TOSOH

POSITIONED FOR GROWTH

Annual Report 2013

Tosoh Corporation and consolidated subsidiaries
Fiscal year ended March 31, 2013

TOSOH CORPORATION

Values based on monozukuri—*"a craftsman-like approach" to product detail and quality—have shaped Tosoh's destiny and growth for more than 75 years. We take pride in having established a resilient global enterprise whose products and services are woven into the fabric of modern life.*

Tosoh Corporation is a Japanese chemical company established in 1935 and listed on the First Section of the Tokyo Stock Exchange. It is the parent of the Tosoh Group, which comprises 132 companies worldwide and a multiethnic workforce of over 11,000 people and generated net sales of ¥668.5 billion in fiscal 2013, ended March 31, 2013.

TOSOH

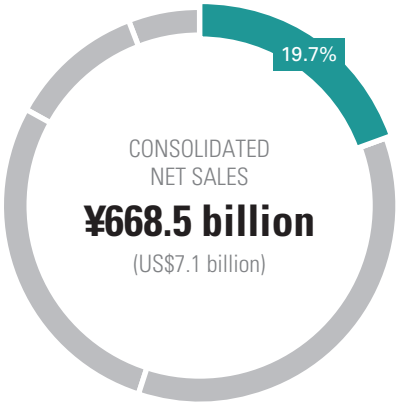
Review of Operations and Management's Discussion and Analysis

SPECIALTY GROUP

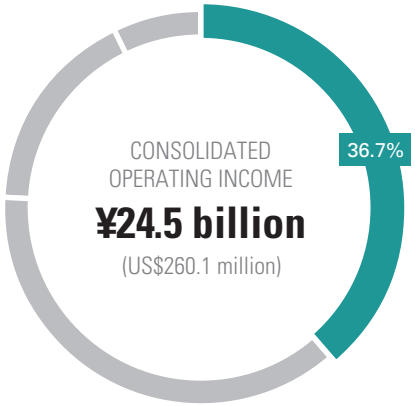
The Specialty Group positions Tosoh for growth by promoting product and technology advances among a wide-ranging customer base.

The group has amassed a multifaceted portfolio of high-value-added bioscience, organic chemicals, and advanced materials products that are typically strongly positioned and highly profitable in well-established and growing niche markets. This portfolio, moreover, serves as a hedge against the cyclical nature of Tosoh's commodity operations, thereby preserving the company's overall profitability.

An array of global clients in high-tech industries, ranging from pharmaceuticals and health care to semiconductors, consumer electronics, and automobiles, depend on the Specialty Group to supply them with its sophisticated, specialized product offerings. The group's clientele includes emerging businesses whose success hinges on the group's ongoing development of offerings to fuel their progress.



SPECIALTY GROUP
¥131.7 billion (US$1.4 billion)



SPECIALTY GROUP
¥9.0 billion (US$95.5 million)

TOSOH'S GLOBALIZATION GIVES RISE TO SPECIALTY GROUP

The Specialty Group sprang from the globalization that Tosoh began in the 1960s. Like all commodity chemicals manufacturers, Tosoh faced the perennial challenge of cyclicality caused by the continuous leapfrogging of demand and capacity. So the company launched a lineup of specialty products that allowed it to tap growing markets for such products worldwide and to thereby offset the cyclical nature of its commodity operations.

The Specialty Group contributes to progress in numerous countries with products for customers in the semiconductor, consumer electronics, pharmaceuticals, bioscience, automotive, and health care industries. Its goal is to continue to break technological ground. The Specialty Group seeks to further the presence of its products in established markets and to gain a place for its products in emerging markets.

Group Performance and Markets

Fiscal 2013 net sales for the Specialty Group amounted to ¥131.7 billion (US$1.4 billion), a decrease of 2.6% from the previous year's figure. The group's contribution to Tosoh's consolidated net sales remained the same as in fiscal 2012, at 19.7%.

The Specialty Group contributes to progress in numerous countries with products for customers in the semiconductor, consumer electronics, pharmaceuticals, bioscience, automotive, and health care industries.

The trend in the Specialty Group's markets was a contraction in demand caused by stagnation and slowdowns in economies around the world, including Japan's. Sales, however, were mixed among the group's products.

The Specialty Group's operating income dropped ¥4.1 billion from fiscal 2012, to ¥9.0 billion (US$95.5 million). Its decline in profitability notwithstanding, the Specialty Group still contributed 36.7% of Tosoh's consolidated operating income.

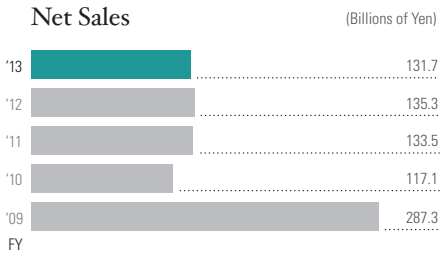
ORGANIC CHEMICALS

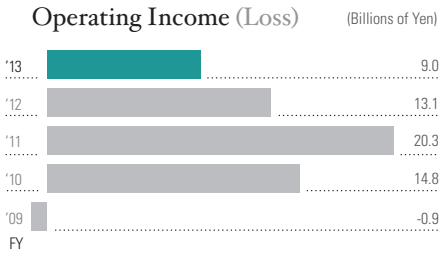
The Specialty Group's Organic Chemicals Division produces organic chemicals that find application in pharmaceuticals, agrochemicals, electronics, petrochemicals, urethane polymers, specialty coatings, and many other products. Tosoh, notably, holds the top share of the Asian market for ethyleneamines and significant shares of the Japanese market for bromine, flame retardants, and industrial cleaning solvents. To stay ahead of the competition, Tosoh seeks to maintain strong or dominant positions in selective markets by continually shifting toward competitive, high-grade products.

ETHYLENEAMINES AND THEIR DERIVATIVES

Ethyleneamines are commonly used as building blocks in the chemical synthesis of products with value-added features. They and their derivatives are widespread in epoxy hardeners, wet-strength resins for paper, chelates, pharmaceutical and agrochemical intermediates, and industrial chemicals.

Ethyleneamines are produced from ethylene dichloride (EDC), ammonia, and caustic soda. Because Tosoh is Japan's largest producer of EDC and caustic soda, it stands to reason that it would be a leading supplier of ethyleneamines in Asia and globally. Delamine B.V., the company's joint venture with Akzo Nobel, in the Netherlands, is the biggest single-line, EDC-based ethyleneamine company in the world. It exports ethyleneamines to over 50 countries.





In fiscal 2012, moreover, Tosoh boosted its ethyleneamine production capacity in Japan to 89,000 metric tons annually. Tosoh has therefore strategically embarked on a course to become one of the world's largest producers of ethyleneamines.

Tosoh expects to complete its shift to a high molecular weight amine manufacturing structure in fiscal year 2014.

Tosoh, meanwhile, is the leading supplier in Japan of heavy metal chelates and ethyleneamine derivatives. Elsewhere in Asia, the company holds major shares of the markets for bulk ethylenediamine (EDA) and for high molecular weight amines, such as diethylenetriamine (DETA) and triethylenetetramine (TETA). Other of the company's Specialty Group's products popular in Japan and overseas are triethylenediamine (TEDA) and Toyocat catalysts for polyurethane production.

Tosoh expects to complete its shift to a high molecular weight amine manufacturing structure in fiscal year 2014. It also will continue to expand its global ethyleneamine derivative network, including its technical support services, and is developing a broader range of product grades to attract more customers.

Performance and Markets

Global economic movements in fiscal 2013 triggered some growth in demand for ethyleneamines compared with the previous fiscal year. But overall there was no improvement to the large gap in the worldwide demand-supply balance. Supply capacity expansion by Tosoh's major competitors is complete, but further expansion is scheduled in the Middle East soon.

Demand for TEDA and Toyocat for polyurethane (PU) production and non-PU applications remained firm domestically and overseas. Intense competition, particularly in Asia, has driven down prices, but the market for these products is now considered to have bottomed out.

Developments

As part of its efforts to expand its global position in the ethyleneamine derivative market, Tosoh is moving forward with the development of processes to increase its use of ethyleneamines in its production lines.

In response to environmental concerns, the Specialty Group is developing emission-free reactive amine catalysts. These products will target specialty grades to be used for the automobile, furniture, and other industries.

In addition, Tosoh is proceeding with plans to commercialize its production of the environmentally friendly reactive TEDA, specifically

for the automobile and furniture markets. Production is scheduled to come onstream in the first half of fiscal 2015 for markets whose size is estimated to be 1,500 metric tons annually. Customer evaluations of the product are well under way.

Strategies and Outlook

In fiscal 2013, Tosoh's sales efforts remained focused on high molecular weight amines. The global supply of EDA has increased and will continue to do so, as various EDA plants have come onstream worldwide and others are in the planning stages. Tosoh, though, will continue to leverage its position as an EDC-based amine producer to differentiate its products in the market.

We will expand our sales of ethyleneamine, particularly in Asia, while carefully watching demand and price movements. In Europe and North America, we will concentrate on increasing our brand recognition while boosting our market share. We will adjust our product mix in favor of high molecular weight amines based on market trends. Long term, Tosoh intends to be the leading global supplier of amines.

We are, meanwhile, taking all the steps needed to expand our TEDA and Toyocat operations globally. The company is considering such strategies as working to increase its share of growing markets for PU and non-PU applications, continuously developing new products, and optimizing processes for better cost-competitiveness and production efficiency.

In addition, Tosoh is developing and commercializing a high-performance amine catalyst that reduces amine emissions. PU producers are becoming more concerned about emissions. So we anticipate that the advantages of our new product and production facility will significantly increase our presence as an eco-friendly company.

BROMINE AND BROMINATED DERIVATIVES

Tosoh is strengthening its position in bromine and its related compounds throughout Asia based on its strength as Japan's sole producer of bromine. The bromine recycling system at our Nanyo Complex gives us a major advantage. That system recycles bromine from industrial waste generated by the complex's facilities and by third-party sources.

Tosoh utilizes proprietary bromination technology to tap hydrogen bromine and bromine from seawater for the production of diverse derivatives. Among styrene derivatives, Tosoh's sodium p-styrenesulfonate (NaSS) in particular boasts a dominant share of the global market in dye enhancers for acrylic fibers and in reactive emulsifiers. And our bromine-based Flamecut flame retardants transform regular plastics into heat- and flame-resistant plastics.

Performance and Markets

Global bromine demand declined 4% in fiscal 2013 from the previous year. Demand, however, is expected to recover, centered on the Asian market. But any recovery is expected to be slow given the stagnation in Japan's bromine market. Domestically, demand for bromine and bromine-based flame retardants peaked in 2011 and until recently has been in steady decline. It has finally bottomed out, so we hope for a reversal in market trends toward growth in demand.

Tosoh is strengthening its position in bromine and its related compounds throughout Asia based on its strength as Japan's sole producer of bromine.

Among the long-term issues that Tosoh must contend with are stricter industrial standards for the use of bromine-based products. We expect a steady phasing out of some products by automotive and other manufacturers, including decabromodiphenyl ether (DBDE) and n-Propyl bromide (NPB).

Strategies and Outlook

Tosoh's medium-term strategy for its bromine and brominated derivatives products is to remain competitive by expanding product sales and reducing costs.

In December 2009, the US Environmental Protection Agency (EPA) and America's big three automotive companies announced the domestic phasing out of DBDE. Japanese automobile manufacturers, therefore, are looking at decabromodiphenyl ethane as an alternative bromine-based flame retardant for their US export models.

Tosoh Group companies, meanwhile, continue to cooperate among themselves and with university and other external research facilities in developing demand in the bromine market. How to expand sales of brominated derivatives remains an ongoing issue.

ECO-BUSINESS

The Organic Chemicals Division's Eco-business Department has established a strong lineup of environmental products. Its environmentally friendly solvents meet a variety of cleaning needs, and its chelating agents render heavy metals from incinerator waste insoluble and therefore harmless. Chelating agent TS-300, for example, sharply reduces the volume of lead, cadmium, mercury, and copper generated from the fly and combustion ash produced in the trash incineration process.

The Eco-business Department recently launched sales of TF-20, a minimally corrosive agent that targets hexavalent chromium and is for use in treating incineration ash, soil, and sewage water. Used with organic chelates, it

can extract a variety of heavy metals from incineration ash in a single process.

Tosoh is beginning to make inroads into China's heavy metal chelating market. China's market is growing faster than Japan's mature market and is on course to outstrip the Japanese market over the medium term despite the recent slowdown in China's economy. And China's emission standards are already stricter than Japan's for some heavy metals.

Performance and Markets

In fiscal 2013, eco-business was once again a stable and reliable annual contributor to the profitability of Tosoh's Organic Chemicals Division.

In Japan, the growing use of eco-cement and the conversion to urban mining methods to recover nonferrous metals from molten fly ash have hampered domestic sales of Tosoh's heavy metal chelating agents. The company's incinerator waste treatment agents likewise are experiencing lower domestic demand amid heightened environmental conservation efforts that generate less waste. A growing emphasis on product price rather than functional quality also has contributed to a downward trend in the domestic market.

Tosoh's domestic hydrocarbon-based and nonflammable cleaning solvents market contracted about 20% during fiscal 2013 because of the continued recession. Other negative factors in the market included slow growth in new demand because of postponed capital investment.

Developments

Tosoh has decided to terminate sales of its bromine-based NFS series of cleaning solvents. The decision comes amid the increasing replacement by industry of such solvents with more environmentally friendly substitutes. Sales of the NFS series are scheduled to end December 31, 2013. As an alternative to the NSF series, Tosoh is launching its recently developed HA-IS16 cleaner. HA-IS16 is an environmentally friendly, non-halogen, nonflammable cleaning solvent offering superior cleansing, drying, recovery, and safety properties.

Strategies and Outlook

Tosoh's long-term eco-business strategy is twofold. The company will continue to make piperazine-based agents its core environmental product line and will reinforce its competiveness in the environmental and recycling market and "top-of-the-line" brand category. Tosoh will seek to maintain its reputation as a manufacturer of high-performance hydrocarbon-based (HC series) and nonflammable (HA series) cleaning solvents.

To cope with a contracting domestic market for its eco-business products and services, Tosoh is turning to China and other Asian countries for growth. Chinese regulations are driving growth in trash incineration, and China's heavy metal chelating agent market is set to grow in the medium term to deal with the large increase in fly ash production in that country.

