

TOPCON CORPORATION

7732

Tokyo Stock Exchange First Section

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Summary

Pursuing Growth Led by IT construction, IT Agriculture, and Eye Care Businesses

TOPCON CORPORATION <7732> (hereafter, also “the Company”) manages its businesses in three segments. The Positioning Company handles high-precision global navigation satellite system (GNSS; generally referring to US GPS satellites, Russia’s GLONASS satellites, and other positioning satellites) receivers, IT construction, IT agriculture, etc. The Smart Infrastructure Business covers surveying instruments, such as total station and 3D measuring equipment, etc. The Eye Care Business oversees manufacturing and sales of ophthalmological examination, diagnosis, and treatment equipment; ophthalmological IoT network systems; eyeglass store devices; etc.

1. Segment sales and operating income composition

TOPCON reported ¥130,735mn in consolidated sales in FY3/16, comprised of 47.4% Positioning Company, 25.2% Smart Infrastructure Business, 33.5% Eye Care Business, 3.8% others, and -10.0% eliminations. Operating income was ¥8,803mn, composed of 27.1% Positioning Company, 44.4% Smart Infrastructure Business, 55.1% Eye Care Business, 2.2% others, and -28.8% adjustments. The regional breakdown of consolidated sales shows Japan at just 21.4%, North America at 27.8%, Europe at 25.9%, China at 6.2%, Asia-Oceania at 11.4%, and others at 7.3%. The overseas sales ratio was 78.6%.

2. Focus points: IT construction, IT agriculture, and eye care businesses

(1) In the IT construction business, TOPCON equips construction machinery with high-precision GNSS receivers, control boxes and various sensors, allowing machines to comply with 3D blueprints. This capability can shorten building periods by 30-50% and enables beginners to realize high-precision construction. While utilization in Japan has lagged, the MLIT’s i-Construction initiative seeks to expand the use of IT construction in public projects from about 20% in 2016 to 100% by 2020. Compared to other industries, the construction industry has been slow to adopt automation, but with the large number of trillion-yen infrastructure projects in emerging countries, TOPCON expects the percentage of IT-equipped construction machinery to climb from about 15% now to roughly 50% over the long term. TOPCON products hold an estimated global share of about 40%.

(2) IT agriculture automates farming processes by equipping tractors with high-precision GNSS receivers and consoles to support guidance systems with onscreen display of plotted courses and automation that eliminates the need for steering. Installation of the CropSpec cultivation sensor allows users to measure crop growth and assign optimal fertilizer spray based on crop conditions in real time. This business has significant growth opportunity as food shortages have become more prominent with the growing global population. TOPCON holds an estimated 20% global market share for these products.

(3) The eye care business primarily handles ophthalmological exam and diagnosis systems and treatment equipment. TOPCON launched the world’s first 3D OCT (optical coherence tomography) system combining OCT with a retinal camera in 2006. This system offers excellent operability and rates highly for the clarity of images of deep within the eye. TOPCON has an estimated 30% global market share, and expects growing global demand amid the aging trend and plans to expand ophthalmological IT solutions with electronic records, remote therapy, and billing systems.

Summary

3. Mid-Term Business Plan

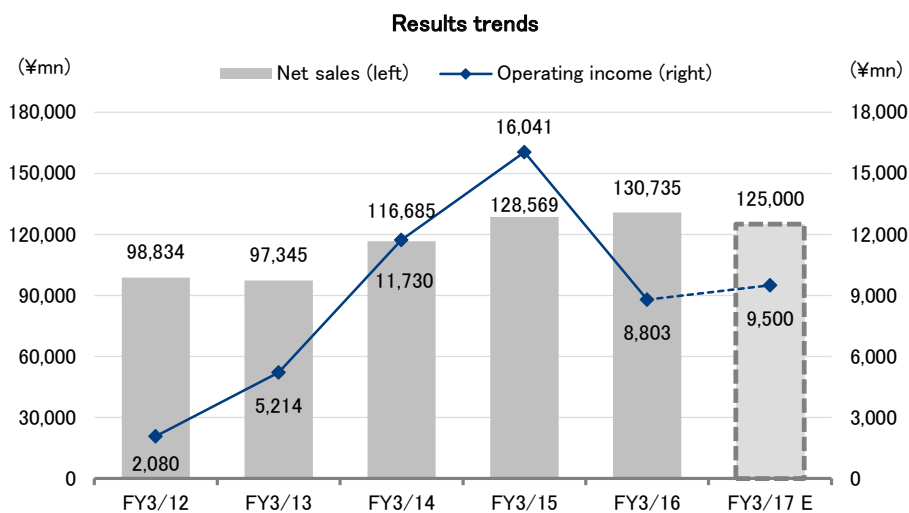
The Second Mid-Term Business Plan covering FY2016-FY2017 (FY3/17-FY3/19) projects average annual growth rates (CAGR) of 4% in sales and 34% in operating income starting from FY3/16. Goals for FY3/19 under the plan include ¥146,000mn in sales (Positioning Company ¥68,000mn, Smart Infrastructure Business ¥36,000mn, Eye Care Business ¥53,000mn, others ¥5,000mn, and eliminations -¥16,000mn) and ¥21,000mn in operating income (Positioning Company ¥10,000mn, Smart Infrastructure Business ¥5,500mn, Eye Care Business ¥7,500mn, others ¥300mn, and adjustments -¥2,300mn). The plan assumes forex rates of ¥110/\$ and ¥125/EUR. TOPCON hopes to achieve 15% ROE in the final fiscal year of the Second Mid-Term Business Plan and 20% ROE over the long term.

4. 3Q FY3/17 consolidated results and FY3/17 guidance

Consolidated results for 3Q FY3/17 were ¥87,422mn in sales (down 4.5% year on year (YoY)) and ¥4,412mn in operating income (up 6.3%). Forex trends had a large negative impact on income, and TOPCON posted higher sales (up 5.1%) and sharply larger operating income (up 57.6%) in real terms excluding the forex impact. The consolidated outlook for FY3/17 forecasts, ¥125,000mn in sales (down 4.4% YoY) and ¥9,500mn in operating income (up 7.9%). While these levels are below the goals set in the Second Mid-Term Business Plan, the shortfalls reflect negative impacts from forex rates.

Key Points

- Main segments are the Positioning Company, Smart Infrastructure Business, and Eye Care Business, and the overseas sales ratio was high at 78.6% in FY3/16.
- We are focusing on the IT construction, IT agriculture, and eye care businesses. The IT construction business shortens project terms and enables high-precision operations. The IT agriculture business automates farming processes with guidance and automated steering systems. The eye care business handles ophthalmological exam and diagnosis systems and treatment equipment, and aims to expand electronic records, remote therapy, and billing systems.
- The Second Mid-Term Business Plan targets ¥146,000mn in sales and ¥21,000mn in operating income for FY3/19. Sales were lower and profit rose modestly in 3Q FY3/17, though consolidated figures excluding the forex impact showed a 5.1% increase in sales and a steep 57.6% increase in operating income.



