Business Strategy Strategy and Progress of the Automotive Business

Toward Further growth through a holistic electrification strategy and new products

Even though the transition from internal combustion engine (ICE) vehicles to electric vehicles (EVs) has slowed, NSK feels that the long-term trend remains unchanged. By 2030, we estimate that the markets for both EVs and hybrids (HEV and PHEV) will expand, and therefore expect to see the ratio of electric vehicles, when combining EVs, HEVs, and PHEVs, to grow as anticipated.

In response to the demand for low-friction, high-speed rotation, and electric erosion resistance required as a result of changes in powertrains against the backdrop of this shift to EVs, NSK will take a holistic, flexible approach through high-value-added electrification technologies and product lineups, including Gen 3 tapered hub bearing units, ball screws for electric brake systems, and quiet operation, high-efficiency electric units. Through the market introduction and expansion of new products, we will capture a majority share of orders in an effort to secure growth that exceeds the declining demand from ICE vehicles. At the same time, we will maintain our position as the world's leading supplier of automotive bearings.

NSK's Competitive Advantages

- Diverse business relationships and customer base as an independent manufacturer with automakers and first-tier automotive components manufacturers built up over many years
- Supply system in areas of demand (robust supply chain system based on local production for local consumption), ability to meet global demand from each of the sales and technology perspectives
- Developmental capabilities and technical expertise critical to addressing the shift to EVs and increasingly advanced automobile functionality (Four Core Technologies plus One; trend toward reductions in both size and weight, low torque, and low friction, and electric erosion resistance)
- Ball screw technologies cultivated through industrial machinery

Change in Business Environment	Risks/Opportunities	Challenges to Address
○ Recovery of automotive production volume (98 mil vehicle/yr) ○ Acceleration of electrification ○ China slowdown ○ Stagnation of volume (92 mil vehicles/yr)	**Risks** ● Sluggish EV growth ● Increased price competition ● Accelerating pace of development **Opportunities** ● HEV/PHEV growth ● Increase in opportunities to cultivate new customers and propose new products on the back of the shift to EVs	**Growth/Expansion** ● Greater profitability and growth through expanded sales for EVs ● Technology differentiation: Low friction/high-speed rotation/electric erosion resistance ● Market introduction and expansion of new products and increased development speed **Profitability improvement** ● ICE product production reorganization ● Expanded lineup and greater sales of high-value-added products meeting electrification needs

Hideki Ochiai
Executive Vice President
Head of Automotive Business Division HQ

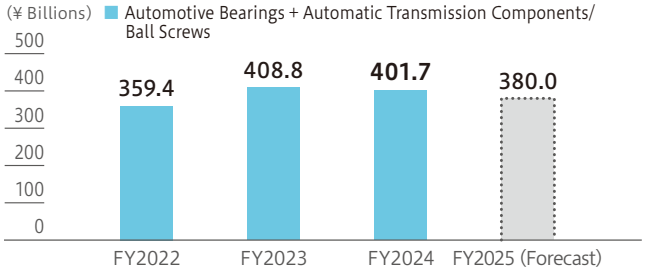
A look back at the business conditions for FY2024 and the forecast for FY2025

Global automotive production volumes fell below those of the previous fiscal year, which resulted in lower year-on-year sales and operating income for the consolidated fiscal year under review.

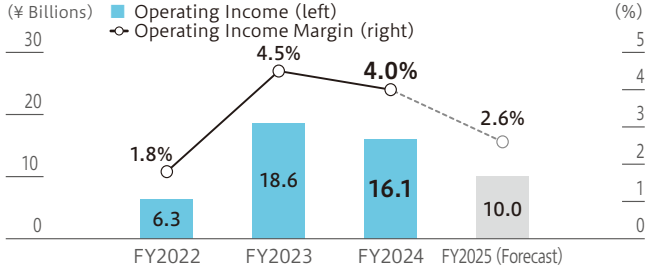
Looking at the Company's results by region, Japan saw a sales decline due to the production and delivery suspensions by some automobile manufacturers. In the U.S., sales increased thanks to a trending recovery in automobile sales volumes. Meanwhile, Europe experienced a decline in sales as a result of ongoing sluggishness in the automobile market. In China, sales fell due to lower demand stemming from the impact of poor Japanese automobile sales.

As a result, sales in the Automotive Business totaled ¥401.7 billion, a year-on-year decline of 1.7%, and operating income came in at ¥16.1 billion, a year-on-year decline of 13.4%.

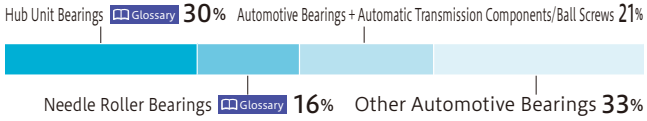
Sales Trends



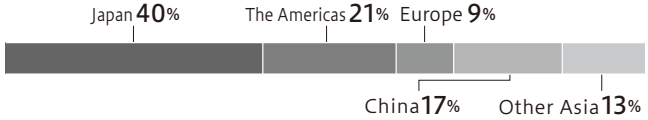
Operating Income and Operating Income Margin Trends



Breakdown of Sales by Product (Sales: ¥401.7 billion)



Breakdown of Sales by Region



Note: Historically, NSK has separately disclosed details of its automotive bearings and automotive components sales. Accounting for the steering business' classification as a discontinued operation in FY2023, FY2022 data were retroactively adjusted and disclosed solely on an Automotive Business basis. Meanwhile, equity in earnings of the joint venture with JIS, established on August 1, 2023, is included in segment income from the second quarter of FY2023.