The company will continue to make piperazine-based agents its core environmental product line and will reinforce its competiveness in the environmental and recycling market and "top-of-the-line" brand category.

In fiscal 2014, Tosoh will focus on developing and launching products in the environmental and recycling markets. The company plans to use exhibitions, demonstrations, testing programs, and other methods to promote its high-performance HC series domestically and overseas. Tosoh will also build a demonstration center where it will promote the HA series and collaborate with cleaning system manufacturers in promotions. The new demonstration center is expected to support new product development efforts focused on shower- and flux-grade cleaning solvents.

ORGANIC ELECTROLUMINESCENCE MATERIALS

Tosoh entered the electroluminescence (EL) materials market in fiscal 2011. The company has offset its late entrance into the market by offering products that are exceptionally bright, long-lived, durable, and low in energy requirements. Electron transport materials and hole transport EL materials are made from amine chemical compounds.

Tosoh's strategy for EL materials began with the production of EL materials for digital signs and for lighting. The next step is to move into the rapidly expanding market for the organic EL panels used in displays for mobile phones, televisions, and other devices.

Performance and Markets

During the fiscal year under review, the global EL materials market continued its rapid expansion and was again dominated by Korean manufacturers. In scale, the hole transport layer (HTL) materials market totaled about 20,000 kilograms, while the electron transport layer (ETL) materials market grew to 4,000 kilograms.

Strategies and Outlook

Tosoh will continue to accelerate its development of high-quality products to differentiate itself in the global marketplace. Because of Korea's dominance in EL materials, we established an organic EL project team in October 2012 to promote our products to the Korean market. Domestically, Tosoh is steadily expanding its business in the digital sign and lighting market and monitoring

ORGANIC CHEMICALS

Products *Brand Names*	Capacity (MTY*)	Markets Served	Applications
Ethyleneamines and derivatives	71,000	Europe, Asia, NA	Asphalt additives, oil and fuel additives, chelating agents, plastic lubricants, anticorrosion agents, polyamide resins, drainage aids, rubber-processing additives, pharmaceuticals, surfactants, epoxy-curing agents, textile additives, fabric softeners, urethane chemicals, hydrocarbon purification, wet-strength resins for paper, mineral processing
Methylene diphenyl diisocyanate	400,000		Polyurethane
Polyurethane catalysts *TEDA, Toyocat®*		Europe, Asia, Japan, NA, SA	Flexible, semirigid, and rigid polyurethane foams; elastomers
Bromine	24,000	Japan	Pharmaceuticals, photosensitive materials, dyes
Hydrobromic acid		Asia, Japan	Organic intermediates, pharmaceuticals, photosensitive materials, dyes, lithium bromide, terephthalic acid
Flame retardants *FLAMECUT®, 110R®, 120G®*		Asia, Japan	Plastics, fabrics
Chelating agents *TS-275, TX-10*		Japan	Systems for removing heavy metals and other pollutants from water
Solvents		Europe, Asia, Japan, NA	Cleansing agents for electronic components, metals, and other items
High-purity ethylene dichloride		Asia, Japan	Pharmaceuticals, agricultural chemicals
2,2,2-Trifluoroethanol		Europe, Asia, Japan, NA	Pharmaceuticals, agricultural chemicals
Organometallic reagents		Asia, Japan	Pharmaceuticals, electronics
Sodium styrenesulfonate		Europe, Asia, Japan, NA	Dye-improving agents for acrylic and polyester textiles, industrial and electronic applications
Organic brominated compounds		Europe, Asia, Japan, NA	Pharmaceuticals, agricultural chemicals
Alkyl aluminums		Asia, Japan	Polyethylene, polypropylene, synthetic rubber

*Metric tons per year

Japanese TV manufacturers' plans to break into the EL market.

ADVANCED MATERIALS

Tosoh established the Advanced Materials Division within its Specialty Group in June 2010 to capitalize on Tosoh Group strengths in advanced inorganic materials through more focused management and development. In February 2012, the company followed suit with announcements of production capacity expansions in Japan of major advanced materials product categories.

The Advanced Materials Division's zirconia powders, zeolites, electrolytic manganese dioxide (EMD), sputtering targets, and quartz and quartzware products have excellent reputations around the world. And the high-tech and niche markets where these products are applied offer ample room for growth. The division's product development and marketing strategies concentrate on markets where Tosoh has a clear competitive edge.

Strategies and Outlook

In fiscal 2013, Tosoh substantially strengthened its advanced materials operations. We boosted our domestic production capacities in various product areas to take advantage of strong growth opportunities arising from evolving industries and changing standards globally. Tosoh also continued to implement cost reduction and additional strategies to ensure its competitiveness in niche and other markets.

ZIRCONIA AND ZEOLITES

Tosoh is the world's leading supplier of yttria-stabilized zirconia (YSZ). This product offers the functionality of conventional ceramics but lacks their brittleness and is commonly referred to as ceramic steel.

We boosted our domestic production capacities in various product areas to take advantage of strong growth opportunities arising from evolving industries and changing standards globally.

Zirconia's properties make it a standard material in fiber-optic connectors. The superior functionality of zirconia powers a stream of applications in fuel cell components, automobile oxygen sensors, dental applications, and other products. Tosoh works with customers to develop those applications. We have, in fact, expanded our product lineup for this versatile ceramic to include powdered and colored grades, injection molding compounds, and machined components.

Tosoh's synthetic zeolite products, meanwhile, feature superior catalytic and adsorbent properties. Our high-silica zeolite (HSZ) series boasts high thermal and acid stability and, as a main catalyst product line, has helped to enlarge our position in specialty materials globally. HSZ series products are popular as

ADVANCED MATERIALS

Products *Brand Names*	Capacity (MTY*)	Markets Served	Applications
Zirconia		Europe, Asia, Japan, NA	Ceramics for optical-fiber connectors, mechanical components, electronic components, wristwatches, grinding media, dental applications
Electrolytic manganese dioxide	64,000	Europe, Asia, Japan, NA	Dry cell batteries, soft ferrites
Manganous manganic oxide *Brownox®*		Europe, Asia, Japan, NA	Ferrites, thermistors
Zeolites		Europe, Asia, Japan, NA	Molecular sieves, automotive catalytic converters, other catalytic applications

*Metric tons per year

materials that go into petroleum-refining catalysts for hydrocracking, isomerization, and dewaxing; in petrochemical catalysts for alkylation and isomerization; in removers of VOCs; and in catalyst components for cleaners of automobile exhaust.

Our Zeolum line of zeolites features molecular sieves of varying grades. Each has powerful specific adsorption properties. Zeolum sieves are suitable for drying, purifying, and separating a wide variety of feedstocks. Zeolum NSA, for example, is a lithium, LSX-type zeolite that we recently introduced. It utilizes heightened aluminum content to achieve high nitrogen adsorption. This makes Zeolum NSA especially suitable for use in oxygen pressure swing adsorption (PSA) systems. Tosoh strives to develop zeolite products that meet all of its customers' adsorption, separation, and purification requirements.

The popularity particularly of Tosoh's zirconia and HSZ has compelled the company to significantly increase production capacity for these high-performance materials—in 2009, and again in 2013. Our most recent expansion of HSZ production at the Nanyo Complex, announced in May 2013, puts production firmly in place at our two main Japanese complexes and reduces the risk of supply interruptions. Tosoh's total annual production capacity for zirconia and for HSZ continues to increase to meet growing demand. We will continue to expand our production capacity to stay abreast of surging demand.

Performance and Markets

Tosoh's shipments of zirconia increased in fiscal 2013 following the company's expansion of production capacity in fiscal 2012. The major uses for the product were in dental materials and grinding media.

The dental market is a leading user of zirconia products, chiefly for crowns, bridges, and other appliances. Globally, Tosoh has positioned itself advantageously in the market with a translucent grade of zirconia. The product is ideally suited for use in front teeth and in teeth-whitening treatments because of its superior cosmetic qualities.

In fiscal 2013, world markets again demonstrated strong demand for high-silica zeolites for use in the catalytic converters of automobile emission systems. HSZ sales were thus up. Governments worldwide are intent on raising automobile emission standards, so high-silica zeolites seem likely to remain a high-growth market in the medium term. Demand, moreover, is broadly based in different product lines. In advanced countries, stricter standards will heighten demand for NOx-reducing catalysts. Rising emission standards in developing countries will raise demand for zeolites for cleaning automobile emissions.

Strategies and Outlook

Tosoh is well positioned to continue the expansion of its zirconia operations. We are developing increasingly durable and colored decorative fine ceramics for use in smartphones, luxury watches, and automotive interior components. We also are preparing the way for heightened sales of zirconia for dental uses by introducing new products, such as translucent and colored materials, that differentiate us in the market. We are, in short, staying ahead of the competition by remaining aware of such important concerns as obtaining stable supplies of raw materials, reducing manufacturing costs, increasing production capacity as necessary, and introducing new types of fabricated products.

Tosoh is expanding its line of HSZ products to meet rising demand from the automotive, oil and energy, and environmental industries.

In our zeolite operations, we are targeting growth through a strategy that shifts our domestic production toward more high-performance products. We are ensuring, for example, that our molded zeolite product line encompasses more than just molecular sieves and includes HSZ products. In addition, Tosoh is expanding its line of HSZ products to meet rising demand from the automotive, oil and energy, and environmental industries. We intend overall to put in place world-class HSZ production capacity to meet market needs.

ELECTROLYTIC MANGANESE DIOXIDE

Tosoh is the world's largest producer of EMD for batteries. EMD is a basic raw material used in the manufacture of primary batteries and of cathodes for rechargeable batteries.

In February 2012, Tosoh announced its development of technology to produce chemical manganese oxide (CMO). The new technology allows the production of a basic raw material for batteries that is more uniform and has fewer contaminants than EMD. The chemical process allows control of the particle formation and its size, eliminating the need for electrolytic cells and pulverizers. Such uniform and pure particles befit the needs of cathodes for lithium-ion secondary batteries for electric vehicles, where safety and high current discharge are required.

Tosoh Corporation has licensed its new production technology to its subsidiary Tosoh Hyuga Corporation. Tosoh Hyuga will use the technology to produce CMO and has built a plant with a 5,000-metric-ton annual capacity for that purpose. Tosoh plans to develop advanced grades of CMO for the growing lithium-ion battery market.

Performance and Markets

EMD sales declined during the period under review, mainly because of inventory adjustments of dry cell batteries. In general, EMD shipment levels are declining because of changes in the dry cell battery market. The shift to energy-efficient light-emitting diode (LED) flashlights, for example, has resulted in a reduction in the use of large batteries. Similarly, the surge in the popularity of mobile phone games has put a significant dent in the dedicated handheld video game console market, reducing battery consumption.

The strong yen in the year under review, moreover, allowed EMD imports to gain market share in Japan. But that trend has reversed, and domestic EMD production is recovering. Overall demand for EMD is forecast to remain stable, albeit at the present low levels.

The shift to electric vehicles (EV) and plug-in hybrid vehicles (PHEV) is under way in the automotive industry. And Tosoh is taking steps to ensure its share of the surging market for rechargeable lithium-ion batteries, which are becoming increasingly important value-added components of automobiles and electronic products. We have ramped up our R&D activity in this respect and are focused on launching materials for application in this market.

Strategies and Outlook

Tosoh intends to establish itself as a major producer of manganese-based cathode materials. Our product lines will encompass EMD and CMO for the dry cell and secondary battery markets. And we plan to grow globally, beginning by expanding beyond our two EMD production bases in Japan and Greece. We must, though, attend to such crucial issues as how to meet the needs of customers with facilities overseas and how to compete with Chinese manufacturers.

In the short term, Tosoh will take advantage of the yen's depreciation to recapture its domestic EMD market share from imports while aggressively pursuing exports. Long term, we will continue to position ourselves in the steadily expanding EV and PHEV markets. Our efforts in this regard include plans to expand our second- and third-stage CMO production capacity and to develop improved grades of CMO and other next-generation cathode materials.

In the short term, Tosoh will take advantage of the yen's depreciation to recapture its domestic EMD market share from imports while aggressively pursuing exports.

THIN FILM MATERIALS AND QUARTZ

Tosoh's efforts on the high-tech frontier are similarly adventuresome. We are constantly developing new products and solutions to provide to the world's high-growth semiconductor, flat-panel display (FPD), photovoltaic (PV), and materials markets.

Our thin film materials lineup, which consists primarily of sputtering targets, includes many products used by semiconductor, FPD, and PV fabrication facilities. And our integrated quartz, or silica glass, business supplies photomasks, substrates, and other parts and materials to the world's major semiconductor and optical markets and to its many niche markets.

Tosoh has an integrated chain of electronic materials manufacturing and marketing bases in Japan, Taiwan, South Korea, Singapore, China, the United States, and the European Union. This supply and customer services network ensures that our products meet customer specifications and delivery needs globally. It also strengthens our ties with the world's leading semiconductor, FPD, and PV makers. Those relationships enable us to work with customers on next-generation products.

ELECTRONIC MATERIALS

Products	Markets Served	Applications
Silica glass	Europe, Asia, Japan, NA	Production systems for semiconductors and LCDs, electronic components
Sputtering targets	Europe, Asia, Japan, NA	Manufacturing of semiconductor devices, photovoltaic cells, flat-panel displays
High-purity organometallics	Europe, Asia, Japan, NA	Lasers, flat-panel displays, semiconductor devices, solar battery electrodes

Tosoh is developing technologies for such next-generation products as 22-nanometer and smaller node-level IC chips and large FPDs. We are also focusing on products for space optics, energy conservation, and quartz microchips for biomedical applications that are unaffected by the semiconductor cycle.

We plan to maximize the profits from our quartz products by giving preference to markets where we have an advantage.

Other of our efforts include the following. We are developing an oversized quartz ingot for ultralarge FPDs. We are commercializing chemical vapor deposition (CVD) and low-temperature coating technologies for thin film products for semiconductor applications. And we are developing cylindrical target materials for use in transparent electrodes for FPDs and in photovoltaic power generation systems for supply to the rapidly expanding solar energy market.