Source: Prepared by FISCO from the Company's website

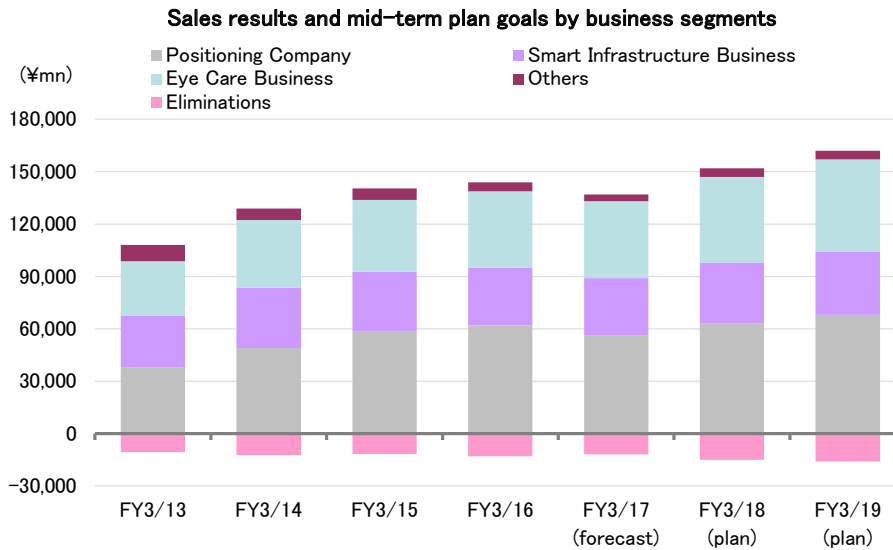
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■ Company and business overview

Resolving social issues related to “healthcare, agriculture, and infrastructure” and contributing to creation of an abundant society

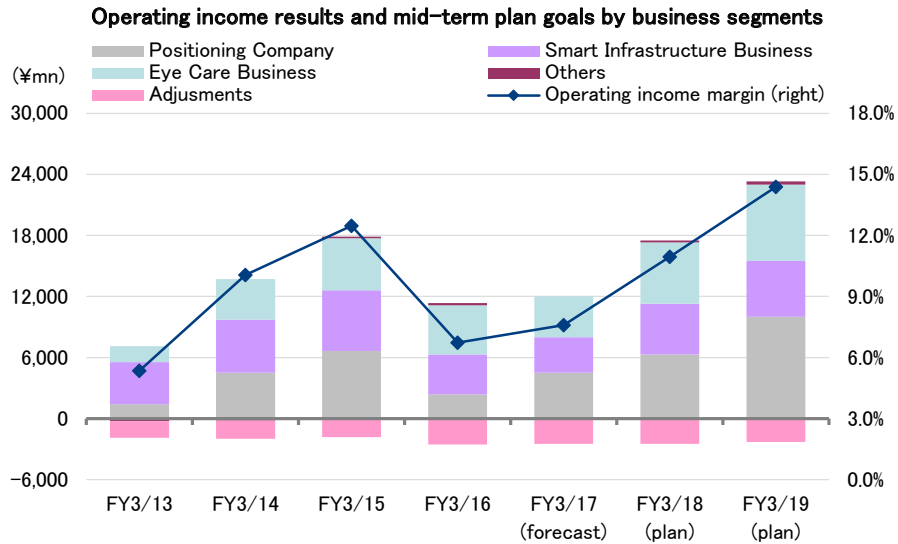
1. Company and business overview

TOPCON has three business domains – Positioning, Smart Infrastructure, and Eye Care. As a corporate mission, the Company embraces the philosophy of “TOPCON for Human life,” in which it seeks to resolve social issues related to “healthcare, agriculture, and infrastructure” and contribute to creation of an abundant society. In the “infrastructure” field, it resolves human resource shortages by automating civil works projects in response to growing global infrastructure investments. In the “agriculture” field, it improves productivity and quality through automation of the farming process to accommodate the rising global population. In the “healthcare” field, by improving IoT medical network solutions it provides early discovery of diseases and enhanced medical efficiency in respond to global aging. While it had been an optical equipment manufacturer, including production of surveying equipment, TOPCON steadily expanded business by adding laser technology, image analysis technology, high-precision GNSS technology, and other technologies to its core optical technology. TOPCON reported FY3/16 consolidated results with ¥130,735mn in sales and ¥8,803mn in operating income, and its overseas sales ratio was 78.6%.

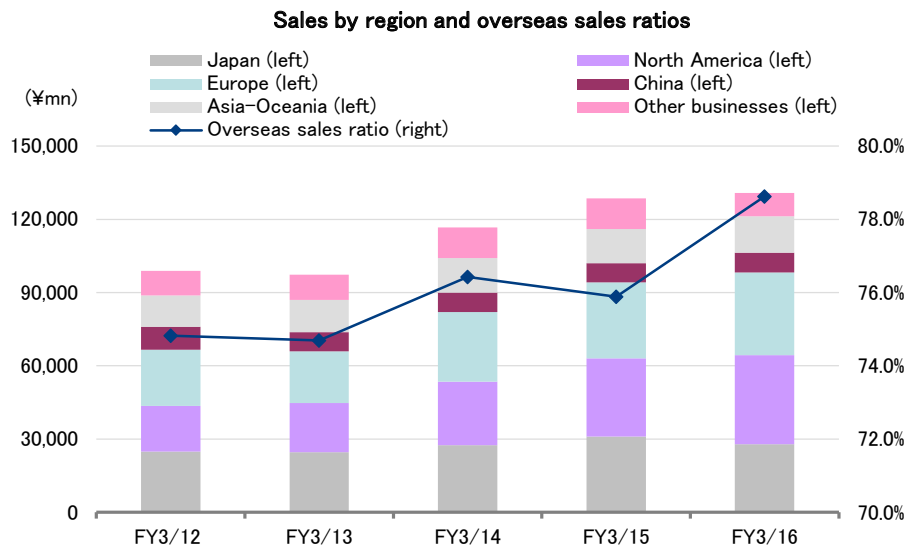


Source: Prepared by FISCO from the Company’s website and The Second Mid-term Business Plan

Company and business overview



Source: Prepared by FISCO from the Company's website and The Second Mid-term Business Plan



Source: Prepared by FISCO from the Company's website

(1) Positioning Company

This segment handles IT construction for automation and construction control in civil works projects utilizing high-precision GNSS positioning technology and IT agriculture that applies IT capabilities to farming and pursues improved efficiency. Main customers are the construction industry for IT construction and large farmers for IT agriculture.

(2) Smart Infrastructure Business

This business sells automated-tracing total station, 3D laser scanners, and mobile mapping systems to surveying business, construction business, and 3D measurement areas, leveraging its involvement in surveying equipment since being founded. TOPCON holds an estimated 35% global top share with its mainstay total station product.

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Company and business overview

TOPCON refers jointly to the Positioning Company and Smart Infrastructure Business as the Positioning Business.

(3) Eye Care Business

This business handles manufacturing and sales of ophthalmological equipment used for examinations, diagnosis, and therapy in cutting-edge ophthalmological medical fields. It has been expanding business scope to prevention and screening and follow-up management in recent years.

2. History

TOPCON was established from the surveying instruments division of K. Hattori & Co., Ltd. (currently Seiko Holdings Corporation <8050>) in 1932 as Tokyo Kogaku Kikai Kabushikikaisha (Tokyo Optical Co., Ltd.) at the request of Japanese Army. It listed shares on the Tokyo and Osaka Stock Exchanges in 1949 and became an affiliate of Toshiba <6502> thereafter in 1960 (Toshiba sold its stake in 2015). It adopted the TOPCON name in 1989.

TOPCON has utilized optical technology cultivated since its founding and integrated cutting-edge high-precision GNSS technology, laser technology, image analysis technology, and other capabilities, including those acquired through M&A to expand its business. It purchased US-based Advanced Grade Technology in 1994, obtaining automated control technology for construction machinery. It acquired US-based Javad Positioning Systems, Inc. in 2000, securing high-precision GNSS technology and beginning sales of high-precision GNSS receivers and IT construction systems. It acquired Australia-based KEE Technologies Pty Ltd. in 2006, entering the farming business, and purchased SOKKIA Co., Ltd. as a subsidiary in 2008, solidifying its position in the total station business. It acquired Digi-Star Investments, Inc. (below, Digi-Star) in 2015, with the aim of expanding IT agriculture and entering dairy farming, and implemented a TOB to acquire Germany-based ifa system AG (below, ifa), a global supplier of ophthalmology electronic records, as a subsidiary in the same year. It expanded business scope through these M&A deals. It purchased Spain-based Mirage Technologies S.L. (below, Mirage), aimed at transferring large-capacity measurement data to cloud processing, and launched MAGNET Collage, a 3D point processing software, as a result in 2016.

