of Financial Statements etc.

#### ◆Maintains ROIC exceeding WACC

Capital cost of the Company is calculated at 5.1% (assuming  $\beta$  of 0.960 and risk premium of 5%). Although ROE sharply dropped to less than 5% in FY2012-3, in other fiscal years, ROE remained at the level of more than 11% and Equity Spread (difference between ROE and capital cost) at around 6%.

On the other hand, return on invested capital (ROIC) was kept more than 6% even at the bottom in FY2012-3, and recorded a high return at 10.4% in FY2014-3. Weighted average cost of capital (WACC) is around 4%, and the Company has achieved higher ROIC than WACC over more than five years in the past.

#### ◆Equity Spread

	Mar-10	Mar-11	Mar-12	Mar-13	Mar-14
ROE	11.6%	11.4%	5.7%	13.4%	11.3%
Capital cost*	5.1%	5.1%	5.1%	5.1%	5.1%
Equity Spread	6.5%	6.3%	0.6%	8.3%	6.2%

\*  $\beta=0.960$  (Bloomberg data as of 2015-1-31), calculated at the risk premium=5%

The latest capital cost is also used for the past year.

Source: Created by SQUADD

## ◆ ROIC (Return On Invested Capital)

	Mar-10	Mar-11	Mar-12	Mar-13	Mar-14	Average
Operating Profit*	10,767	10,087	7,117	11,859	14,800	10,926
Effective tax rate	40.6%	40.6%	40.6%	38.0%	38.0%	39.3%
NOPLAT	6,396	5,992	4,227	7,353	9,176	6,629
Interest Bearing Debts	22,735	13,599	11,977	10,040	15,350	14,740
Market Cap	63,251	50,463	50,070	82,532	72,892	63,842
Invested Capital	85,986	64,062	62,047	92,572	88,242	78,582
ROIC	7.4%	9.4%	6.8%	7.9%	10.4%	8.4%
Liability Cost	2.1%	2.2%	2.3%	2.2%	1.2%	2.0%
Capital Cost	5.1%	5.1%	5.1%	5.1%	5.1%	5.1%
WACC**	4.0%	4.2%	4.3%	4.6%	4.3%	4.4%
ROIC-WACC	3.4%	5.1%	2.5%	3.3%	6.1%	4.1%

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

Source: Created by SQUADD.

\*\*WACC=Liability Cost×(1-effective tax rate)×Interest Bearing Debts ratio / Total Asset+Capital Cost×Market Cap ratio.

Liability Cost: the company's historical average of the long term loan interest rate, refer to 「Equity Spread」 above for the Capital Cost.

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