Strategies and Outlook

We are positioning our thin film material operations for growth. Tosoh is working to establish its line of products for 300-millimeter wafer manufacturing while building a base in the 450-millimeter wafer market. Our strategies involve working with customers from the R&D stage onward, expanding the range of materials that we manufacture in volume, and developing and commercializing advanced materials for state-of-the-art transistors and memory chips.

To support our efforts, we are developing facilities at Tosoh SMD Shanghai Co., Ltd. This sputtering target manufacturing subsidiary in Shanghai, China, expanded US-based Tosoh SMD, Inc.'s global capacity for procurement and supply. It also is helping to build the semiconductor, FPD, solar, and large-area coating markets in China.

We continue, meanwhile, to maintain a high pace of development. This is necessary to meet the increasing demand for special properties in our sputtering targets from the solar cell, tablet and smartphone, touch-panel, organic EL display, and other rapidly growing markets. Manufacturers are searching for lighter, more flexible, and higher-quality materials to fuel their product development. In addition, there is an increasing call for "green" energy sources. We are responding by concentrating on marketing our new indium tin oxide (ITO) and zinc aluminum oxide (AZO) lines and our cylindrical sputtering targets.

We plan to maximize the profits from our quartz products by giving preference to markets where we have an advantage. In the fused silica glass market, we are expanding sales of cost-competitive transparent components and materials. We also are focusing on improving the properties of our opaque components and materials. Our fabricated quartzware operations are preparing to start the commercial production of our offerings for 450-millimeter wafer manufacturers.

In the optical market, increasing demand for diagnostic equipment in China and other markets is driving growth in demand for original equipment manufacturing (OEM) quartz cells. Tosoh is taking steps to further improve its manufacturing technology and to expand its production capacity to meet that demand. The specialty optical quartz market is a focus at Tosoh. Our aim is to differentiate our large, highly homogenous products and enter high-value-added sectors of this market, such as for laser-driven nuclear fusion and optical equipment.

BIOSCIENCE

Tosoh is a world leader in high-performance liquid chromatography (HPLC) systems, analytical columns, and separation media. We furnish sophisticated diagnostic systems that enable quick and accurate results. Tosoh, in fact, is among only a handful of companies worldwide developing, manufacturing, selling, and providing customer support and maintenance services for medical instruments, analytical columns, separation media, and diagnostic reagents.

Tosoh's diagnostic systems feature advanced immunoassay technologies that support the monitoring of such life-threatening diseases as diabetes, certain cancers, and microbial infections. They also feature integrated essential hardware and software and uncompromising value through global customer support that includes ensuring the ready availability of the systems' consumable items.

We have positioned our bioscience product lines in markets globally through multifaceted strategies. Using internal growth, acquisitions, and strategic alliances, we have established a worldwide sales and service network and acquired access to cutting-edge technologies in fields such as genetic diagnostics. Our bioscience network spans Japan, Europe, and the United States and is expanding into China, India, and other Asian markets. It serves four global markets: separation products, clinical HPLC systems, immunoassay systems, and molecular testing.

In Japan, Tosoh is the top supplier of analytical columns based on sales of its TSK gel HPLC analytical columns, which are also popular worldwide. We have succeeded in building a dominant position in the competitive domestic market for gel permeation chromatography (GPC) and for ion chromatography (IC) products and are extending sales of our GPC products overseas.

Strong global demand has long driven growth in sales of Tosoh's Toyopearl separation media.

Leading biopharmaceutical companies in the United States and Europe are long-term Toyopearl customers, and a growing customer base is emerging in developing countries, including China and India, among others.

The growing market worldwide for our automated immunoassay (AIA) analyzers is rooted in our proprietary technology. Our freeze-drying technology has facilitated our production of sophisticated, fast, easy-to-use, highly sensitive, and extremely precise analyzers, which are in demand. Our range of products includes the AIA-2000, the AIA-900, and the AIA-360. The top-of-the-line AIA-2000 can run 200 tests per hour. The more flexible AIA-900 runs only 90 tests per hour but is available in three models, which allows customers to choose the best fit for their operations now and in the future. As their operations grow, customers have the option of increasing automation capacity just by adding a larger tray reagent sorter.

The International Diabetes Federation (IDF) has forecast that 1 in 10 adults globally will have diabetes by the end of 2030. Supporting the fight against the rapid spread of diabetes mellitus is a major goal of Tosoh's bioscience operations. Tosoh has become a global leader in the automated glycohemoglobin (GHb) analyzer market. We are focused on building a customer base for our analyzers—the HLC-723G9, sold in Japan, and the HLC-723G8, sold abroad—and their requisite consumables. We have also begun selling the HLC-723GX in Europe and Southeast Asia.

Tosoh has launched a compact TRC Rapid-160 real-time fluorescence monitoring system and a transcription reverse transcription concerted reaction (TRC) reagent in the nucleic-acid amplification testing (NAT) market. The company has also introduced a product that tests for food poisoning and a reagent to test for bacteria that cause tuberculosis.

Using internal growth, acquisitions, and strategic alliances, we have established a worldwide sales and service network and acquired access to cutting-edge technologies in fields such as genetic diagnostics.

Performance and Markets

Reflecting growing demand globally, the major product lines of our bioscience operations—separation, clinical HPLC, immunodiagnostics, and molecular testing products—posted solid performances in fiscal 2013. Separation product sales were especially robust in liquid chromatography packing materials. Immunodiagnostic product sales continued to expand and accounted for the majority of bioscience sales.

Tosoh has enjoyed strong growth in sales of its AIA systems, but the company has only scratched the surface of the massive global bioscience market. With markets surging in many countries around the world, Tosoh is targeting substantial additional growth for its AIA systems. The markets in China and India are especially attractive and have allowed us to post high, double-digit growth in AIA system sales for some time now.

BIOSCIENCE

Products	Markets Served	Applications
Automated immunoassay systems	Europe, India, Asia, Japan, NA	Medical diagnosis
High-performance liquid chromatography	Europe, Asia, Japan, NA	Chemical and pharmaceutical analysis
Chromatographic separation media	Europe, Asia, Japan, NA	Pharmaceutical development and manufacturing
Automated glycohemoglobin analyzers	Europe, Asia, Japan, NA	Diabetic screening and monitoring
Molecular testing systems	Europe, Japan	Medical diagnosis, pharmaceutical development, food analysis

Separation products and HPLC systems again contributed strongly to bioscience sales. We maintained our leadership position in Japan's market for GPC separation systems.

Strategies and Outlook

Tosoh's vision for its bioscience operations is to be a global player with a major market presence. Our presence in many overseas markets remains undeveloped. To achieve status as a global player, the Tosoh Group is striving to be more competitive in all aspects of its business, including technology, quality guarantees, marketing, and customer support.

Our immediate-term focus in our separation operations is on the biomedical field, to which we intend to expand sales of separation columns and Toyopearl. We will gradually shift our line of columns to ultrahigh-performance liquid chromatography (UHPLC) products, which are rapidly becoming mainstream. Our R&D efforts will also aim at the evolution of GPC and IC systems that exceed customer expectations.

Over the next five years, we will concentrate our marketing efforts on capturing a 20% share of the global GPC market. Tosoh holds an approximately 90% share of its domestic GPC market but has yet to establish a significant presence in GPC markets overseas. We plan likewise to develop IC markets in China and other Asian countries. Our aim in our column business is to attain top market shares for our SW, ion-exchange, and hydrophobic interaction columns in bio-related fields. To do so, we will take advantage of our new SW products for antibody processing. Our recent expansion of our Toyopearl production capacity, meanwhile, should support our marketing goal of winning 10% of the global separation media market.

Our immediate-term focus in our separation operations is on the biomedical field, to which we intend to expand sales of separation columns and Toyopearl.

We are similarly preparing for further growth in our diagnostic operations. Over a five-year span, we will introduce new reagents for atrial natriuretic peptide (ANP) and other testing. We will also continue our efforts to market our B-type natriuretic peptide (BNP) diagnostic reagent in the United States and in countries in Europe and Asia. In addition, we will increase our range of panels for contagious diseases, a rapidly growing market.

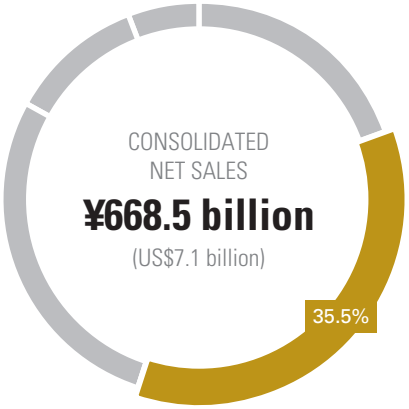
And we will continue to expand our diagnostic product lines for measuring and supporting the treatment of diabetes. This will heighten our contribution to diabetes patient care.

CHLOR-ALKALI GROUP

The Chlor-alkali Group operates the largest fully integrated manufacturing capacities of their kind for chemical commodities in Asia. It supplies global industry with the raw materials for a vast array of products that enrich people's lives. Because of the close proximity of its core operations to Asia's growing markets, the Chlor-alkali Group is well-positioned to take advantage of opportunities throughout Asia.

Manufacturers around the world count on Tosoh and its Chlor-alkali Group to support their operations with stable supplies of raw materials. We fulfill our responsibility to maintain stable supplies of commodities to world markets and to our own group operations globally with a focus on keeping costs down and on market movements.

The Chlor-alkali Group's operations thrive on the synergies afforded by Tosoh's vinyl isocyanate chain. Those operations exemplify the cooperation among companies inside and outside the Tosoh Group that bolsters the company's competitiveness and makes it a valued partner of industry. Tosoh Group companies and their suppliers work to make and to provide the Chlor-alkali Group's products to growing markets in Asia and beyond.



CHLOR-ALKALI GROUP
¥237.3 billion (US$2.5 billion)

CHLOR-ALKALI GROUP
-¥1.6 billion (-US$17.1 million)

Note: The operating loss is not shown above.

BASIC CHEMICALS

The basic chemicals that fuel the Chlor-alkali Group's commodity and specialty businesses arise from an integrated process that begins with the electrolysis of salt to obtain chlorine and caustic soda. This reaction is the basis for the manufacturing of five principal chlor-alkali products: caustic soda; vinyl chloride monomer (VCM); polyvinyl chloride (PVC) resins; calcium hypochlorite; and sodium bicarbonate.

Caustic soda, or sodium hydroxide, is used in producing sodium compounds, such as sodium bicarbonate, or baking soda. It also finds application in the manufacture of rayon, pulp and paper, alumina, soaps and detergents, textiles, and vegetable oils. Tosoh employs its jointly owned bipolar ion-exchange membrane technology (BiTAC) in combination with the economies of scale afforded by its operational infrastructure and expansive operations to supply the vital basic chemical caustic soda competitively to the Asian market.

VCM is a colorless gas and a building block for PVC, which is used in pipes and other building materials. Tosoh accounts for more than 35% of Japan's VCM production and is the domestic leader in PVC resins, accounting for one-fourth of the national output. With Tosoh considering expansions to its PVC production facilities in China and the Philippines, the potential need for VCM by the Tosoh Group rises substantially. The company, therefore, has taken steps to clear a bottleneck in its VCM production at the Nanyo Complex caused by the oxychlorination process used to increase the yield of VCM from ethylene dichloride (EDC). The implementation of an improved oxychlorination process is scheduled to be completed in October 2013.

In fiscal 2013, moreover, Tosoh decided to expand capacity at its Nanyo Complex No. 3 Vinyl Chloride Plant instead of rebuilding the No. 2 Vinyl Chloride Plant severely damaged in the fire and explosion of November 2011. Scheduled for completion in October 2014, the expansion will add 200,000 metric tons of VCM per year. Restored VCM capacity will also benefit the company's electrolysis operations, which have been operating at excess capacity. Based on its capacity expansions, Tosoh expects to return to full production in its VCM and electrolysis operations in 2015.

Tosoh, meanwhile, markets its Chlor-alkali Group's calcium hypochlorite overseas under the brand name Niclon. This product is used for sterilizing and disinfecting swimming pools and drinking water. It also is used in sewage treatment systems. The group's sodium bicarbonate likewise is widely used, in food products, animal feeds, bath additives, and pharmaceuticals.

TOSOH'S FULLY INTEGRATED VINYL ISOCYANATE CHAIN

The Vinyl Isocyanate Chain's Chemical Manufacturing Processes

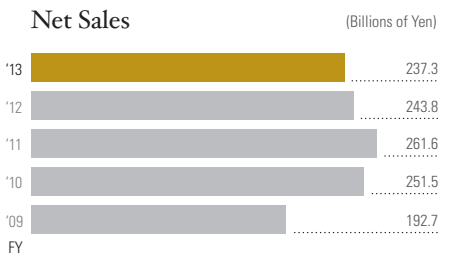
The array of chemical processes that form the vinyl isocyanate chain yield a wide range of feedstocks. The vinyl chain begins with the electrolysis of salt to generate chlorine and caustic soda. Ethylene is then reacted with some of the chlorine to produce EDC. The remaining chlorine is used to manufacture additional chlorine derivatives. The EDC, meanwhile, is combined with caustic soda to produce ethyleneamines, a major Tosoh product, and is converted to VCM, which, in turn, is converted into PVC resins.

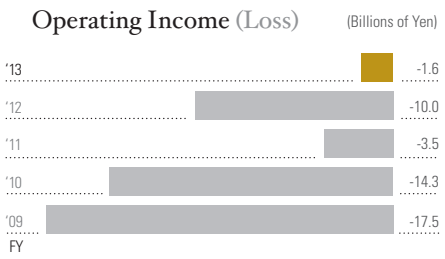
Tosoh has expanded its vinyl chain to include the isocyanate chain by supplying chlorine and other raw materials for the production of isocyanates. Downstream processes subsequently generate hydrogen chloride, a by-product of isocyanate production that is then pumped back to Tosoh for processing into more EDC for conversion into VCM.

Group Performance and Markets

Net sales for the Chlor-alkali Group were ¥237.2 billion (US$2.5 billion), a decrease of 2.7% from fiscal 2012. The group accounted for 35.5% of Tosoh's consolidated net sales in fiscal 2013, the same as a year earlier. The principal factors behind the deterioration in performance were the downturns in global markets and the continued strong yen, compounded by the disruption in domestic sales and in exports of various product lines because of the November 2011 accident at the Nanyo Complex. The Chlor-alkali Group recorded an operating loss of ¥1.6 billion (US$17.1 million) in fiscal 2013, improving by ¥8.4 billion from fiscal 2012.