Company History

September 1932	Tokyo Optical Co., Ltd.(Currently TOPCON) was established based on the surveying instruments division of K. Hattori & Co., Ltd. (currently Seiko Holdings Corporation)
May 1949	Listed its stock on Tokyo and Osaka Stock Exchanges
March 1960	Became an affiliate of Tokyo Shibaura Electric Co, Ltd. (currently TOSHIBA CORPORATION).
September 1986	Listed in First Section of Tokyo and Osaka Stock Exchange
April 1989	Changed corporate name to TOPCON CORPORATION
September 1994	Acquired Advanced Grade Technology in US, and move into machine control business.
July 2000	Acquired Javad Positioning Systems, Inc. in US, and began developing precision GPS receivers and related products.
February 2004	Established TOPCON (Beijing) Opto-Electronics Corporation in Beijing, China.
April 2006	Implemented 2-for-1 stock split.
October 2006	Acquired KEE Technologies Pty Ltd. in Australia to enter into the agriculture sector.
May 2007	Took over the mobile control business rights from Javad Navigation Systems, Inc. in US.
February 2008	Offered a tender offer bid to SOKKIA Co., LTD. and made it a subsidiary.
August 2010	Acquired retina and glaucoma business of OptiMedica in US and entered therapeutic laser market.
April 2012	Discontinued the Finetech Business Unit.
June 2012	Changed organizational structure into three in-house companies.
February 2013	Capital increase by a public offering
April 2015	Acquired Digi-Star to expand IT agriculture business and to launch dairy industry.
July 2015	Issued 1st and 2nd unsecured bonds
September 2015	TOSHIBA sold out all shares of TOPCON
December 2015	Acquired ifa systems AG, a global supplier of electronic medical record systems and made it a subsidiary
December 2016	Acquired Mirage in Spain aimed at transferring large-capacity measurement data to cloud processing

Source: Prepared by FISCO from the Company materials and press releases

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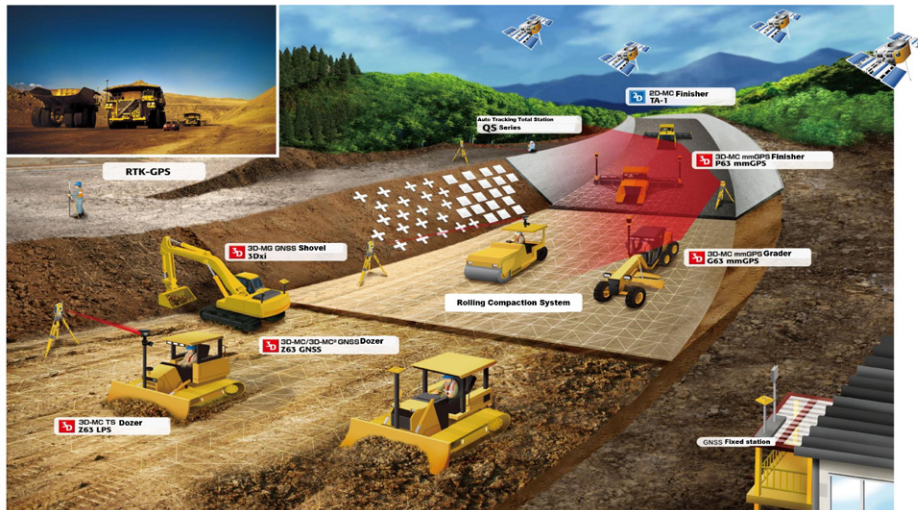
Focus Point 1: IT construction

Start of a “civil engineering revolution” in Japan too

1. What is IT construction?

TOPCON's IT construction refers to a system for ground leveling and drilling processes based on 3D design data that utilizes positioning technology, which consists of a high-precision GNSS receiver, a control box, and various sensors, and hydraulic control technology. The traditional approach had five steps – surveying, design (CAD), setting, construction, and inspection. Surveying and design are the same as before in IT construction, but setting, construction, and inspection are integrated into construction-machinery machine control (CAM). The entire process is shortened to three steps, and this reduces the construction period by 30-50%. In the past approach, construction firms brought 3D CAD data as analog (paper) blueprints to the construction site, installed piles as indicators at the site based on paper blueprints, and construction machinery drivers carried out land digging using visual information from the piles. Utilization of TOPCON's IT construction system greatly improves efficiency. Furthermore, IT automation of the construction process supports work with high precision unrelated to the experience level of the operator. Benefits of IT construction are better productivity as well as removal of personnel shortages and cost savings. High-precision GNSS technology and hydraulic control technology are vital aspects. While precision is an issue in ordinary GNSS used by car navigation systems and smartphones because the positioning coordinates are a few ten meters, TOPCON's high-precision GNSS can measure and control systems at millimeter and centimeter units.

Our Machine Control System ties 3D CAD data with actual operation



Source: From the Company's briefing materials

Focus Point 1: IT construction

2. Main products

The new product in this field is the “Mastless MC System 3D-MCMax.” Previous bulldozer systems attached a mast to the blade as an add-on and needed to connect to the GNSS antennas with a cable. This format had extensive troubles, such as pole breaks because of fierce vibration from construction equipment and severing of the GNSS antenna cable. New products eliminate the mast so do not require pole welding or a cable.

Next Generation Dozer System 3D-MC^{MAX}

The 3D-MC^{MAX} is the next generation of dozer grading solutions that redefines the concept of machine control system. It provides high-accuracy elevation, slope, and blade rotation sensing in an integrated configuration resulting in maximum speed, maximum control and maximum grading performance. The system is designed to let operators work confidently in rough or fine grade applications, slope conditions, and in restricted sight environments without the visual obstruction of masts or risks to hanging cables. By making full use of these systems, it enables safe, high-speed, high-precision construction.



Source: From the Company's website

3. i-Construction and the Japanese market outlook

We anticipate rapid inroads in Japan because of the MLIT's i-Construction initiative to require full adoption of IT (IT construction). IT construction started at about 20% of projects directly under the MLIT's jurisdiction in 2016, and this is slated to rise to 100% in 2020. Related project value should expand to expand fivefold from the current level to roughly ¥2.5-3trn. Additionally, the “Growth Strategy Council – Investing for the Future (chaired by Prime Minister Shinzo Abe),” a joint public-private sector meeting held in September 2016 set a goal of increasing productivity at construction sites by 20% through 2025. The government added projects with orders placed by regional government entities to those directly under national jurisdiction after this meeting. We think Japan has finally entered a phase of increased adoption of utilizing IT construction in public projects, trailing Europe and the US by 16 years. In fact, sites that placed i-Construction orders rose from 400 locations in April 2016 to 1,700 locations in March 2017. We expect TOPCON's products to contribute substantially to improving productivity and resolving manpower shortages at construction sites.

The US and European countries actively use IT construction to achieve cost performance. In Japan, meanwhile, skilled technicians dealt with this aspect in past years. Yet we expect decline in the labor population to make it difficult to employ not only technicians, but also civil engineering workers. It took from a few years to about a 10 years to cultivate qualified construction machinery operators and technicians. TOPCON's IT construction system, however, can be utilized with beginners and realizes high-precision work. We think this is likely to be a savior technology for construction firms struggling with manpower shortages. TOPCON operates training centers that support widespread use in three locations in Japan (Fukushima, Kobe, and Kitakyushu). Operators can experience actual usage of the product at these sites. Furthermore, Japan has many construction machinery rental firms, and companies can curtail initial investments and costs by trying the product on a rental basis. It can be said that a foundation to support expansion of introducing IT construction is in place. TOPCON also jointly developed an IT construction system with Komatsu <6301>, a major construction machinery manufacturer. We expect this involvement in Komatsu's Smart Construction strategy to support growing adoption.