Progress of MTP2026 and growth engines

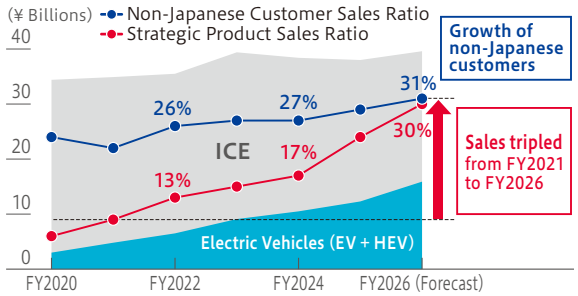
Amid increasing opportunities to cultivate new customers and propose new products on the back of the shift to EVs, NSK is steadily working to increase market share through orders of high-value-added products, grow sales of ball screws for electric brake systems to the level of ¥30 billion, and expand the number of non-Japanese customers.

FY2026 Target

Sales
¥410billion

Segment income margin
7%

Strategic Products and Growth in Sales to Non-Japanese Customers



Strategic Products

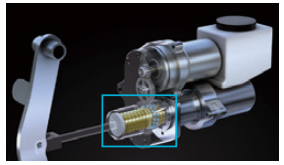
	Technology/Market Needs	NSK Product Features
eAxle bearings (Conductive brush set / Ceramic ball bearings / Overmolded bearings)	● Electric erosion problem due to adopting higher voltage/ output motors ● High-speed rotation/low friction	Comprehensively meet diverse needs in electric erosion/high-speed/low friction
Hub unit bearings	● Longer driving range ● Battery increases weight, demands higher durability	Low friction with high durability ≫Gen 3 tapered hub unit bearing
Ball screws for electric brake systems	● Demand increase driven by regulatory requirements ● Small/high capacity ● Highly responsive	Achieved smaller/higher capacity systems through the use of NSK's proprietary machining technologies Ball screw types are advantageous for their responsiveness

Strategy to expand ball screws for electric brake systems

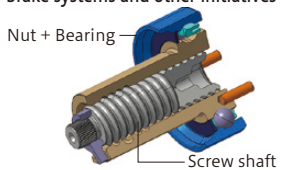
The mandatory installation of autonomous emergency braking systems is progressively taking hold in line with efforts to achieve a safe and secure society, thereby driving greater demand for ball screws for electric brake systems with superior responsiveness. NSK aims to expand sales of these ball screws beyond automotive applications to include a wide range of industries.

Tighter Regulatory Standards: Japan in November 2021, Europe in July 2024, with mandatory installation expected next for North America and China

Electric-hydraulic brake systems



Ball screws for electric-hydraulic brake systems and other initiatives



Market Environment

- The number of vehicles equipped with electric brake systems is expected to expand as the mandatory installation of automatic braking systems progressively takes hold

Technological Advantages

- Ball screw type systems are highly responsive, efficient, and reliable
- Achieved smaller/higher capacity systems through the use of NSK's proprietary technologies

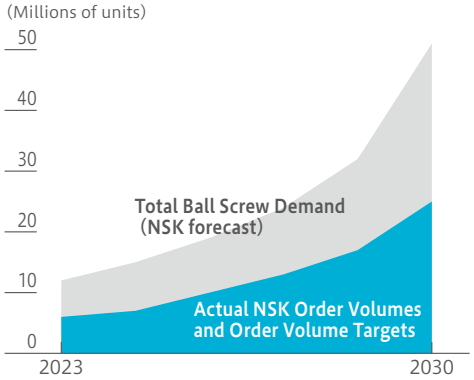
FY2026 Target

Order Volume	Share
More than 10 million units	More than 50%

Total Demand Forecast and Order Standing

- FY2025: Order volume expected to reach 10 million units, primarily for electric brake systems
- FY2030: Aim for an order volume in excess of 20 million units, including applications beyond electric brake systems (maintain the highest share by far)

NSK Order Volumes and Share



Topics

Development of New Products to Support Electrification and Self-Driving Automobiles

Founded on the expertise and technologies built through our existing products, NSK is advancing the integration of bearings and surrounding components into units and systems in an effort to drive innovation for the future of mobility.

Electric Corner Module Concept

As a concept model that integrates an electric suspension, rear wheel steering actuator, electro-mechanical brake system, and ultra-low friction ball hub unit bearings, this development will help realize sophisticated self-driving vehicles and flexible component arrangements.

Rear Wheel Steering Actuator

This development realized a high-efficiency rear wheel steering actuator with a miniaturized, power-saving motor.

Locking Clutch

This development will help to miniaturize and reduce the power consumption of electric actuators in a wide range of industries, from automobiles to industrial machinery.

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