The Chlor-alkali Group continued in fiscal 2013 to be troubled by the negative trends of the past five years. These include excess competition, a strong yen, the difficulties of passing on the rising cost of ethylene, and a shrinking export market to China. The group also had to deal with the lingering effects of the accident at the Nanyo Complex and with slowdowns in economies around the world for most of fiscal year 2013.





Tosoh is positioned as a major player in chlor-alkali internationally and is a dominant player in Asian markets.

Our domestic shipments of caustic soda declined in fiscal 2013 because of the limitations placed on our electrolysis operations by the lower production levels of VCM and falling demand in Japan. Overall caustic soda shipments, however, approximately matched those of the previous fiscal year because of growth in exports. Sales were also about the same because the group increased its domestic caustic soda prices and because caustic soda prices rose overseas.

Domestic and overseas shipments of VCM and PVC resin fell because of the accident at the Nanyo Complex's No. 2 Vinyl Chloride Monomer Plant. In addition, VCM and PVC prices softened overseas.

Tosoh is positioned as a major player in chlor-alkali internationally and is a dominant player in Asian markets. In addition to being able to offer a full line of chlor-alkali products, the company has built a strong reputation for stable supply because of its ability to maintain cost-effective operating rates by adjusting exports and domestic supplies.

The company, however, faces stiff competition in its principal chlor-alkali markets at home and abroad. Domestically, Tosoh competes with 25 other companies with electrolysis facilities. Overseas, China accounts for approximately 40% of global salt electrolysis and PVC production capacity and is rapidly emerging as the main player in chlor-alkali. China's use in particular of the carbide method for PVC production has led to a deterioration of PVC prices. High electric power rates and raw material prices in China, though, have eroded the advantages of the carbide production method.

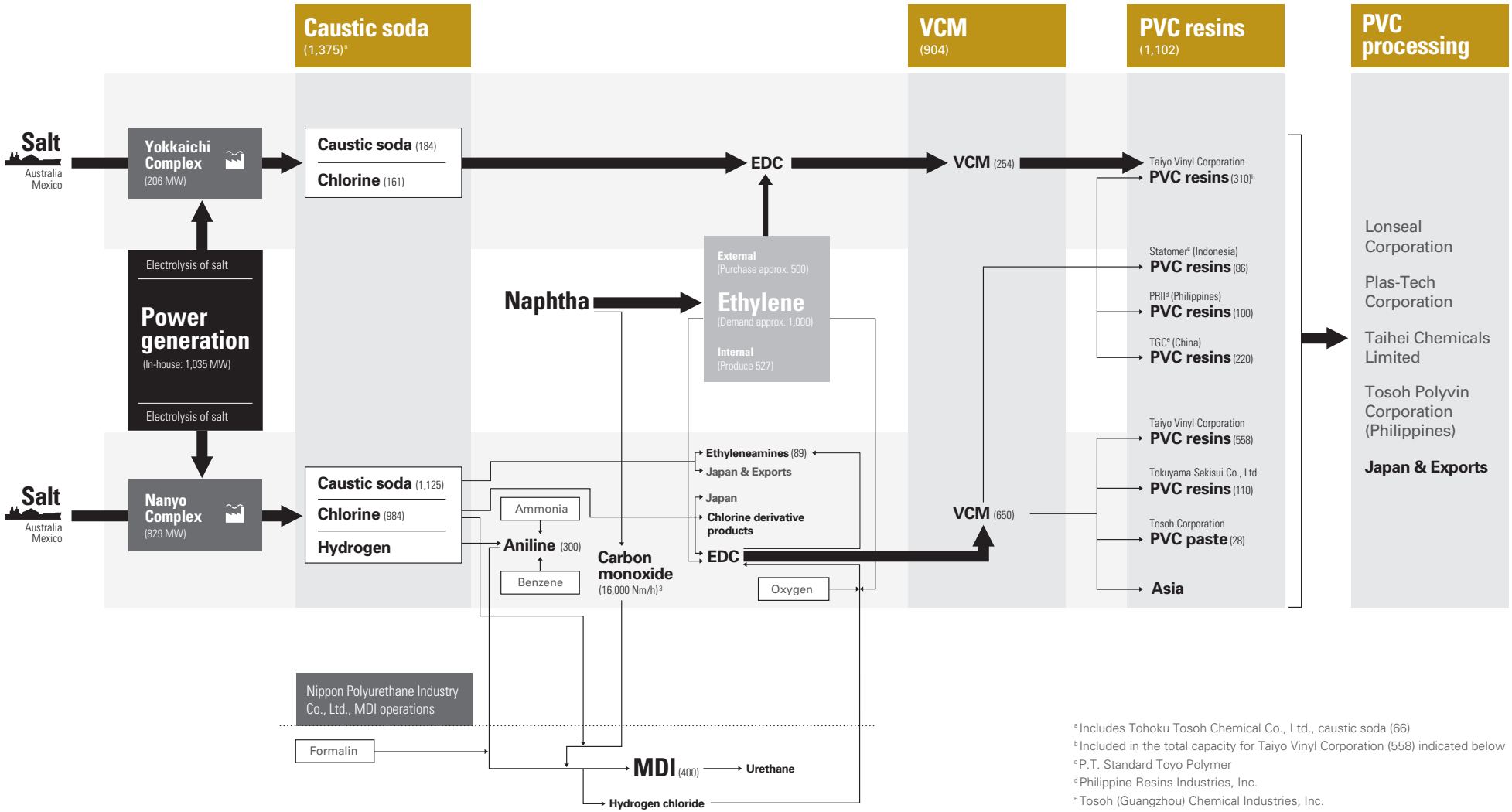
The long-term forecast for such of Tosoh's main products as caustic soda and PVC is for inevitable growth in demand throughout Asia. This is especially true for India and China.

Developments

At the end of 2013, Tosoh chose to expand the VCM production capacity of its No. 3 Vinyl Chloride Monomer Plant at the Nanyo Complex by 200,000 metric tons. The expansion will bring Tosoh's annual VCM production capacity to 1,100,000 metric tons. It will result in increased production and sales

TOSOH FULLY INTEGRATED VINYL ISOCYANATE CHAIN

As of July 2013
Units: 1,000 metric tons



[a] Includes Tohoku Tosoh Chemical Co., Ltd., caustic soda (66)
[b] Included in the total capacity for Taiyo Vinyl Corporation (558) indicated below
[c] P.T. Standard Toyo Polymer
[d] Philippine Resins Industries, Inc.
[e] Tosoh (Guangzhou) Chemical Industries, Inc.

of VCM and caustic soda and contribute to the greater profitability of the Tosoh Group's core operations, the vinyl isocyanate chain.

Tosoh explored various options for rebuilding its VCM capacity after the explosion and fire at the No. 2 Vinyl Chloride Monomer Plant eliminated that facility's annual VCM production capacity of 500,000 metric tons. The No. 3 Vinyl Chloride Monomer Plant was started up again in July 2012 following the accident. And the boost in its capacity will enable Tosoh to restore stability to its VCM supplies to Tosoh Group domestic and overseas PVC manufacturing and sales subsidiaries.

Likewise, the company will use the increased production to sell VCM directly to Asian markets. Another goal of this capacity expansion is to raise the operating rate of Tosoh's electrolysis operations, which have had excess capacity since the accident, and to sell more caustic soda. The capacity expansion should come onstream in October 2014.

Strategies and Outlook

Tosoh's strategy for its chlor-alkali operations seeks a complete recovery from the 2011 accident at the Nanyo Complex to achieve profitability. To that end, the strategy involves reviewing the efficacy of business-strengthening plans, supporting Nippon Polyurethane Industry Co., Ltd. (NPU)'s efforts to become profitable, establishing more independent and collaborative PVC operations among Tosoh's PVC subsidiaries, and stabilizing operations at Tohoku Tosoh Chemical Co., Ltd., in the aftermath of 2010's major earthquake and tsunami.

With VCM production on track for a recovery, Tosoh is more than ever focused on the overall profitability of its basic chemicals operations. We are scrutinizing ways to bring product prices in line with rising naphtha and other fixed costs and to shift our priorities to the most profitable domestic and overseas markets. Those markets have strengths and weaknesses that increase or decrease as exchange rates, market conditions, and technologies change.

With VCM production on track for a recovery, Tosoh is more than ever focused on the overall profitability of its basic chemicals operations.

Teamwork thus is necessary on our part, especially for such products as PVC that are produced by a group of subsidiaries. These subsidiaries must cooperate in expanding markets while keeping their own houses in order to ensure profitability. Our goal for our VCM and PVC operations is to provide stable VCM supplies to our PVC manufacturing subsidiaries while maximizing profits. That involves strengthening domestic sales and seeking sales opportunities abroad in such markets as Indonesia and India. China, as indicated earlier, has become a difficult market characterized by the growing use of the carbide method to produce PVC.

As our electrolysis operations regain balance, we plan to increase sales of caustic soda domestically and overseas by upping shipments and pushing for price corrections. Ample

CHLOR-ALKALI CHEMICALS

Products *Brand Names*	Capacity (MTY*)	Markets Served	Applications
Caustic soda	1,375,000	Asia, Japan	Aluminum, paper, numerous other products
Vinyl chloride monomer	904,000	Asia, Japan	Polyvinyl chloride
Polyvinyl chloride resins	1,102,000	Japan	Numerous plastic products
Calcium hypochlorite *Niclon®*	10,080	Europe, Asia, Japan	Water treatment
Sodium bicarbonate		Asia, Japan	Food processing, animal feeds, bath additives, pharmaceuticals

*Metric tons per year

opportunities remain for caustic soda sales in Australia, Southeast Asia, and North America over the medium term. We are also exploring methods of expanding our sales of hypochlorate, sodium bicarbonate, and sodium sulfate.

Longer-term concerns include controlling the rising per kilowatt cost of our independent electric power generation facilities amid soaring commodities costs globally. The environmental taxes on fossil fuels being implemented in Japan in step-up stages over the next few years present a challenge to competitive electric power costs at Tosoh.

Among the strategies Tosoh is considering to raise its competitiveness is the expansion of its operations overseas. This strategy offers the advantages of reducing transportation costs and minimizing foreign exchange risk, so Japanese manufacturers are moving overseas. Our target markets will be downstream derivative products, such as PVC, methylene diphenyl diisocyanate (MDI), ethylene, and chloroprene rubber.

METHYLENE DIPHENYL DIISOCYANATE AND HEXAMETHYLENE DIISOCYANATE

MDI occupies a unique position among Tosoh's product lines and is of significance for the company's commodity and specialty operations. This isocyanate is a raw material for polyurethane and a fine chemical with an array of uses in organic synthesis. It also has marketing synergies with Tosoh's diverse product lines, including organic synthesis compounds, polyurethane catalysts, and specialty polymers. MDI is used to produce a variety of products: thermal insulation for buildings and equipment; cushioning and paneling for automobiles; and packaging, sealants, and sporting goods.

Tosoh recognized the growing importance of MDI and its links to the company's vinyl chain in the mid-2000s. Between 2004 and 2005, therefore, the company added production facilities for aniline and carbon monoxide, two raw materials for MDI. Tosoh also increased its equity stake in MDI and polyurethane maker NPU, to 51% in 2006 and to 80% in 2008, before converting NPU to a wholly owned subsidiary in July 2012. These measures converted Tosoh's vinyl chain to a vinyl isocyanate chain.

By the end of 2007, NPU had substantially increased its annual production capacity for its core product, MDI. Demand, however, fell shortly thereafter because of rising global MDI production and a downturn in the global economy, and this compelled NPU to begin developing a lineup of higher-priced and more profitable products. NPU, for example, bolstered its rigid polyurethane foam product lineup and developed new applications for another of its isocyanate chain products, hexamethylene diisocyanate (HDI). The subsidiary has developed a range of high-performance HDI-based paints and an HDI-based insoluble resin used as a surface coating for leather.

Our chlor-alkali and MDI operations are among the most integrated of the vinyl isocyanate chain. When demand for MDI and polyurethanes increases, NPU buys more raw materials from the vinyl chain operations. Projections show that demand for MDI is growing 8% annually in Asia, so this multiplier will become an ever more important driver of growth for Tosoh.

MDI occupies a unique position among Tosoh's product lines and is of significance for the company's commodity and specialty operations.

Performance and Markets

At the start of fiscal 2013, NPU's overseas markets for MDI were in a slump. Raw materials prices were rising, and the yen was strong. By year-end, however, export conditions had improved, with overseas markets recovering and the yen progressively weakening against other currencies. Profitability worsened, though, within NPU's domestic market amid heightened competition from imports and from domestic competitors.

NPU supplies MDI to polyurethane manufacturers in Japan and other Asian nations. In recent years, Tosoh and NPU have worked to increase NPU's MDI production capacity to 400,000 metric tons a year in anticipation of growth in demand, particularly in Asia. Oversupply and weak demand in a tough economic climate have altered the pace of demand growth, but Tosoh expects that MDI operations should reach full production in the medium term.

Our competitors, of course, also have MDI production capacity increases in the works. But no major additions in capacity are expected until fiscal 2015.

Strategies and Outlook

NPU's goal is profitability. But with no prospects of a full recovery in demand for MDI in the short term, NPU is seeking profitability by other means. It is developing value-added products and rationalizing its logistics. It is converting to a low-cost MDI production process that should be mostly in place by the end of fiscal 2014. It also is achieving growth in its domestic market share for the highly profitable functional urethane HDI.

NPU will also continue to solidify its dominance in the domestic polymeric market, where it holds a greater than 50% share. It will in addition continue to work on improving quality with monomeric that will support a higher price structure.

CEMENT

Tosoh makes three types of cement: ordinary portland cement, portland fly ash cement, and portland blast-furnace slag cement. Our cement plant is located at the Nanyo Complex, and all of the cement produced there is sold to Taiheiyo Cement Corporation, Japan's largest cement manufacturer.

Tosoh shifted to a one-kiln cement production system in fiscal year 2012 to reduce costs and improve efficiency.

Tosoh adds coal ash, a by-product of electrical power generation, and slag, emitted by blast furnaces, to its cement mixture. This enhances certain of its cement's properties, such as density and water resistance. Cement production, therefore, helps the company process waste and by-products from its other operations, giving cement production an important role in Tosoh's overall value chain.