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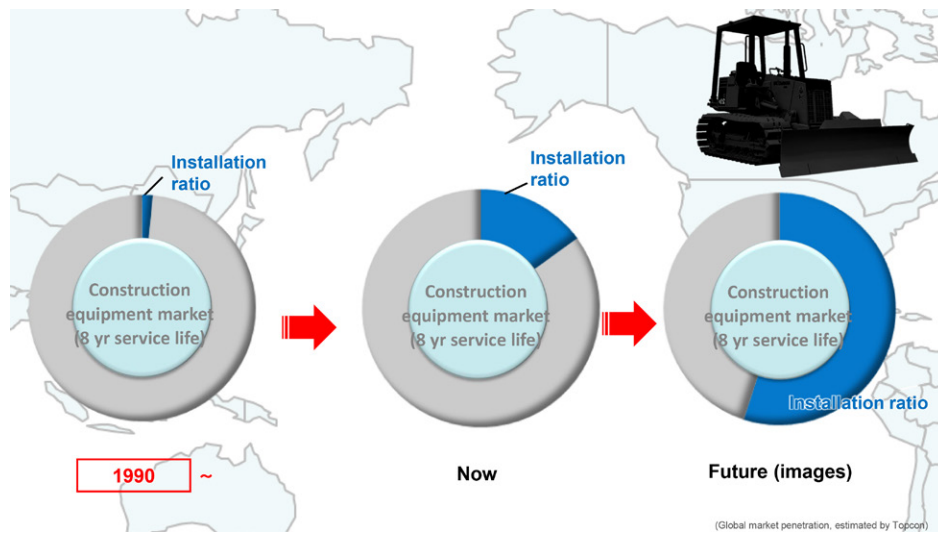
Focus Point 1: IT construction

4. Potential market

Automotive plants widely utilize factory automation and have achieved high production efficiency. Many construction sites, however, still employ inefficient methods, such as paper blueprints and piles as visual indicators, despite utilizing CAD at the design stage. This is because of delays in adopting automation and IT capabilities, even though global infrastructure investment value amounts to over ¥800trn (¥50trn in Japan, ¥120trn in the US), making it the world's largest industry at roughly eight times the scale of the automotive industry (which is worth just over ¥100trn).

TOPCON estimates the global penetration rate using eight years as the useful lifespan of IT construction. While this rate was just a few percent in 1990, it increased to about 10% in 2014 and is currently at about 15%, and TOPCON projects that it should expand to over 50% within 10-20 years. The TOPCON analysis indicates potential market for IT construction of about ¥110bn.

IT Construction Potential Demand and Growth



5. Market shares and competitors

TOPCON holds an estimated roughly 40% top share of the global market for IT construction. Its rivals are US-based Trimble <TRMB> and Sweden-based Hexagon AB <HEXA-B>. The former has a market share on par with TOPCON and the latter stands at a lower share.

6. Growth strategy

We expect stable growth mainly in developed countries because construction investments are steadily growing in the US and Europe and Japan has started promoting i-Construction. Komatsu is TOPCON's leading construction machinery partner, and TOPCON also has alliances with John Deere's construction machinery division and Volvo and other firms. OEM business has entered an expansion phase, and TOPCON is likely to achieve robust growth by acquiring new business partners and expanding models equipped with the system at existing business partners.

■ Focus Point 2: IT agriculture

Large potential demand

1. What is IT agriculture?

IT agriculture improves farming process efficiency by equipping tractors with a high-precision GNSS receiver and console (touch-panel operating screen) in order to support a guidance system that displays the driving line on a display and an automated steering system that eliminates the need for steering operations. Furthermore, installation of the CropSpec cultivation sensor facilitates diagnosis of crop conditions and optimal fertilizer spraying based on crop conditions in real time.

Utilization of an automated steering system that removes the need for steering operations has the following benefits. It raises operating efficiency through removal of excesses, waste, and disparities by operating in line with system assistance. It also reduces operator fatigue by alleviating the need to focus on steering operations. A newer operator can conduct the work with the same precision as a skilled operator. Tractors and other farming machinery support the ISOBUS international standard. Machinery with ISOBUS compliance can be operated from the console so this eliminates the need to change the control box and obtain a power source and conduct other wiring work for each tool. This format is also suited to PC management because work records can be obtained through a USB.

In large-scale farms typically found in the US and European countries, the machine is mainly equipped with large tractors with 150-200hp or more. Switch to an ISOBUS-compliant machine ensures support for a variety of processes. Many tractors exhibited at farming industry events in the US and elsewhere are outfitted with a high-precision GNSS receiver or envision outfitting. In the US and European countries, farming is often managed and operated as a business and cost-performance assessments are clearly calculated. This appears to be a reason for wider adoption in these countries than in Japan. Interest in rolling out IT agriculture equipment is growing in Japan, mainly in Hokkaido, since FY3/17, and it might not very long until Japanese farmers can simply improve efficiency and streamline operations by selecting TOPCON's products.

2. Main products and applicable tasks

Main products are the guidance system that discloses the driving line on a screen and the automated steering system that eliminates the need for handle operations. These systems support ground tilling, seed planting, pesticide spraying, weed management, and other tasks by changing the tool. Installation of the CropSpec cultivation sensor facilitates diagnosis of crop conditions and optimal fertilizer spraying based on crop conditions in real time.

Focus Point 2: IT agriculture

CropSpec and guidance System

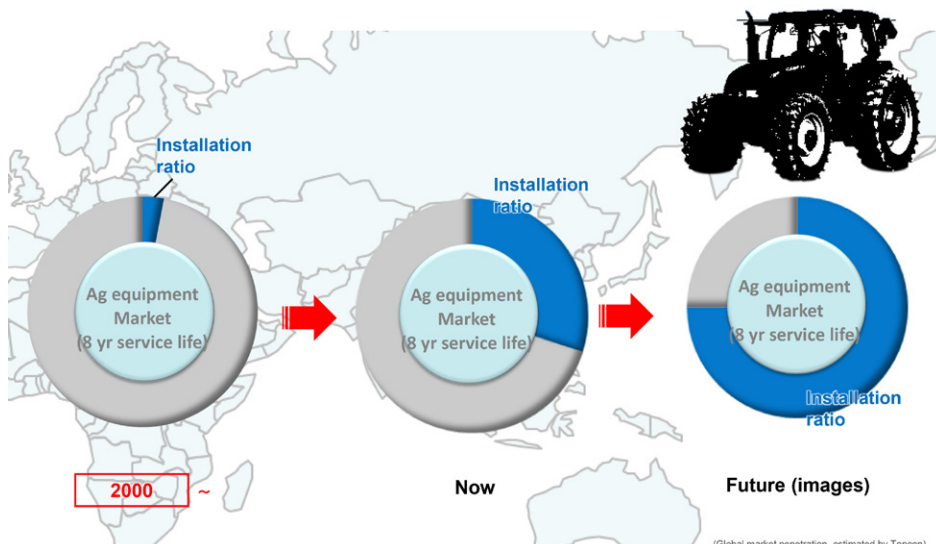


Source: Prepared by FISCO from the Company's website

3. Potential market

The IT agriculture equipment installation rate was just a few percent in 2000, but TOPCON estimates that it has currently expanded to about 30% and should expand to about 75% in the future. TOPCON believes that the global market is worth about ¥200bn. Global population is steadily rising, and the world is facing a food crisis due to decline in farming land per person. We expect TOPCON's products to contribute substantially to efficiency production of food that is vital to sustaining human life.

IT Agriculture Potential Demand and Growth



Source: From the Company

(Global market penetration, estimated by Topcon)

Focus Point 2: IT agriculture

4. Market shares and competitors

TOPCON holds a market share of about 20%, and its rivals are US-based John Deere <DE>, the top player, and Trimble <TRMB>. TOPCON has an alliance with John Deere's construction machinery division.