Performance and Markets

Public- and private-sector demand for cement increased in fiscal 2013. A rise in the Chlor-alkali Group's domestic shipments of cement was attributed especially to high private-sector demand. The recovery efforts following the Great East Japan Earthquake underpinned much of that domestic demand.

Cement exports, though, continued to languish. Rising production and freight costs and increasing competition from cement makers in other countries put Tosoh at a disadvantage in export markets. And although overseas demand for cement remains firm, profit margins are low.

Tosoh's Cement Division nonetheless posted sales growth in fiscal 2013. And an increase in prices, a decline in coal costs, and other factors combined to push up the division's fiscal 2013 profitability.

Developments

Tosoh shifted to a one-kiln cement production system in fiscal year 2012 to reduce costs and improve efficiency. As a result, cement operations have operated at full capacity and full sales since then and expect to continue to do so for the immediate future. This production structure has contributed significantly to the Cement Division's greater profitability. Over the medium term, the division is focusing on achieving further profit gains through additional reductions in its fixed costs.

In fiscal 2014, we anticipate ongoing strong domestic demand for cement from rebuilding projects in the Tohoku region in the aftermath of the earthquake and tsunami there.

Strategies and Outlook

Our one-kiln cement production system is expected to yield additional savings in fixed costs through reduced maintenance expenses and lower labor and outsourcing costs. Our improved waste plastic processing capacity and operations should also contribute to operational profitability. We will increase our waste plastic processing toward the full capacity of our upgraded facilities over the medium term. In addition, we are continuing our efforts to conserve energy and to reduce our energy costs.

Performance, of course, is an important management target. But maintaining the important role our cement operations play in our recycling and environmental activities remains a top priority. The close relationship that we maintain with Taiheiyo Cement is crucial in that respect.

In fiscal 2014, we anticipate ongoing strong domestic demand for cement from rebuilding projects in the Tohoku region in the aftermath of the earthquake and tsunami there. Exports are also expected to expand after we increase our production to provide export quota portions that have not been available in recent years because of domestic demand.

CEMENT

Products	Capacity (MTY*)	Markets Served	Applications
Cement	2,900,000	Asia, Japan	Portland cement, portland blast furnace slag cement, portland fly ash cement

*Metric tons per year

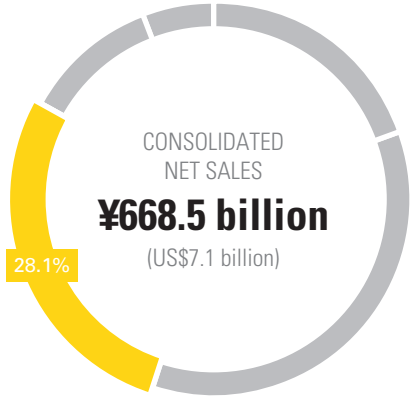
PETROCHEMICAL GROUP

The challenge faced by Tosoh's Petrochemical Group is the pursuit of growth amid constantly increasing global petrochemical production capacity. The group targets growth by remaining competitive based on reducing its production costs and on moving its products upstream.

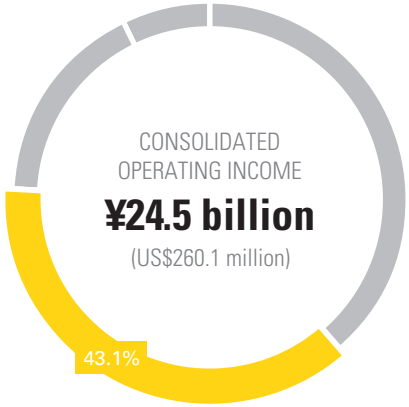
Product line diversification is another way the Petrochemical Group strives for growth. Its high-performance laminates for photovoltaic cells and its popular specialty items balance Tosoh's more traditional product lines for medicines, clothing, mobile device components, automobile parts, building materials, food packaging, paints, and more.

The Petrochemical Group is at the heart of Tosoh's operations. It supplies roughly half of the ethylene Tosoh requires for its vinyl isocyanate chain and polyethylene operations. And the group aims to provide the approximately 500,000 metric tons of ethylene that it manufactures in-house annually at a cost that keeps other petrochemicals competitive in the market. It achieves that goal in part through flexible feedstock strategies.

A secondary challenge for the group is to manage its product mix to take advantage of or to compensate for continually changing market demand.



PETROCHEMICAL GROUP
¥187.6 billion (US$2.0 billion)



PETROCHEMICAL GROUP
¥10.5 billion (US$112.1 million)

PROVIDING INDUSTRY WITH AN EXTENSIVE PORTFOLIO OF BUILDING BLOCKS

Tosoh began diversifying into petrochemicals in the late 1950s. The product line was a good fit with the company's other operations and with its mission to support the manufacturing industry and thereby fuel Japan's economic progress. We did not, however, enter the petrochemical market full scale until 1964 and the height of Japan's era of high economic growth.

It was in 1964 when one of our joint ventures began producing EDC, the main precursor for VCM. The wisdom of adding these building blocks of modern industry is obvious today. The Petrochemical Group accounts for around one-fourth of Tosoh's net sales and one-half of its operating profit.

Group Performance and Markets

The Petrochemical Group posted net sales of ¥187.6 billion (US$2.0 billion) in fiscal 2013, a 2.9% decline from a year earlier. The group's contribution to Tosoh's consolidated net sales remained the same as in fiscal 2012, at 28.1%.

Operating income for the group decreased ¥2.0 billion, or 15.6%, to ¥10.5 billion (US$112.1 million). This represented 43.1% of Tosoh's consolidated net operating income.

Shipments of ethylene, propylene, cumene, and other olefins contracted along with a falloff in demand. In addition, there were production declines at the start of the fiscal year because of scheduled plant maintenance.

Declining demand was also at fault for the low levels of polyethylene resin and chloroprene rubber shipments. Among other factors, the decrease in polyethylene resin shipments can be attributed to reduced shipments of ethylene vinyl acetate (EVA) copolymer caused by dropping demand for sealant film for solar cells and an increase in competitive imports. Faltering demand from Europe and Asia was responsible for declining shipments of chloroprene rubber.

OLEFINS

Tosoh and its customers use olefins to manufacture a broad array of products, from automotive additives to flavors and fragrances. The company has utilized its olefins feedstock to become an integrated manufacturer of hydrocarbon-based products and their derivatives. Major products in this category include ethylene, propylene, and cumene.

Ethylene is the precursor of polyethylene, from which springs the array of polymer

products manufactured by Tosoh. Propylene, in turn, is the precursor of polypropylene, a polymer that Tosoh applies broadly in such industries as packaging, textiles, and medical equipment. And cumene is generally converted to phenol, a key ingredient for the manufacture of phenolic resins, polycarbonate resins, and epoxy resins.

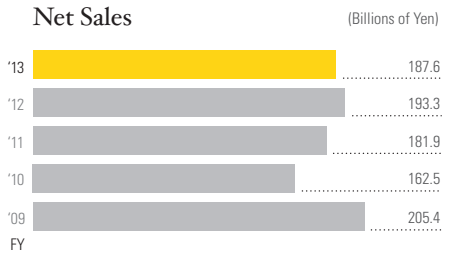
Olefin operations at Tosoh also include aromatic compounds. Benzene, for example, is a raw material for the cumene and aniline used in the Chlor-alkali Group's MDI operations. MDI is used as a raw material in the manufacture of polyurethane.

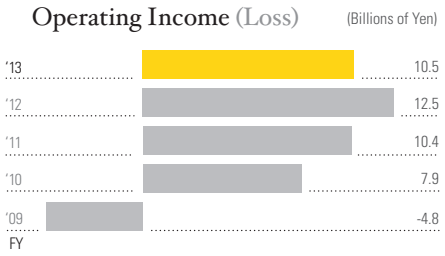
Since petrochemical manufacturing is primarily dependent on naphtha, the upswing in oil prices poses a threat to operational stability. The Petrochemical Group's response has been to implement a feedstock diversification strategy. That strategy includes reducing production costs by employing heavier naphtha grades, improving the recovery efficiency for spent C4 and C5 fractions, and shifting to butane and propane to enhance the flexibility of feedstock selection.

Performance and Markets

Shipments of olefins fell because of the deterioration in the domestic demand-supply balance caused by stagnant demand from China and by declining exports and increasing imports because of the strong yen through most of fiscal 2013. The demand-supply balance in Asia worsened because of new production capacity that came onstream in Asia and the Middle East and because of the weak Chinese market.

In fiscal 2013, the issue of excess ethylene supply capacity in Japan continued to rear its head amid greater petrochemical production in the Middle East and in Asia. Ethylene production in Japan slid to 6.1 million metric tons in fiscal 2013, from 6.7 million metric tons a year earlier. Demand, on the other hand, fell below 5.0 million metric tons, the same level as in the early 1990s. Conversely, the demand-supply gap for butadiene and benzene tightened, pushing up prices. The economic slowdown in the global and Asian economies, coupled with the influx of imports from the Middle East, hit Asian markets hard. Ethylene production in China declined 2.7%, to 14.9 million metric tons.





Over the longer term, we expect olefins to remain a growth market because developing economies invariably consume increasingly large amounts of plastics.

Strategies and Outlook

Expectations are high that demand for olefins will grow in fiscal 2014. The change of government in Japan and the implementation of various strategies to resurrect the Japanese economy have changed domestic market sentiment. The yen, moreover, has weakened considerably, and the stock market has risen. Companies are investing capital.

Elsewhere in Asia, competing forces are at work. Economies are getting back on a growth track, particularly in China, but the greater influx of olefins from the Middle East and new capacity additions in Asia suggest that there will be no significant improvement in demand for Tosoh products soon.

Over the longer term, we expect olefins to remain a growth market because developing economies invariably consume increasingly large amounts of plastics. This trend is occurring in China and other Asian countries and is showing signs of emerging in India.

Raw material prices continue to edge upward, though at a slower pace. The import price of naphtha appreciated further in fiscal 2013 because of the weakening yen and ended the year at ¥57,450 per kiloliter, up from ¥54,100 at the end of fiscal 2012. Consequently, diversifying the feedstocks used in Tosoh's cracking operations remains an important cost strategy.

Tosoh is increasing its use of liquefied petroleum gas (LPG) and other non-naphtha alternatives and is employing less-costly grades of naphtha. The emergence of shale gas as an alternative feedstock represents a new force of change in the industry. We are assessing its significance and deciding on strategies.

Tosoh consistently makes full use of its refining and petrochemical modeling system (RPMS) to deal with alterations to its business environment. We are also adjusting the mix of cracker output to maximize profitability.

In fiscal 2014, there are concerns that demand for ethylene will continue to dwindle. We

anticipate, conversely, that demand will strengthen for such C4 fraction products as butadiene and for aromatics, such as benzene. We remain prepared for growth by taking advantage of the opportunities that arise from managing the balance among production rates, product mix, and market prices.

POLYMERS

Plastics are part of the fabric of modern living, and Tosoh is the source of polymers used by a wide spectrum of industries to manufacture a multitude of plastic products. Polymers have application in everything from food packaging to agriculture, engineering, and distribution.

Our polyethylene lineup includes ethylene vinyl acetate (EVA); low-density polyethylene (LDPE); linear low-density polyethylene (LLDPE); high-density polyethylene (HDPE); and functional polymers, including chloroprene rubber, adhesive polymers, and engineering plastic resins. We adapt product specifications to meet the needs of our customers for applications in consumer and industrial products. As a result, different grades of EVA are used in everything from solar cells to shoe soles. LDPE goes into heavy-duty bags and agricultural film. And HDPE is found in injection moldings and fishing net filament.

A standout in Tosoh's polymer lineup is chlorosulphonated polyethylene (CSM). Highly durable, CSM is used extensively in automotive hoses, industrial rollers, electric power lines, high-performance adhesives, escalator handrails, leisure boats, and many other products. CSM is in short supply worldwide, and Tosoh, as the global leader in CSM production, has ramped up its production capacity and debottlenecked its manufacturing process to fill that gap. Through two phases of construction, in fiscal 2011 and fiscal 2012, the company more than doubled its annual CSM production capacity, to 9,500 metric tons.

Among other notable polymer products, engineering plastic polyphenylene sulfide (PPS) is also in great demand. It is especially valued by automotive manufacturers, which utilize PPS to make their vehicles lighter and more fuel efficient.

POLYETHYLENES

Performance and Markets

Most categories of polyethylenes posted year-on-year declines in sales and sales volumes in fiscal 2013. This reflected the end to a cycle of price increases and a decrease in demand.

OLEFINS

Products	Capacity (MTY*)	Markets Served	Applications
Ethylene	493,000	Asia, Japan	Petrochemicals
Propylene	288,000	Asia, Japan	Polypropylene, cumene, OXO process alcohol
C4 fraction		Japan	C4 hydrocarbons, including butylenes and butane; tertiary butyl alcohol; polychloroprene rubber
Tertiary butyl alcohol	70,000	Japan	Methyl methacrylate
Cumene (isopropylbenzene)	300,000	Asia, Japan	Phenol
Aromatic compounds	Benzene: 154,000 Toluene: 65,000 Xylene: 32,000	Japan	Numerous products

*Metric tons per year

POLYMERS

Products *Brand Names*	Markets Served	Applications
Ethylene vinyl acetate copolymer *Nipoflex®*	Europe, Asia, Japan, NA	Shoe soles, blown film, stretch film and laminates, extruded sheet, hot-melt adhesives, injection moldings
Low-density polyethylene *Nipolon®, Nipolon-L®, Nipolon-Z®, LUMITAC®*	Europe, Asia, Japan, NA	Heavy-duty bags and agricultural film, extrusion coating and laminates, injection moldings
High-density polyethylene *Nipolon® Hard*	Europe, Asia, Japan, NA	Chemical containers used in semiconductor manufacturing; blow moldings; blown film for containers, bags, and packages; extruded pipe; injection moldings; fishing net filament
Adhesive polymers *Melthene®-M, Melthene®-H, Melthene®-G*	Europe, Asia, Japan, NA	Adhesives for diverse materials
Chloroprene rubber *SKYPRENE®*	Europe, Asia, Japan, NA	Sheathing for wire and cable jackets, industrial and automotive components, construction materials, extruded products, adhesives, wet suits
Chlorosulphonated polyethylene *TOSO-CMS®*	Europe, Asia, Japan, NA	Automotive and industrial hoses, coatings and linings for electrical and mechanical products, raincoats
High-performance chlorosulphonated polyethylene *extos®*	Europe, Japan, NA	Automotive belts
Polyvinyl chloride paste	Asia, Japan	Wallpaper, flooring, artificial leather, toys, gloves
Polyphenylene sulfide resins	Europe, Asia, Japan	Electric and electronic equipment, home appliances, automotive components
C9 hydrocarbon resins	Asia, Japan	Paints, printing inks, adhesive tape, hot-melt adhesives, rubber

EVA and LDPE sales suffered a double punch from a sudden drop in demand and intensified competition. Melthene, however, remained profitable, edging up in sales and sales volume. LLDPE also posted sales growth, regaining its profitability after facing pricing pressure in fiscal 2012 from new plants in the Middle East. HDPE sales faced the same challenge but did not have the firm demand required to remain profitable.

Strategies and Outlook

Tosoh is shifting its strategy in the polyethylene (PE) markets to an emphasis on its high-value-added products. The company is therefore weighting the composition of its PE sales heavily toward blown and extrusion products in the HDPE market and toward laminates, particularly in the food product and medical treatment fields, in the LDPE market. Few of the company's PE sales come from the commercial film market, which is dominated by imports.

In the HDPE market, we have developed high melt strength (HMS) PE laminates that serve as substitutes for low-density polyethylene. The product line has been making steady inroads in the food-wrapping market. We also have developed a high forming HMS-PE grade to support the automotive industry's drive to build lighter cars.

In addition, Tosoh has introduced new grades of HDPE for blown plastic. Demand is rising for Tosoh's HDPE for use in medicine bottles and industrial chemicals based on the pharmaceuticals and health care industries' strong regard for the high-permeation barrier of the company's HDPE. Another area of growing demand for HDPE is one-way medicine dispensers, such as eye drop ampoules. Companies are looking to replace conventional polymers with HDPE because of its strong rupture resistance. We also will strive to expand our sales of the high-purity pharmaceutical containers and water supply pipes that are our areas of strength in our line of Ziegler catalyst–based products.

In addition, we will continue to develop more niche markets for Melthene, another of our PE product lines. We will leverage Melthene's versatility and our established position in the market. Beyond furnishing "easy-peel" Melthene lines for industrial and food products, we aim to enter the technically challenging dimming glass market for automobiles.

The market for LLDPE, meanwhile, is similar to that for LDPE. So we will focus on the laminate and medical treatment markets to boost LLDPE sales by developing high-value-added products.

Low demand for solar cells and excess inventory in the solar cell industry have reduced demand for EVA. Full-scale recovery is not expected until the latter half of fiscal 2014. As recovery takes hold, however, Tosoh will remain well positioned as Japan's top manufacturer of EVA grades for the high-growth solar cell market and its No. 2 EVA manufacturer overall.

FUNCTIONAL POLYMERS

Performance and Markets

Sales of high-performance polymers in fiscal 2013 were down in most categories, but overall profits remained solid during the year. CSM was no exception to the general trend, but we managed to minimize declines in CSM sales and profits while maintaining a high profit margin. Tosoh is the dominant global manufacturer of CSM. We hold a 66% share of the CSM market worldwide.

PPS resin sales rose in fiscal 2013, but profits declined amid growing excess supply on the market. The opposite was true for chloroprene rubber, for which sales fell but profits increased as higher-grade product strategies began to kick in.

Developments

Tosoh's optical polymer (TYR) operations are finally getting on track. Higher demand and expanded production levels helped sales to increase in fiscal year 2013.

Optical polymer TYR is used to produce small and medium displays. With the soaring popularity of these devices, optical polymer operations are poised to become a significant contributor to the sales of the Petrochemical Group. Those operations are working with customers to provide increasingly advanced products.

Strategies and Outlook

By exploiting the competitive advantage inherent in our vinyl isocyanate chain, we are marketing special grades of PVC paste for wallpaper and flooring. This fits with our intent to increase profits by improving our products and expanding our product lines.

In the chloroprene rubber market, the weakened yen should help us deal better with the high prices for the raw material butadiene. Our olefin operations will also be increasing their production of butadiene from the C4 fraction. We will continue, therefore, to focus on increasing our sales of grades of chloroprene rubber products that are resistant to economic fluctuations and to intense price competition. These include those of our chloroprene rubber grades that do not contaminate metal molds. They also include our sulfur-modified chloroprene rubber grades.

Tosoh is the world's sole supplier of CSM to the high-end market. With the yen exchange rate falling to more reasonable levels, we plan to take advantage of our superior positioning in the global CSM market.

Differentiating our PPS resin products is essential to combating the oversupply of PPS on the world market. So we are pursuing

a strategy aimed at applications that require special grades of PPS resins. Our specialty grades include a PPS resin with superior metal bonding for automotive applications.

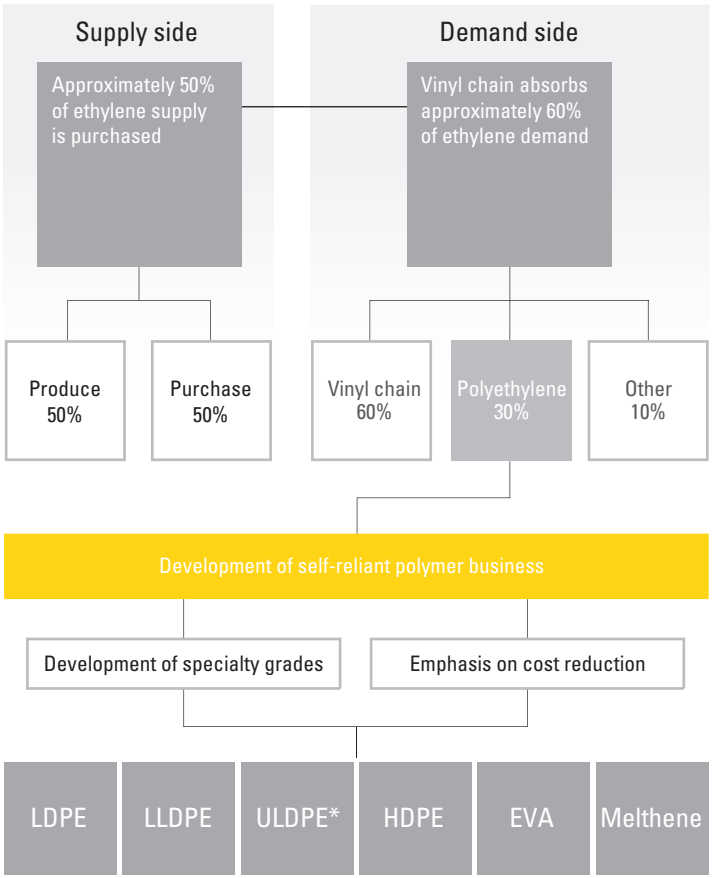
Differentiating our PPS resin products is essential to combating the oversupply of PPS on the world market.

We also are looking forward to scaling up operations of our new TYR product line. That will enable us to ride the wave of handheld devices flooding markets globally.

ETHYLENE

Ethylene is a basic raw material used in Tosoh's vinyl chain in the processes for producing VCM and PVC and for its polymers business. Because Tosoh produces half of the ethylene it needs in its manufacturing activities, the company is buffered from rising ethylene prices. Tosoh must, however, keep its production costs under control to ensure the competitiveness of its upstream products.

ETHYLENE OPERATIONS



*Ultralow density polyethylene

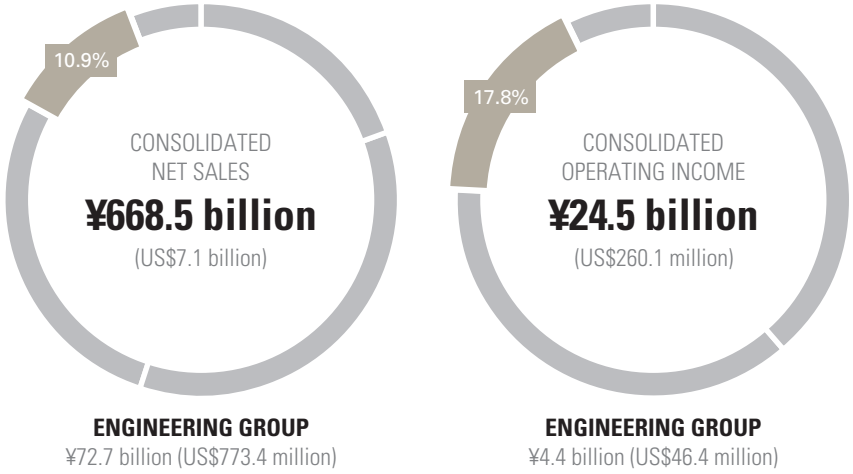
ENGINEERING GROUP

Tosoh established its Engineering Group in fiscal 2011. The group comprises such various companies as Organo Corporation and its water treatment and pure water generation operations, Tohoku Denki Tekko Co., Ltd., and its construction operations, and Eco-Techno Corporation and its soil remediation operations.

Group Performance and Markets

Fiscal 2013 net sales for the Engineering Group were ¥72.7 billion (US$773.4 million), a decrease of ¥1.8 billion, or 2.4%, from the group's net sales for fiscal 2012. The group's operating income fell ¥1.4 billion, or 24.1%, to ¥4.4 billion (US$46.4 million).

The decline in net sales notwithstanding, the Engineering Group contributed to Tosoh's consolidated performance in fiscal 2013. It accounted for 10.9% of the company's consolidated net sales, compared with 10.8% in fiscal 2012. Its contribution, however, to Tosoh's consolidated net operating income declined from 24.2% to 17.8%.



ENGINEERING GROUP
¥72.7 billion (US$773.4 million)

ENGINEERING GROUP
¥4.4 billion (US$46.4 million)

The group's businesses in water treatment facilities, services, and related chemicals were the main contributors to its sales performance. Organo accounted for over 85% of the net sales of the Engineering Group. The group's construction-related companies posted sales declines.

WATER TREATMENT

Tosoh subsidiary Organo Corporation is a specialist in water treatment and pure water generation technologies and systems. In addition, its water treatment systems for industry and for municipal waterworks and sewage treatment plants and its soil remediation technologies are top ranked around the world.

Organo's businesses, however, face uncertainty in Japan's maturing market.

Capital investment has been weak in the public sector in Japan for many years, and Organo's high-tech business is susceptible to electronics industry business cycles. Fortunately, a huge potential market for Organo's products and services exists elsewhere in Asia. The subsidiary is steadily gaining ground in the public and private sectors of many Asian countries that will experience rapid infrastructure growth over the next few decades.

The history of Organo is the history of water purification in Japan. The subsidiary began operations in 1946 by marketing Japan's first heat-free water distillation system. Over the years, Organo has been an important contributor to progress in industry and to people's daily lives through its water treatment systems and products for municipal waterworks and sewage treatment plants and power stations and for the pharmaceutical, food processing, and IT and electronics industries. Tosoh Corporation acquired equity in Organo in 1955 and retains a 41.20% interest in the company.

Organo's operations are built around two business segments: water treatment engineering and functional products. The water treatment engineering business is further divided into the plant and solution businesses. The plant business markets water treatment systems, while the solution business maintains and manages delivered systems. The functional product business sells consumables, such as standard products, chemicals, and food processing materials.

Ultrapure water systems feature some of Organo's most advanced technologies. These systems are essential for the cleaning of semiconductor devices and LC panels, the production of pharmaceuticals, the safeguarding of power generation systems at thermal and nuclear power stations, and the analysis of trace substances. Organo's San Kan Oh multifunctional water system series for cleaning semiconductors and LC panels was awarded the Excellent Environmental Equipment Award by the Japanese Ministry of Economy, Trade and Industry in 2007.

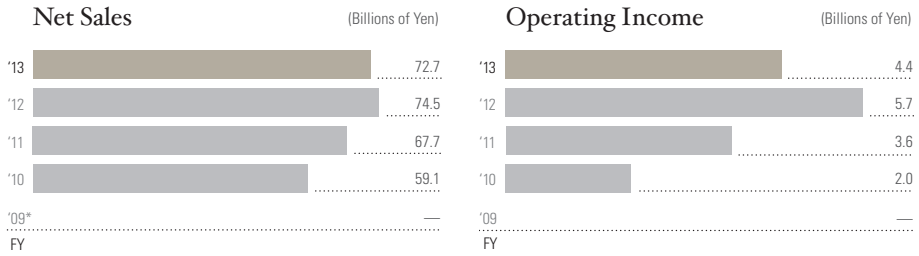
In 2010, Organo began the full-scale commercialization of two series of ion-exchange resins that it has developed to ensure low-metal materials for use in the electronics industry. The miniaturization of semiconductors has boosted demand for the type of resins represented by the subsidiary's new Amberlyst Dry and Orlite DS series, which are used chiefly to remove metals from electronic materials.

The subsidiary's recent developments in wastewater treatment and resource recovery include Ecocrysta, a fluoride collection and recycling system for wastewater. Other Organo advances involve a high-speed nitrogen removal process for sludge that is three to five times faster than conventional systems. In addition, Organo has developed a high-speed dissolved air flotation system that can reduce the load of suspensoid almost four times compared with conventional systems.

Organo has also expanded its functional product lineup with the introduction of the Puric-ω and Purelab flex UV ultrapure water production systems for laboratories. And the subsidiary has augmented its Amberlite polymeric adsorbents and ion-exchange resins for the medical and pharmaceuticals industries. Retail consumers benefit from Organo's launch of a filterless air purifier, the Air Washer, that uses water to remove pollen, exhaust gas components, radioactive materials, and other unwanted elements.

Organo, meanwhile, was the first company in Japan to develop a system for removing organic chlorine compounds from groundwater. The subsidiary also is committed to advancing its soil remediation technology.

To sell and service the technologies and systems that it has furnished to its Japanese customers, Organo has established a strong network of maintenance and sales subsidiaries in Japan. It is building a similar network throughout the rest of Asia. In fiscal 2011, Organo established a sales subsidiary, Organo (Vietnam) Co., Ltd., in Ho Chi Minh City, Vietnam. It has also established Organo (Suzhou) Water Treatment Co., Ltd., an R&D center, in Suzhou, China. In addition, Organo has four production bases: three in Japan and one in China.