5. Growth strategy

TOPCON has completed its portfolio with mainstay auto-steering position information as well as acquisitions of harvest management and other measuring information and boom height automated control and other machine control technology through M&A deals in 2014-15. We expect TOPCON to realize considerable growth as farming market recovers in the US and Europe with its IT agriculture business and acquired companies. AGCO is a notable partner, and TOPCON has alliances with Italy-based SAME DEUTZ-FAHR and others. TOPCON also many mid-sized tractor tool manufacturers as partners. It thinks that OEM business has entered an expansion phase. TOPCON should deliver strong growth by recruiting new business partners and increasing models equipped with the system at existing business partners.

■ Focus Point 3: Eye Care business

Provides a broad range of ophthalmological equipment, likely to realize further growth with the ifa acquisition


1. Markets covered by TOPCON and equipment supplied

Ophthalmologists use multiple systems for eyesight exams, ocular tension exams, and other inspections. TOPCON supplies almost all of these products. It caters to ophthalmological hospitals and eyeglass stores. Key equipment types are ophthalmological examination and diagnosis systems, ophthalmological treatment systems, electronic record and IT solutions, and eyeglass store equipment.

2. Main products and features

TOPCON's core product is the 3D OCT series of 3D retinal photography cameras, industry-first products that integrate OCT (optical coherence tomography) and retinal camera functionality in a single system. TOPCON sells the Maestro model to the ophthalmologist and screening market and the Triton model to the research and ophthalmological clinical market. Maestro is the only product with automatic OCT on the market and supports imaging by anyone. This removes the impact of operator skill on the test results. This product is not only easy to use, it offers excellent depiction with high pixel count. Analysis report results are detailed and readily seen. A variety of reports that reflect the ailment, such as yellow spot analysis mode and optic nerve head shape analysis model, can be output too. TOPCON obtained approval from the US Food & Drug Administration (FDA) in July 2016. Triton is a next-generation Swept Source OCT with the industry's fastest scanning function. Its instantaneous photography acquires clearer high-quality images with less impact from eyeball movement. This product has an optional angiography function that provides clear visibility of state of blood flow inside retina blood vessels and microvascular structure in a non-invasive way (fluorescent agent is not used), thereby lightening the patient burden. Famous doctors worldwide very highly rate TOPCON's "ultimate all-in-one OCT" product. TOPCON has an estimated share in the 3D OCT market of about 30%. In treatment equipment, the PASCAL series of ophthalmological laser photocoagulation systems treats retinal disease and can irradiate many spots in a short period to shorten treatment time and alleviate pain. The ALADDIN optical eye-axis measurement system is ideal for exams prior to cataract surgery.

Focus Point 3: Eye Care business



World's First

Optical Coherence Tomography 3D OCT Series

This instrument, which combines a retinal camera with optical coherence tomography, contributes to early detection and treatment of various ophthalmic diseases by capturing 3D as well as 2D cross-sectional images of the fundus.



World's First

Ophthalmic Laser Photocoagulator PASCAL®

PASCAL, which burns the diseased part of the retina through multispot laser irradiation, contributes to the treatment of diabetic retinopathy and retinal break, which causes retinal detachment.

Source: From the Company's annual report

Creation of an ophthalmological IT solutions business

3. Growth strategy

Besides screening, TOPCON plans to strengthen sales in the treatment field and release new products for the treatment market. TOPCON expects steady growth in 3D OCT sales. Additionally, 3D OCT-1 Maestro is beginning to take hold in Japan's health check-up market and should make rapid inroads with the aging trend in Japan. TOPCON intends to create an ophthalmological IT solutions business for sharing data in the cloud and provision of services that support collaboration among local areas.

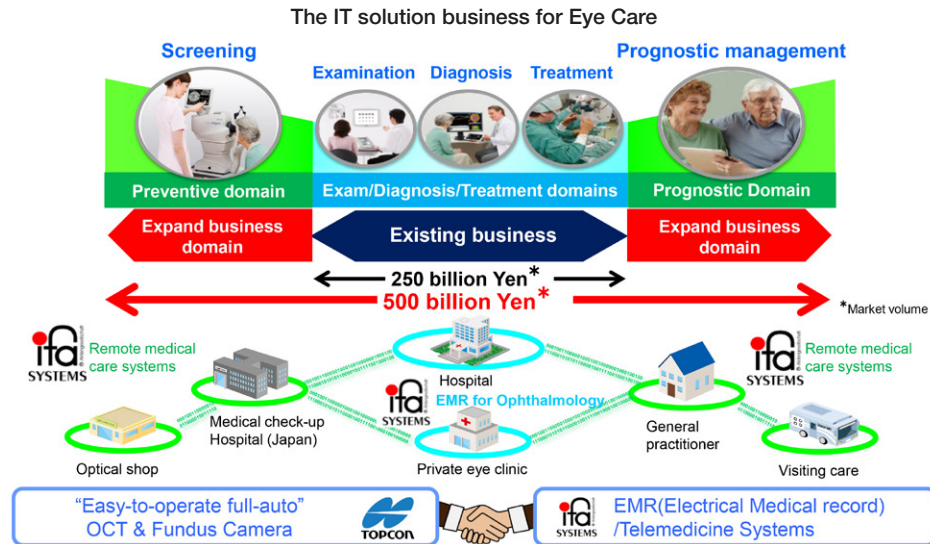
TOPCON seeks to expand the electronic medical records business with the investment in Germany-based ifa. The ifa electronic medical records are vendor-neutral and can connect with over 500 systems other than those supplied by TOPCON and thereby support centralized management of massive amounts of data and a wide range of examination and treatment information in the ophthalmology field. The ifa system supports remote diagnosis as well. With this capability, patients can receive examinations and diagnosis at Wal-Mart and other retailers, overseas eyeglass shops, family physicians, and other local sites, without having to visit a large hospital. Demand is particularly strong in long-term cases, such as age-related macular degeneration and glaucoma. TOPCON plans to increase income in the eye care business by expanding sales of OCT equipment and other existing hardware and selling electronic medical record systems worldwide and rolling out a fee system for remote diagnosis.

4. Potential market

Populations are steadily getting older in developed countries and emerging countries, and the number of people afflicted with eye-related diseases is increasing. The three major eye diseases (glaucoma, diabetic retinopathy, and age-related macular degeneration) can lead to blindness. Early discovery and early treatment are vital. The importance of early discovery is also growing for efforts to comprehensively reduce medical costs. Emerging markets should be expanding as well given the prospect of rising outlays on medical care, including in preventive fields, as incomes grow.

Focus Point 3: Eye Care business

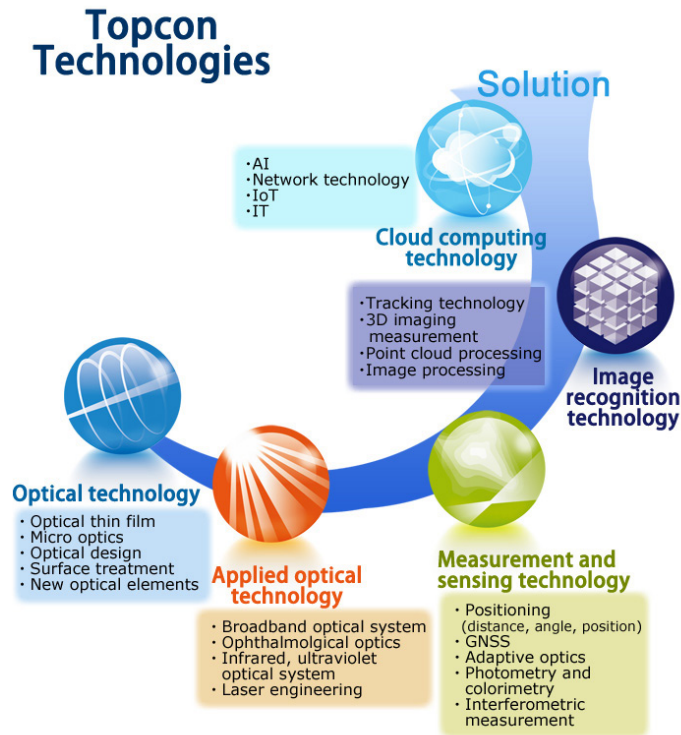
Global gross medical costs, including drugs, amount to about ¥700trn. The ophthalmological examination, diagnosis, and treatment field, where TOPCON mainly operates, is worth roughly ¥250bn. TOPCON estimates that the target market could grow to about ¥500bn through expansion of business scope to prevention and screening as well as follow-up management and pursuit of electronic medical records and other growth strategies.



Source: From the Company's the Second Mid-term Business Plan briefing material

Strengths

TOPCON emphasizes its strengths as having excellent technologies, strong global coverage, and high market shares. Technologies include a world first millimeter-level GPS devices, industry-leading 3D OCT, and the world's fastest IT construction system 3D-M C². In market share, TOPCON is sustaining No.1 global shares in total station, retinal cameras, and other major products. In global coverage, TOPCON generates a substantial portion of income outside of Japan as seen in the regional breakdown of FY3/16 consolidated sales (¥130,735mn) with Japan at just 21.4% and North America at 27.8%, Europe at 25.9%, China at 6.2%, Asia-Oceania at 11.4%, and others at 7.3%. Development takes place at 28 sites in Japan, the US, Europe, and Australia. TOPCON also manufactures products at 17 sites and has sales offices at 34 sites with global reach that includes Africa. Another indicator of its global nature is that 65% of all employees are non-Japanese, and this ratio reaches 75% for engineers.



Source: From the Company

A further strength is TOPCON's ability to effectively accommodate acquisitions and globalization. TOPCON has acquired many companies, as explained in the history section, enabling it to supplement and enhance its own technologies and products. While Japanese companies often acquire overseas firms, there are not many cases of obtaining satisfactory results from investments. It is also not unusual to encounter difficulties in integrating people that prevent the acquisitions from obtaining the anticipated effect. TOPCON is dealing with global management by letting non-Japanese people serve as presidents of overseas consolidated subsidiaries.

■ Mid-Term Business Plan

Accelerating growth strategies to realize 34% annual average growth in operating income during FY3/16-19; targets 20% ROE over the long term

1. Overview of the Second Mid-Term Business Plan

TOPCON announced the Second Mid-Term Business Plan covering FY3/17-19 in April 2016. The plan's basic strategy presents goals of 1) strengthening the management structure, 2) advancement of the growing business, and 3) creation of a subscription business model. TOPCON targets 20% ROE as a long-term goal.

1) Strengthening the management structure consists of two main initiatives. One is improving management efficiency with operating base consolidation, productivity improvement, and raw material cost down. TOPCON expects these efforts to increase operating income by ¥6bn over the three years of the plan. The other is improving cash flow from operating activities. TOPCON aims to generate cash by increasing profits and reducing inventory assets and utilizes these funds for growth investments. It hopes to increase cash flow from operating activities from ¥4bn in FY3/16 to ¥12bn in FY3/17, ¥17bn in FY3/18, and ¥23bn in FY3/19.

2) Refer to "3. Growth strategies by business segments" for details on advancement of the growing business.

3) Creation of a subscription business model aims to strengthen and enhance cloud applications in each area and operate these services in a fee-charging manner, in addition to the existing outright-sale business. Specifically, TOPCON plans to collect data from construction sites, farms, and hospitals through cloud-based applications for its various businesses in IT construction, IT agriculture, and eye care respectively. It intends to improve business efficiency by scientifically implementing tasks that relied on experience and intuition in the past by getting to know project progress conditions, preparing resources utilization plans, and supporting diagnosis, forecasting, and prescribing at farms and hospitals.

2. Numerical goals in the Second Mid-Term Business Plan (values released on April 28, 2016)

Consolidated results goals are ¥130,000mn in sales and ¥10,500mn in operating income in FY3/17, ¥137,000mn in sales and ¥15,000mn in operating income in FY3/18, and ¥146,000mn in sales and ¥21,000mn in operating income in FY3/19. Forex rate assumptions from FY3/17 are ¥110/\$ (vs. the ¥120.16 average rate in FY3/16) and ¥125/EUR (vs. ¥132.36).

Segment targets are the Positioning Company at ¥68,000mn in sales and ¥10,000mn in operating income, putting CAGR at a robust 61%, in FY3/19, the Smart Infrastructure Business at ¥36,000mn in sales and ¥5,500mn in operating income in FY3/19, the Eye Care Business at ¥53,000mn in sales and ¥7,500mn in operating income in FY3/19, and other businesses at ¥5,000mn in sales and ¥300mn in operating income in FY3/19. TOPCON expects faster growth in operating income than sales CAGR for major business domains. For Positioning, which has the strongest growth rate, the plan seeks a sharp expansion of operating margin from 3.8% in FY3/16 to 14.7% in FY3/19.

TOPCON budgets ¥33bn in R&D costs, ¥12bn in capital investments, and ¥20bn in M&A and other financing for years covered by the Second Mid-Term Business Plan.

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Mid-Term Business Plan

Consolidated Results Goals (values released on April 28, 2016)

(¥mn)

	FY3/16	Second Mid-Term Business Plan		
		FY3/17 (plan)	FY3/18 (plan)	FY3/19 (plan)
Net sales	130,735	130,000	137,000	146,000
Converted at FY3/16 forex rates	-	139,000	146,000	156,000
Operating income	8,803	10,500	15,000	21,000
Operating income margin (%)	6.7	8.1	10.9	14.4
Converted at FY3/16 forex rates	-	12,500	17,200	23,500
Operating income margin (%)	-	9.0	11.8	15.1
Ordinary income	7,366	9,000	13,000	19,000
Profit attributable to owners of parent	4,197	5,000	7,000	11,000
ROE (%)	6.9	8	11	15
ROIC (%)	5.4	6	9	13
DPS	24	16	20	30
Forex rate (average during the period)				
USD (JPY/USD)	120.16	110	110	110
EUR (JPY/EUR)	132.36	125	125	125

Source: Prepared by FISCO from the Company's website

Segment consolidated results goals (values disclosed on April 28, 2016)

(¥mn)

	FY3/16	Second Mid-Term Business Plan			FY3/16-19
		FY3/17 (plan)	FY3/18 (plan)	FY3/19 (plan)	CAGR (%)
Net sales	130,735	130,000	137,000	146,000	4
Positioning	61,977	59,000	63,000	68,000	3
Smart Infrastructure	32,989	33,500	35,000	36,000	3
Eye Care	43,834	45,500	49,000	53,000	7
Others	4,997	5,000	5,000	5,000	0
Eliminations	-13,063	-13,000	-15,000	-16,000	-
Operating income	8,803	10,500	15,000	21,000	34
Positioning	2,385	4,000	6,300	10,000	61
Smart Infrastructure	3,909	4,000	5,000	5,500	12
Eye Care	4,850	5,000	6,000	7,500	16
Others	196	200	200	300	-
Cancellations	-2,538	-2,700	-2,500	-2,300	-
Operating income margin (%)	6.7	8.1	10.9	14.4	
Positioning (%)	3.8	6.8	10.0	14.7	
Smart Infrastructure (%)	11.8	11.9	14.3	15.3	
Eye Care (%)	11.1	11.0	12.2	14.2	
Others (%)	3.9	4.0	4.0	6.0	

Source: Prepared by FISCO from the Company's website

Investment plan for the growth strategies (values disclosed on April 28, 2016)

(¥100mn)

	Second Mid-Term Business Plan			FY3/17-19
	FY3/17 (plan)	FY3/18 (plan)	FY3/19 (plan)	(plan)
R&D expenses	100	110	120	330
Capital investments	40	40	40	120
Financing (M&A)	20	60	120	200

Source: Prepared by FISCO from the Company's website

3. Growth strategies by business segments

(1) Positioning Company

TOPCON is promoting expansion of IT construction and IT agriculture as growth areas. In core business, it intends to strengthen competitiveness by releasing a “disruptive” strategic product in the GPS area and continue lowering costs.

a) IT construction

In IT construction, TOPCON has a lead over other firms in advanced technologies, such as the Mastless MC System 3D-MCMax, and is aiming for further expansion of add-on and OEM businesses.

b) Expansion of IT agriculture

In IT agriculture, TOPCON seeks to acquire new technologies and enter new areas through M&A and expand add-on and OEM businesses.