*The Engineering Group did not exist in fiscal 2009.

Organo ... was able to take advantage of its positioning abroad to capture solid orders from the semiconductor industry in Taiwan.

Organo also is keeping an open mind to collaborative efforts with other companies. In February 2012, Organo signed a basic agreement on a business alliance with Meidensha Corporation to collaborate in a domestic municipal waterworks business. Organo and Meidensha will combine their water and engineering equipment capabilities and their business experience in the water processing market to supply services to the public sector. In Japan, the public sector is increasingly outsourcing water treatment operations or seeking to work with private-sector partners.

Performance and Markets

Similar to its parent company, Organo Corporation faced difficult business conditions in Japan and elsewhere in Asia during the fiscal year under review. Water treatment sales in particular declined from the previous fiscal year. This was because of the tapering off of major orders for water treatment systems of domestic thermal power stations received in the wake of the March 2011 earthquake and tsunami in Japan and the shutdown of the country's nuclear power plants.

The solution business, which oversees the maintenance and management of installed water treatment systems, also suffered. It experienced lower operating levels at clients' facilities and the postponement of regularly scheduled maintenance. Business declined especially from the electronics industry.

Overseas, the strong yen and economic slowdowns continued to dampen capital expenditures and therefore sales in most of Organo's markets. Organo, though, was able to take advantage of its positioning abroad to capture solid orders from the semiconductor industry in Taiwan.

Developments

In February 2013, Organo announced that it had developed and begun selling high-speed anaerobic microorganism treatment equipment for organic wastewater that uses a fluid carrier. The subsidiary has commenced full-scale sales of the equipment domestically and abroad. The new system is more than 10 times faster than the traditional aerobic method and in excess of 3 times speedier

than the anaerobic granule method. It safely retains removed microorganisms and has the added advantage of producing biogas that could be recycled as an energy source for gas-driven electric power generators. This new system is especially effective in treating organic effluents from food, beverage, and chemical plants.

Strategies and Outlook

Facing maturing and highly competitive markets in Japan, Organo is concentrating on capturing growth opportunities and maintaining profits. Capital investment continues to decline in Japan, such that the subsidiary must react quickly to changes in industrial structure to stay ahead of the market. Growth opportunities domestically include midsize pure water production and wastewater treatment and solution businesses, such as operations and maintenance (O&M) contracts.

Organo, however, must be equally aware of the need to accelerate its shift to overseas markets, particularly for its water treatment engineering business for power stations. This process will take time because Organo must become highly cost-competitive and must position itself in markets abroad.

The potential rewards are high, though, with the global market for water treatment forecast to grow substantially. As a step forward, in November 2012 Organo started a joint water treatment business with P.T. Lautan Luas in Indonesia when it acquired a 51% stake in that firm's water treatment subsidiary. It renamed its new subsidiary P.T. Lautan Organo Water in January 2013. P.T. Lautan Organo Water will target Japanese and local companies in the Indonesian market.

Overall, Organo must develop new technologies, markets, and businesses that capitalize on growth opportunities. It also must become more cost-competitive through greater efficiencies and cost reductions.

Organo has in place multiple strategies to meet its goals. The subsidiary is restructuring to shift from its concentration on the electronics industry, pure water, and its domestic market to general industries, wastewater treatment, and the global market. Organo is also concentrating on providing customers with greater value and satisfaction. It is encouraging its employees and its business groups to act with a market and customer orientation in mind. In addition, the subsidiary continues to make progress with its cost-reduction programs.

In fiscal 2014, demand for Organo's products and services from the electric power industry is anticipated to decline further while demand from the electronics industry is expected to remain at low levels. Organo's sales are nonetheless forecast to expand slightly on the strength of growth in functional products and overseas sales.

Over the long term, Organo will focus on expanding its thermal plant related business with the electric power industry. It will continue to build its business alliance with Meidensha Corporation to target domestic municipal waterworks projects in particular. The strategy for the functional products business is to continue to renew and expand the product lineup, aiming to ensure repeat business and to expand market share.

Overseas, Organo will aim at expanding its business elsewhere in Asia, especially in Taiwan and in countries throughout Southeast Asia. China remains a growth market, but higher business risk there makes it a lower priority. Overall, Organo is stepping up its efforts to position itself strongly in markets overseas. Its business localization activities, including its development of local supply chains, are helping to root it in local markets.

Overall, Organo is stepping up its efforts to position itself strongly in markets overseas.

ADDITIONAL OPERATIONS

Engineering Group member Eco-Techno provides soil purification and remediation. Its particular competency is in soil surveys and analyses. Bringing Organo and Eco-Techno together in the Engineering Group raises their collaboration in and the technological level of their eco-businesses.

Another member of the Engineering Group, Tohoku Denki Tekko, is a Tosoh Group construction company. To ensure cost-efficiency, Tohoku Denki Tekko must compete with non-group companies to win orders from the Tosoh Group.

Performance and Markets

Tohoku Denki Tekko has long struggled amid a prolonged period of deteriorating sales and fierce competition. It continued, however, to focus on gaining orders from industrial and electrical machinery businesses. And in fiscal 2013, Tohoku Denki Tekko's efforts to improve profitability demonstrated strong progress.

Sales by Eco-Techno rose substantially in fiscal 2013 on the strength of the large volume of orders received in the previous fiscal year. Order volume for fiscal 2013 did not fare as well because of the lack of large orders, faltering business conditions, and growing competition. The overall soil purification and remediation market continued its decline. Boosted, however, by expanded sales and continued cost-reduction efforts that included workforce cuts, Eco-Techno moved into the black in fiscal 2013.

Strategies and Outlook

Tohoku Denki Tekko has made a significant recovery, but further efforts are required to put it on stable ground. It will continue to improve its efficiency and to increase its operating rates. With its enhanced cost structure, Tohoku Denki Tekko will be aiming to win more orders. Its targeted markets include earthquake rebuilding and other large-scale projects.

Eco-Techno is determined to continue to build on the profitability it achieved in fiscal 2013. To keep costs to a minimum as it pushes to expand orders in fiscal 2014, Eco-Techno will use outside resources and collaborate with Organo in sales and in technical matters. The March 2013 end to a period of grace on stricter requirements for certified staff members under Japan's Soil Contamination Countermeasures Act presents Eco-Techno with an opportunity. Many competing companies are expected to exit the soil purification and remediation market, and the reduced competition and Eco-Techno's contingent of certified staff will give it the advantage in the market.

Eco-Techno is determined to continue to build on the profitability it achieved in fiscal 2013.

WATER TREATMENT

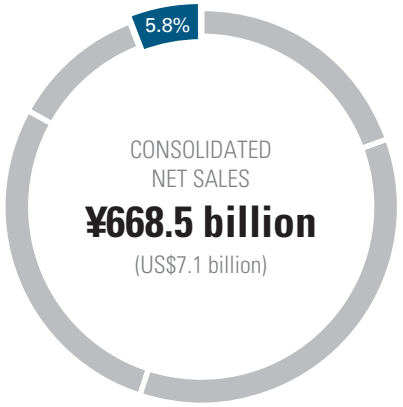
Products	Markets Served	Applications
Water treatment systems	Asia, Japan	Effluent processing, pure water generation

OTHER

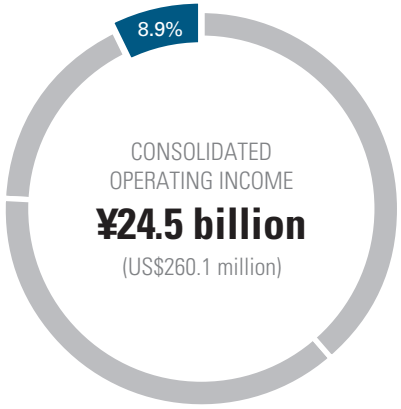
Being positioned for growth includes being prepared to bridge the gap between business operations and customers. And that's the business of Tosoh's other businesses. It's an important role because the myriad support services provided by Tosoh's other businesses are essential to the company's ability to perform at peak—to ensure timely delivery and cost advantage.

It's essential, moreover, that those services be provided in a timely fashion. And not only to the company's diverse operations but also to its customers.

Tosoh's other businesses thus are constantly on call. They handle facility construction, maintenance, expansion, upgrading and administrative services, personnel training, information technology (IT) support, and more. Tosoh, in fact, is encouraging the evolution of each of its other businesses from cost center to profit center.



OTHER
¥39.1 billion (US$415.5 million)



OTHER
¥2.2 billion (US$23.2 million)

STRATEGIC MOVE ENSURES COST-EFFECTIVENESS

Tosoh's other businesses came into being in April 2000, when Tosoh spun off its information processing, analytical, chemistry, and administrative operations into separate companies. This move was designed to improve Tosoh's consolidated performance and to enable its service-related companies to compete head to head with external suppliers by setting prices according to market rates.

The move, furthermore, keeps Tosoh competitive and customers satisfied. It is a cost-effective arrangement that applies to all of Tosoh's logistics, construction, engineering support, and related services. In Japan, other businesses also include cost-effective financial services.

Other Performance and Markets

Other net sales in fiscal 2013 fell ¥1.1 billion, or 2.8%, from net sales the year before, to ¥39.1 billion (US$415.5 million). Operating income declined 9.3%, to ¥2.2 billion (US$23.2 million). Other businesses contributed 5.8% of Tosoh's consolidated net sales, compared with 5.9% in the previous term, and 8.9% of Tosoh's consolidated operating income, down from 10.1% in fiscal 2012.

LOGISTICS

Maintaining transportation equipment, optimizing shipping schedules, and facilitating communications with bulk terminals and internal customers are a crucial part of Tosoh's other business offerings. The efficiency of our logistics operations has helped us gain ISO 9001 certification for the quality control systems at our 13 sites in Japan—another important consideration in purchasing decisions.

Tosoh is working to build a similarly competitive logistics network in China. That will bolster the company's growing presence in China and elsewhere in Asia.

Performance and Markets

Tosoh's logistics operations serve the expansion and transport needs of the Tosoh Group. Business conditions for logistics were severe at the start of fiscal 2013, but they improved as exchange rates and markets steadily moved in the Tosoh Group's favor. As a result, logistics sales exceeded forecasts.

In fiscal 2013, logistics operations continued to support NPU's efforts to enhance its competitiveness, primarily by implementing more efficient logistics systems. They also began working with Tosoh Silica Corporation to improve its efficiency. The goal is to produce a concrete profitability improvement plan for that Tosoh subsidiary for fiscal 2014 and beyond.

In addition, logistics operations took measures during the year in review to improve the efficiency of land transportation services. Efforts included greater sharing of loads and expanded

joint transportation operations with other transportation companies.

Strategies and Outlook

Tosoh's logistics operations focus on four main tasks. They assist Tosoh companies and manufacturing groups with reducing manpower requirements and heightening efficiency. They introduce risk management processes and other procedures to improve safety and quality. They ensure that shipping terminals and warehouses have the capacities and facilities to meet the Tosoh Group's changing needs and that traffic is optimized along shipping routes. On a more strategic scale, they aid in the Tosoh Group's overseas expansion.

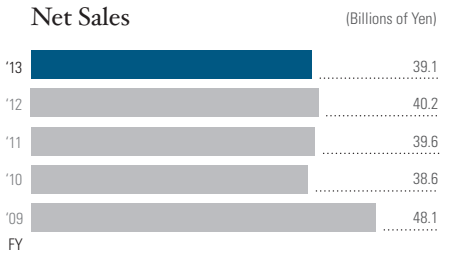
In fiscal 2014, our logistics operations will continue to aid NPU and Tosoh Silica with their drives to become more profitable. More efficient land transportation operations through greater load sharing and joint transportation will also remain an important theme.

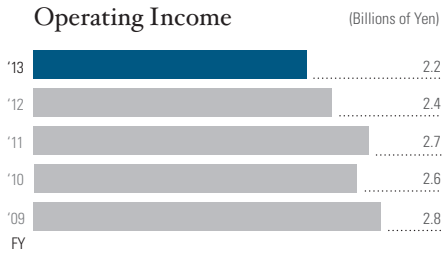
GENERAL SERVICES

Tosoh believes that its people are its strength and takes a hands-on approach to keeping its employees happy. It has established other businesses to handle personnel management, employee benefit administration, and human resources training. Those operations focus on developing social services that support employees.

Performance and Markets

In fiscal 2013, general services continued to strive for greater administrative efficiency by promoting participation in their Tosoh Group salary administration system. General services also worked to improve their service quality and reliability through training programs and better communications between branches.





Strategies and Outlook

General services will continue their mandate to handle and improve personnel management and employee benefit administration and training in fiscal 2014. They will reexamine methods of further reducing their workforce. They will also endeavor to raise the level of their services with poor reputations. In their training programs, they will focus on safety and career stage based education and training programs. They will, moreover, aim to prevent the spread of illness among employees by better managing employees with health concerns.

Tosoh believes that its people are its strength and takes a hands-on approach to keeping its employees happy.

ANALYSIS AND RESEARCH

Tosoh's chemical analysis operations provide Tosoh Group companies worldwide with a range of sophisticated services specializing in organic, inorganic, and polymer chemistry and in electronic materials. These services support Tosoh's product and application development efforts, ultimately benefiting customers.

Performance and Markets

Sales by the analysis and research operations remained solid but edged downward in fiscal 2013. The decline can be mainly attributed to a poor business climate and to cost-reduction programs at Tosoh Group companies. Analysis and research operations seek to promote their services and to raise their non-group sales.

Tosoh's analysis and research operations continued to install new equipment to upgrade the level and scope of their testing capabilities. During fiscal 2013, each of these operations' different sections focused on specialized technologies essential to their services.

Strategies and Outlook

In fiscal 2014, analysis and research operations will take further steps to boost their technical capabilities and reputations. They will intensify their concentration on providing specialized technology services. They also will push forward with a project to build an analysis and research service center for Tosoh Group companies in the vicinity of the Nanyo Complex. Major initial clients of the center will include NPU and Tosoh Finechem Corporation.

With higher sales to Tosoh Group and non-group companies, Tosoh anticipates a slight increase in sales for its analysis and research operations in fiscal 2014.

INFORMATION SYSTEMS

The company's information systems business maintains more than 300 servers, nearly 8,000 personal computers, and around 170 networks across 44 companies. That work spans administrative and factory operation systems. Information systems also has developed and introduced an enterprise resource planning system that allows Tosoh management to assess the performance of Tosoh Group members quickly and easily.

Performance and Markets

Sales by Tosoh's information systems operations rose in fiscal 2013, exceeding forecasts. Throughout the fiscal year, information systems introduced innovative technology and worked to improve processes. It completed, for instance, the setup of private cloud computing and backup services at the Nanyo and Yokkaichi Complexes and then pursued a project to make these services available to all in the Tosoh Group. Information systems is installing the services in stages as group companies upgrade or replace their servers.

Among other ongoing projects, information systems installed various information and communications technology (ICT) systems at Tosoh Corporation and at Tosoh Group companies. The Nanyo and Yokkaichi Complexes received plant information (PI) web services and PI systems. Information systems also expanded its cyber-schooling software services to include 15 companies that service 3,956 users. In addition, it has now installed web conferencing systems in 31 departments of 9 companies.

Strategies and Outlook

Information systems is tasked with evaluating and introducing new technology, with planning and introducing new systems and services, with maintaining and upgrading systems and services, and with reducing IT costs for the Tosoh Group. In fiscal 2014, information systems will continue its improvements to the Group's core IT systems.

The company's information systems business maintains more than 300 servers, nearly 8,000 personal computers, and around 170 networks across 44 companies.

Information systems is reinforcing the skills of its staff members by managing their education and training progress. Some of the specific areas being addressed are writing applications for the Group's core IT systems, better capabilities in a diverse range of programming languages, and expanded innovation and processes improvement skills.

FINANCIAL REVIEW

Throughout most of calendar year 2012, the Japanese economy suffered from extremely poor business and political conditions. A territorial dispute with China in particular soured Japan's business relations with that country.

Japanese exports and manufacturing contracted substantially. The cause was falling external demand precipitated by stagnation in European economies and a slowdown in the Chinese economy. Capital investment, moreover, weakened in reaction to a loss of momentum in consumer spending. As the benefits of the Japanese government's economic policies tapered off and concern about the economy's direction heightened, consumer spending waned.

A change in government at the end of calendar 2012, however, altered the mood in Japan. There was a broad recovery in stock prices in the wake of the market's positive evaluation of the new government's bold monetary and public spending policies. And export conditions improved as the yen weakened against other currencies and as the global economy began to recover. The combination of these factors heightened expectations of an economic recovery in Japan.

Tosoh spent the first three quarters of its fiscal year 2013 dealing with its VCM production and other issues, including the general malaise in the Japanese and world economies and the disadvantages of a strong yen. On a more positive note, the company achieved price increases for caustic soda, ethyleneamines, and polyethylene resins. And Tosoh's nonoperating income received a boost from substantial insurance claims stemming from the accident at the Nanyo Complex.

The continued upswing in the average annual price for naphtha, a key raw material for chemical makers, underpinned higher product prices domestically and internationally. The price of naphtha increased from ¥54,925 per kiloliter in fiscal 2012 to ¥57,450 per kiloliter in fiscal 2013.

NET SALES

Harsh business conditions throughout most of the fiscal year under review notwithstanding, a strong fourth quarter supported a solid performance by the Tosoh Group. Consolidated net sales declined, but only 2.7%, to ¥668.5 billion (US$7.1 billion).

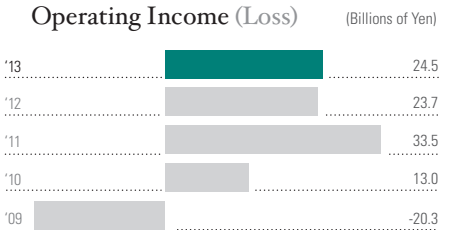
OPERATING EXPENSES AND OPERATING INCOME

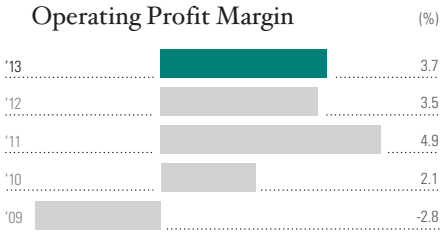
Our cost of sales decreased 3.1%, to ¥549.9 billion (US$5.8 billion). Gross profit contracted 0.8%, to ¥118.6 billion (US$1.3 billion). And the gross profit margin rose to 17.7%, from 17.4% a year earlier.

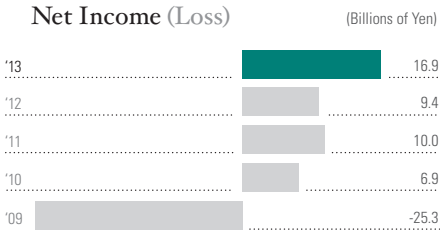
Selling, general and administrative expenses declined 1.7%, to ¥94.1 billion (US$1.0 billion). R&D expenditures decreased 5.2%, to ¥12.2 billion (US$129.8 million).

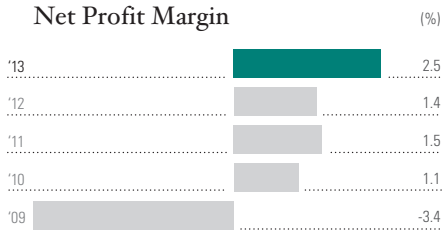
Operating income climbed 3.1%, to ¥24.5 billion (US$260.1 million). Among other income (expenses), Tosoh booked substantial foreign exchange gains of ¥5.9 billion (US$63.1 million), compared with losses of ¥0.9 billion in fiscal 2012.

The company, however, recorded losses in fiscal 2013 on the explosion and fire at the Nanyo Complex's No. 2 Vinyl Chloride Monomer Plant. Those losses amounted to ¥1.3 billion









(US$14.0 million) and were in addition to related losses of ¥2.4 billion in the previous fiscal year. These amounts, though, were more than offset in the year under review by insurance income totaling ¥7.0 billion (US$74.7 million). Compensation for damage income was down significantly in fiscal 2013 compared with the large amount received in fiscal 2012 for a fly ash chelating agent patent infringement.

Overall, though, Tosoh reported net other income of ¥7.2 billion (US$76.1 million) in fiscal 2013, compared with net other expenses of ¥1.9 billion in the previous fiscal year. Income before income taxes and minority interests rose 44.6%, to ¥31.6 billion (US$336.2 million).

NET INCOME

Minority interests in the net income of subsidiaries totaled ¥1.3 billion (US$13.9 million) in fiscal 2013, compared with ¥884.0 million a year earlier. As a result, the Tosoh Group registered net income of ¥16.9 billion (US$179.3 million), up 79.8% from fiscal 2012. Net income per share, undiluted, amounted to ¥28.17 (US$0.30), compared with ¥15.67 in the previous fiscal year. Tosoh maintained its annual dividend per share at ¥6.00 (US$0.06).

PERFORMANCE BY GEOGRAPHIC REGION

Export sales and sales outside Japan by overseas subsidiaries were ¥243.3 billion (US$2.6 billion) in fiscal 2013. This amount represented 36.4% of consolidated net sales, up 0.7 percentage points from fiscal 2012. Sales in Asia accounted for ¥176.6 billion (US$1.9 billion) of total export sales and sales outside Japan and for 26.4% of consolidated net sales, a slight dip of 0.5 percentage points from a year earlier.

DIVIDEND POLICY

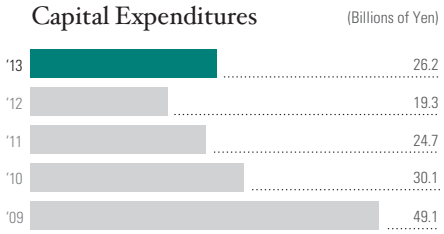
Tosoh aims to maintain a balance between its internal reserves for R&D and capital expenditures, which are designed to sustain steady high growth, and its returns to its shareholders. The company intends to provide a stable dividend to shareholders on a continuous basis, subject to business conditions.

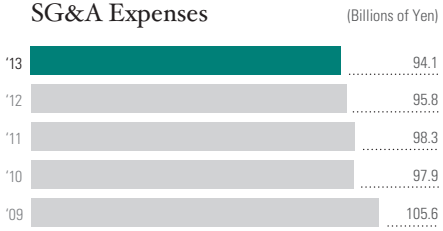
In fiscal 2013, Tosoh's annual dividends per share were ¥6.00 (US$0.06). As a result, the consolidated payout ratio for the year under review was 21.3%. Tosoh will continue to invest its internal reserves in competitive product development and global business strategies in a bid to respond to anticipated changes in its business environment.

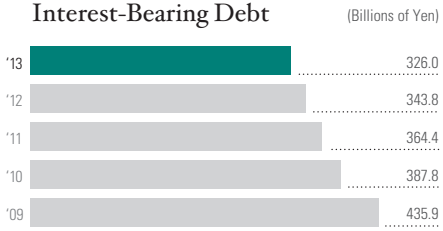
FINANCIAL POSITION AND LIQUIDITY

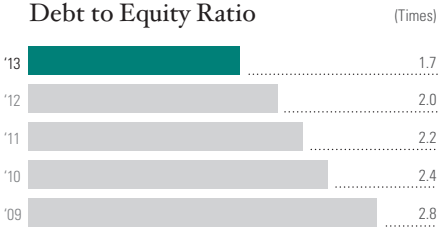
FUND PROCUREMENT AND LIQUIDITY MANAGEMENT

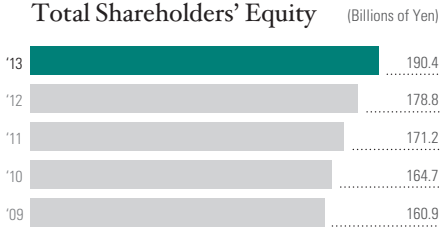
Tosoh raises working capital as necessary through short-term bank loans and other means. The company decides on the funding method for its long-term capital requirements, such as capital investment, after determining the investment recovery period and risk. In fiscal 2013, Tosoh financed its capital expenditure and R&D activities primarily from cash provided by operating activities.











ASSETS, LIABILITIES, AND NET ASSETS

Current assets as of March 31, 2013, rose 7.9% from a year earlier, to ¥411.1 billion (US$4.4 billion). Cash and cash equivalents declined 14.8%, to ¥57.4 billion (US$609.9 million). Among the major components of current assets, trade receivables increased 19.8%, to ¥198.3 billion (US$2.1 billion), while inventories were up 5.6%, to ¥128.7 billion (US$1.4 billion).

Current liabilities rose 9.4% from the previous fiscal year, to ¥366.5 billion (US$3.9 billion) in fiscal 2013. Working capital, therefore, totaled ¥44.7 billion (US$474.8 million), compared with ¥46.0 billion a year earlier. The current ratio was 1.12 times, a decrease from 1.14 times in fiscal 2012.

Property, plant and equipment contracted 4.3%, to ¥240.5 billion (US$2.6 billion). However, significant increases in current assets and in investments drove total assets up 3.7% from a year earlier, to ¥735.1 billion (US$7.8 billion). Interest-bearing debt was ¥326.0 billion (US$3.5 billion) as of March 31, 2013, down from ¥343.8 billion at the previous fiscal year-end. Long-term debt continued its downward trend, dropping 15.4%, to ¥122.7 billion (US$1.3 billion).

Total shareholders' equity rose 6.5% year on year, to ¥190.4 billion (US$2.0 billion), mainly because of a 10.5% rise in retained earnings, to ¥120.5 billion (US$1.3 billion). Net unrealized gains on securities reflected the sharp rise in stock prices at fiscal year-end and soared 154.1%, to ¥4.9 billion (US$52.4 million).

Among total accumulated other comprehensive income, foreign currency translation adjustments—chiefly the effect of exchange rates on the net assets of overseas Tosoh Group companies—reduced net assets ¥7.1 billion (US$75.7 million) in fiscal 2013. This compares with ¥10.5 billion a year earlier. Total net assets edged up 9.5% year on year, to ¥219.3 billion (US$2.3 billion). Net assets per share totaled ¥315.15 (US$3.35), compared with ¥285.88 a year earlier. Return on average total net assets was 9.5%, and the net asset ratio was 25.7%, compared with 24.1% in fiscal 2012.

CAPITAL EXPENDITURES AND DEPRECIATION

CASH FLOWS

Net cash provided by operating activities was ¥36.1 billion (US$383.6 million), a decrease from ¥55.3 billion in fiscal 2012. The principal sources of cash were depreciation and amortization and an increase in trade payables. The major uses of cash were an increase in trade receivables and other, net.

Investing activities absorbed ¥23.4 billion (US$249.3 million) in cash flows, up from ¥17.6 billion in the previous fiscal year. Increased payments for the purchases of property, plant and equipment, increased proceeds from sales of stocks of subsidiaries and affiliates, and increased proceeds from collections of long-term loans receivable resulted in an overall rise in investment cash flows.

Free cash flow, therefore, was positive. The excess of cash flows from operating activities over the cash absorbed in investing activities amounted to ¥12.6 billion (US$134.3 million), compared with free cash flow of ¥37.7 billion in fiscal 2012.

Net cash used in financing activities was ¥24.5 billion (US$260.7 million), compared with ¥22.7 billion in the previous year. The principal reason for the increase in net cash used was the increase in cash dividends paid. There was a ¥21.6 billion (US$229.1 million) net decrease in long-term debt, compared with a net decrease of ¥21.2 billion in fiscal 2012. Cash and cash equivalents on March 31, 2013, were ¥57.4 billion (US$609.9 million), down 14.8% from a year earlier.

PROJECTIONS FOR FISCAL 2014

Tosoh is anticipating growth in fiscal 2014. The company forecasts a substantial increase in net sales, to ¥730 billion, resulting in consolidated net income of ¥23 billion and operating income of ¥40 billion.

In preparing these sales and earnings projections for fiscal 2014, Tosoh's management has assumed an average exchange rate of ¥95 to the US dollar, compared with ¥80 in fiscal 2013. Management has also assumed an average naphtha cost—a benchmark of raw material costs in the chemical industry—of ¥62,000 per kiloliter in Japan, the same projection made for fiscal 2013.

TOSOH CORPORATION

3-8-2, Shiba, Minato-ku, Tokyo 105-8623, Japan
Tel: +81 (3) 5427 5118 Fax: +81 (3) 5427 5198
info@tosoh.com www.tosoh.com