(2) Smart Infrastructure Business

Growth businesses are i-Construction and 3D measuring. The Japanese government is taking a leading role in promotion of i-Construction, and this is accelerating adoption of IT construction systems and 3D measuring equipment in Japan. Opportunities for the latter area include social infrastructure maintenance and building measurement management. Given the large presence of core business, TOPCON is promoting a common platform for Total Station and pursuing improved profitability by lowering manufacturing costs.

(3) Eye Care Business

Growth businesses are 3D OCT and ophthalmological medical records. TOPCON seeks to increase sales of Triton and Maestro products in line with market expansion. TOPCON acquired FDA approval for Maestro in July 2016 for the US market. While this was the latest release among developed countries, the US market is beginning to contribute to sales. TOPCON aims to grow sales even more by acquiring Triton approval during FY3/18. It entered ophthalmological electronic medical records business by acquiring Germany-based ifa in 2015. TOPCON hopes to make inroads in the ophthalmological field by leveraging vendor-neutral features and seeking to increase sales and stabilize income through pursuit of remote diagnosis and fee businesses.

4. Risks

Primary risks are major fluctuation in forex rates, global economic impacts, timing discrepancies (such as demand not ramping up as anticipated), and natural disasters. TOPCON addresses forex risk by arranging forex hedges using futures contracts within the scope of actual demand.

Results trends

Large impact by forex fluctuations

1. Past results

TOPCON reported ¥71,480mn in sales and ¥4,167mn in operating income as consolidated results in FY3/04. While it subsequently continued growth and reached ¥112,666mn in sales in FY3/09, it slipped to an operating loss of ¥6,944mn due to the financial crisis following the collapse of Lehman Brothers. Sales weakened to ¥94,862mn in FY3/10, but steadily rose thereafter thanks to business structure reforms and expanded to ¥116,685mn in FY3/14 and ¥128,569mn in FY3/15. Operating income slumped on the financial crisis. However, TOPCON restored a profit in FY3/10 and lifted operating income to ¥16,041mn in FY3/15. For the period from FY3/04 through FY3/15, TOPCON increased consolidated sales by 1.8 times and consolidated operating income by 3.8 times.

TOPCON had a difficult time in FY3/16 with weaker profit on a modest rise in sales. Specifically, sales rose 1.7% to ¥130,735mn and operating income dropped 45.1% to ¥8,803mn. TOPCON reduced its operating income guidance twice during the year and missed targets presented in January 2016 by 1.7% for sales and 29.6% for operating income. While Eye Care Business posted upbeat sales and profits, operating incomes slipped because of impacts by sluggish IT agriculture business in the US and Europe and lower crude oil prices on the Positioning Company and by weaker orders placement in Japan due to shrinking earthquake reconstruction demand and slow public project orders in Japan and delayed rollout of new total station products in overseas markets on Smart Infrastructure Business. TOPCON took various steps to improved income, such as spending cutbacks (including personnel revisions), releases of strategic new products, reductions in production costs, and sales shift to high value-added products, it was unable to sufficiently offset profit-decline impacts from slow markets, lower overseas economies, and higher costs to fund product development to expand business areas and reinforce core systems.

Simplified consolidated statements of income

	(mn)					
	FY3/12	FY3/13	FY3/14	FY3/15	FY3/16	FY3/17 E
Net sales	98,834	97,345	116,685	128,569	130,735	125,000
YoY	-3.5%	-1.5%	19.9%	10.2%	1.7%	-4.4%
Cost of sales	60,716	54,517	61,034	62,299	65,093	
YoY	-1.1%	-10.2%	12.0%	2.1%	4.5%	
Gross profit	38,118	42,828	55,651	66,269	65,642	
YoY	-7.2%	12.4%	29.9%	19.1%	-0.9%	
SG&A expenses	36,037	37,613	43,920	50,227	56,839	
YoY	-8.4%	4.4%	16.8%	14.4%	13.2%	
Operating income	2,080	5,214	11,730	16,041	8,803	9,500
YoY	15.6%	150.6%	124.9%	36.7%	-45.1%	7.9%
Ordinary income	467	3,471	11,300	14,880	7,366	7,500
YoY	-23.2%	642.9%	225.5%	31.7%	-50.5%	1.8%
Profit attributable to owners of parent	-3,686	511	5,963	8,670	4,197	4,200
YoY	-	-	-	45.4%	-51.6%	0.1%

Source: Prepared by FISCO from securities reports

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Results trends

Simplified consolidated balance sheet

	End FY3/12	End FY3/13	End FY3/14	End FY3/15	End FY3/16	End FY3/17 3Q
	(mn)					
Current assets	78,207	89,110	96,391	100,946	107,663	100,894
Cash and deposits	13,775	17,213	15,187	16,507	16,186	17,744
Notes and accounts receivable – trade	35,871	36,912	41,875	43,210	42,484	33,598
Merchandise and finishing goods	21,597	26,363	29,420	30,627	36,001	37,029
Non-current assets	42,569	40,392	39,426	42,235	58,879	57,495
Property, plant and equipment	12,850	11,277	11,188	12,159	13,265	14,047
Intangible assets	18,344	18,892	18,132	21,081	38,636	36,346
Goodwill	10,048	9,650	8,319	8,555	17,501	16,409
Investments and other assets	11,374	10,222	10,105	8,994	6,976	7,101
Total assets	120,777	129,503	135,818	143,181	166,542	158,390
Current liabilities	55,375	54,662	50,010	57,794	49,628	43,916
Notes and accounts payable - trade	12,206	9,903	11,107	12,034	11,066	9,477
Short-term loans payable	33,625	31,627	25,044	30,105	23,754	20,428
Non-current liabilities	32,337	25,818	31,478	20,775	55,770	53,858
Long-term loans payable	25,256	19,002	22,689	13,908	40,387	38,029
Total liabilities	87,713	80,480	81,489	78,570	105,399	97,775
(Interest bearing debt)	58,882	50,629	47,733	44,013	64,141	58,457
Non-controlling interests	397	548	729	1,150	2,832	2,968
Total net assets	33,064	49,022	54,328	64,610	61,143	60,615

Source: Prepared by FISCO from securities reports and the Company's financial results

Simplified consolidated cash flow statement

	FY3/12	FY3/13	FY3/14	FY3/15	FY3/16
	(mn)				
Cash flows from operating activities (a)	47	3,474	8,132	17,143	3,979
Cash flows from investing activities (b)	-3,622	-1,611	-3,532	-9,192	-27,100
Cash flows from financing activities	3,467	976	-6,877	-7,602	22,889
Free cash flow (a) + (b)	-3,575	1,862	4,599	7,951	-23,121
Cash and cash equivalents at end of period	13,606	16,883	15,029	16,252	15,499

Source: Prepared by FISCO from securities reports

Results trends

Sharp improvement in Positioning lifted consolidated operating income 57.6% YoY in 3Q FY3/17 (excluding forex impact)

2. 3Q FY3/17 consolidated results

TOPCON reported 3Q FY3/17 consolidated results with ¥87,422mn in sales (down 4.5% YoY), ¥4,412mn in operating income (up 6.3%), ¥3,009mn in ordinary profit (down 5.8%), and ¥878mn in profit attributable to owners of parent (down 20.0%). Excluding the forex impact, however, TOPCON achieved stronger sales and sharply higher profits growth rates of 5.1% in sales, 57.6% in operating income, 71.5% in ordinary income, and 145.6% in profit attributable to owners of parent.

The Positioning Company incurred an 8.9% YoY decline in sales to ¥40,734mn (up 2.5% excluding forex impact), despite higher IT construction sales and a rise in IT agriculture sales for the second straight quarter, because of forex pressure, though operating income increased sharply with a gain of 194.8% to ¥3,010mn (up 231.7%) thanks to strong boosts from new products and cutbacks in fixed costs and production costs. The Smart Infrastructure Business had a 2.8% decline in sales to ¥22,445mn (up 4.5%), even with i-Construction advances in Japan and growth in India and China, because of weakness in Middle East and South American markets, and a 30.1% dip in operating income to ¥1,702mn (down 6.9%). The Eye Care Business benefited from the successful launch of Maestro sales in the US market and the upbeat eye examination market and OCT sales in China, but faced weaker price competitiveness due to yen appreciation in the European market. Its results were a 2.6% rise in sales to ¥30,078mn (up 12.9%) and a 33.2% decline in operating income to ¥1,716mn (up 19.7%). We attribute the decline in Smart Infrastructure operating income, even though TOPCON's sales and profits increased on a real basis in almost all areas, to delayed release of new total station products in the US and Europe.

3. FY3/17 consolidated guidance

TOPCON guides for FY3/17 consolidated results of ¥125,000mn in sales (down 4.4% YoY), ¥9,500mn in operating income (up 7.9%), ¥7,500mn in ordinary profit (up 1.8%), and ¥4,200mn in net profit attributable to parent owners (up 0.1%). It expects to miss Second Mid-Term Business Plan goals because of negative forex impact. Forex sensitivities disclosed for annual operating income by TOPCON are ¥150mn for the USD/JPY and about ¥70mn for the EUR/JPY.

3Q FY3/17 Consolidated results

	FY3/16 3Q		FY3/17 3Q		YoY	Progress rate	FY3/17
	Results	% of sales	Results	% of sales			Company forecast
							(mn)
Net sales	91,542	-	87,422	-	-4.5%	69.9%	125,000
Cost of sales	44,825	49.0%	42,296	48.4%	-5.6%		
Gross profit	46,716	51.0%	45,125	51.6%	-3.4%		
SG&A expenses	42,565	46.5%	40,713	46.6%	-4.4%		
Operating income	4,150	4.5%	4,412	5.0%	6.3%	46.4%	9,500
Ordinary income	3,194	3.5%	3,009	3.4%	-5.8%	40.1%	7,500
Profit attributable to owners of parent	1,098	1.2%	878	1.0%	-20.0%	20.9%	4,200

Source: Prepared by FISCO from the Company's financial results

Equity share supply-demand balance

High ownership by foreign corporate investors

TOPCON's shareholders by category as of September 30, 2016 were financial institutions at 32.01%, financial product agents at 0.64%, other corporate owners at 1.96%, foreign corporations at 48.14%, and individuals and others at 15.34%. Foreign corporate investors own about half of the shares. Foreign owner stakes according to the quarterly securities report of second quarter of 124th period were Capital Group (US) at 22.30%, Newton Investment Management (US) at 8.54%, Baillie Gifford & Co. (US) at 7.55%, and Taiyo Funds (US) at 6.88%.

Ownership ratio by shareholder type (as of September 30, 2016)

	Governments and local public bodies	Financial institutions	Financial instruments business operators	Other companies	Overseas corporations	Individual investors and others	Total
Ownership ratio (%)	-	32.01	0.64	1.96	48.14	15.84	100.00

Source: Prepared by FISCO from the Company's website

Major Shareholders (as of September 30, 2016)

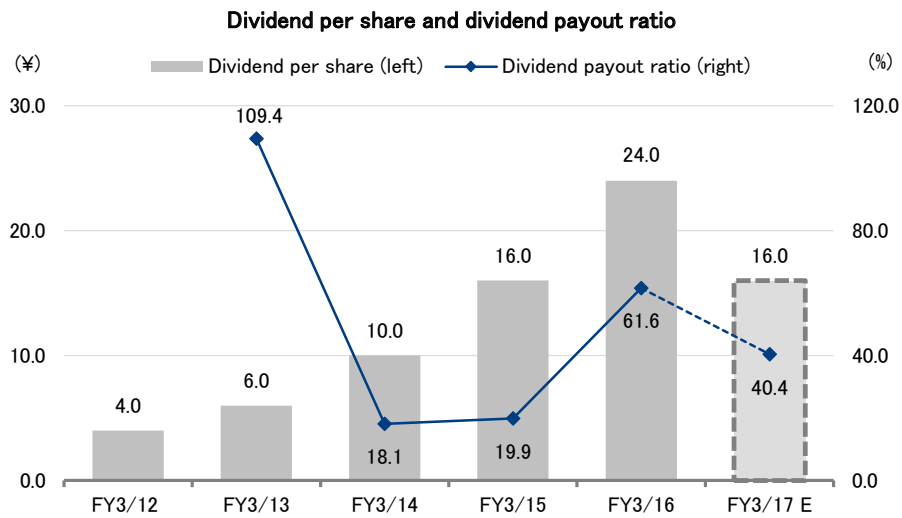
Ranking	Name	No. of shares held (Thousands of shares)	Ratio of total shares issued (%)
1	STATE STREET BANK AND TRUST COMPANY (Standing proxy: Hong Kong and Shanghai Banking Corporation Tokyo Branch)	10,387	9.61
2	Japan Trustee Services Bank, Ltd. (trust account)	7,379	6.83
3	THE BANK OF NEW YORK 133522 (Standing proxy: Mizuho Bank, Ltd. Settlements Sales Division)	5,135	4.75
4	Japan Trustee Services Bank, Ltd. (trust account 9)	4,640	4.29
5	The Dai-ichi Life Insurance Company, Limited (Standing proxy: Trust & Custody Services Bank, Ltd.)	4,350	4.02
6	The Master Trust Bank of Japan, Ltd. (trust account)	3,931	3.64
7	TAIYO HANEI FUND, L.P. (Standing proxy: Citibank Japan Ltd.)	2,650	2.45
8	JP MORGAN CHASE BANK 380055 (Standing proxy: Mizuho Bank, Ltd. Settlements Sales Division)	2,649	2.45
9	STATE STREET BANK AND TRUST COMPANY 505019 (Standing proxy: Hong Kong and Shanghai Banking Corporation Tokyo Branch)	2,458	2.27
10	JPMC OPPENHEIMER JASDEC LENDING ACCOUNT (Standing proxy: The Bank of Tokyo-Mitsubishi UFJ, Ltd.)	2,208	2.04
Total		45,790	42.36
Based on values from reports of possession of large volume and change reports			
	Capital Group	24,107	22.30
	Newton Investment Management	9,228	8.54
	Baillie Gifford & Co.	8,165	7.55
	Taiyo Fund	7,434	6.88
	Sub total	48,934	45.27

Source: Prepared by FISCO from quarterly securities reports

Shareholder return policy

Applying 30% dividend payout from FY3/17

TOPCON states that it will apply 30% dividend payout from FY3/17. It paid a ¥24 dividend in FY3/16, and the FY3/17 outlook projects a decline to ¥16. This outcome can be attributed to adopting a 30% payment commitment from FY3/17 and the inflated 61.6% payout ratio in FY3/16 because of the decision to maintain the period-start dividend despite lowering the earnings outlook.



Source: Prepared by FISCO from securities reports and the Company's financial results



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