For New Technology Network





# Annual Report 2005

Year ended March 31, 2005

**NTN Corporation** 

Corporate Philosophy	Our contribution to the global community lies in our creation of new technologies and development of new products.
	The directors and employees of NTN Group companies strictly adhere to company rules of conduct and strive to be consistently fair and responsible in their business activities. Through these actions, NTN seeks to fulfill the NTN Group's responsibil- ity to its shareholders, customers, local communities, and other stakeholders.
Profile	• NTN, a precision equipment manufacturer, ranks fifth in the world in bearing sales. Since its establishment in 1918, the Company has supplied many industries with products and technologies that have been essential to their development.
	<ul> <li>NTN has also achieved notable growth in fields other than bearings. It holds the No. 2 global market share of constant-velocity joints (CVJs)—a key component for automobile drive trains. The cumulative production of our CVJs has sur- passed 300 million units since NTN put them on sale for the first time.</li> </ul>
	<ul> <li>NTN is a global organization, with approximately half of its 12 thousand employees working overseas. Since 1961, NTN has been building a five-sided sales and production network encompassing Japan, the Americas, Europe, Asia, and China. Overseas sales ratio to consolidated net sales was more than 50% in the fiscal year ended March 31, 2005.</li> </ul>
	<ul> <li>NTN is aggressively developing business in China, which is achieving notable economic growth. The Company already has five production bases, and is delivering on orders for bearings and CVJs.</li> </ul>
	<ul> <li>At NTN, our long-term vision for 2010 has several facets. First, we aim to establish a strong market presence capitalizing on our global best-in-class and products that are unmatched by our competitors. Secondly, we will work to establish a presence in the five major global markets, including Japan, the Americas, Europe, Asia and China. Thirdly, we will strive to become a global company that is capable of bringing out the best in people and that contrib- utes to society. We started a new three-year business plan in April 2004. The plan, called "Rapid Advance 21," involves several different policies, aiming to enhance the corporate value.</li> </ul>
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**Notice:** This annual report contains forecasts and projections regarding NTN's future plans, strategies, and business results. Please note that actual business results may vary from the projections made herein by the Company.

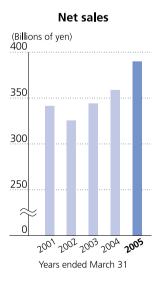
Financial Highlights

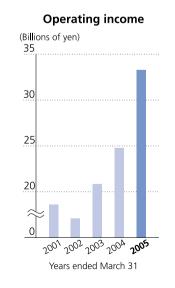
Financial Highlights

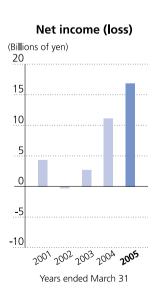
NTN Corporation and Consolidated Subsidiaries Years ended March 31

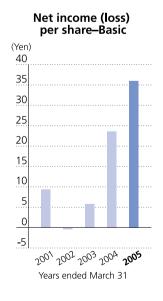
			Millio except per)	ons of yen share amounts)		(exc	Thousands of U.S. dollars cept per share amount
	2005	% change (05/04)	2004	2003	2002	2001	2005
FOR THE YEAR DATA							
Net sales	¥ 388,349	8.7%	¥ 357,394	¥ 342,745	¥ 324,339	¥ 340,551	\$ 3,616,249
Operating income Income (loss) before income	33,201	34.4%	24,709	20,785	8,140	14,335	309,163
taxes and minority interests	26,586	46.2%	18,181	6,198	(701)	6,888	247,565
Net income (loss)	16,740	51.7%	11,032	2,657	(132)	4,289	155,880
PER SHARE DATA							
Shareholders' equity	¥ 341.93	-	¥ 308.27	¥ 291.82	¥ 299.27	¥ 299.44	\$ 3.18
Net income (loss)							
–Basic	35.83	-	23.54	5.70	(0.29)	9.26	0.33
–Diluted	32.94	-	21.87	5.51	_	8.78	0.31
Cash dividend	8.50	-	5.50	5.00	5.50	6.00	0.08
AT YEAR-END DATA							
Total assets	¥ 516,578	12.2%	¥ 460,341	¥ 467,198	¥ 462,895	¥ 478,945	\$ 4,810,299
Shareholders' equity	157,952	10.9%	142,487	134,928	138,532	138,625	1,470,826
Number of employees	12,788	_	11,885	11,810	11,989	12,619	12,788

Notes: U.S. dollar amounts have been translated from yen for convenience only, using the approximate exchange rate on March 31, 2005, which was U.S.\$1=¥107.39.









# **To Our Shareholders**



Yasunobu Suzuki President

# **Overview of Fiscal 2004**

Fiscal 2004, ended March 31, 2005, was the first year of NTN's mediumterm business plan Rapid Advance 21. Working in unison companywide, NTN took steps to enhance corporate value. As a result of these efforts, the Company posted its third consecutive year of sales and profit growth on a consolidated basis and set new highs for net sales and operating income.

Our sales in Japan benefited from higher production levels at automobile manufacturers and increased sales to general industrial machinery manufacturers and distributors and to the digital electronics industry. Overseas, sales were also firm to the automobile industry and to general industrial machinery manufacturers and distributors. Consolidated net sales, therefore rose 8.7%, to ¥388.3 billion.

Despite the negative influence of falling sales prices, the weakening U.S. dollar, and the rise in raw material prices, consolidated operating income expanded 34.4%, to ¥33.2 billion due to the effects of increased sales and reduced costs. After an extraordinary loss of ¥1.8 billion related to a product defect compensation reserve, consolidated net income still climbed 51.7%, to ¥16.7 billion.

In consideration of its performance and dividend payout ratio, NTN increased its cash dividends in fiscal 2004. The Company added ¥3.00 per share to the annual cash dividend, raising it to ¥8.50 per share.

## First Year Results of Rapid Advance 21 Plan

Under our structural reform plan NEW Plan 21, we initiated many fundamental steps over a two-year period to innovate our corporate structure and strengthen our profitability. Accelerating our efforts over that time, we implemented structural reform.

The medium-term business plan Rapid Advance 21 that commenced in the fiscal year under review targets enhancement of corporate value. By acquiring new customers and business through sales innovation during the three-year period up to March 2007, we are aiming for a nearly ¥100 billion increase in net sales, to ¥450 billion. Based on greater productivity and benefits from reductions in proportionate costs provided by our MONOZUKURI<sup>\*1)</sup> innovations, we have set a goal of ¥42.0 billion for operating income, and plan to achieve an operating margin of 9.3%.

As part of the Rapid Advance 21 plan, we set a variety of measures in motion during the fiscal year under review, and also set the stage for reaching the goals of the business plan. To start with, in June 2004, we introduced an executive officer system, aiming to speed up our decision-making and separate the roles of management and business execution. To introduce the fundamental reforms of MONOZUKURI, which provides the foundation for the Rapid Advance 21 plan, we pursued our MONZUKURI innovations at our production bases, aiming to achieve improvements in productivity and product quality and reduction in production lead times. In implementing those MONOZUKURI innovations, we are emphasizing HITOZUKURI<sup>\*2)</sup>. To create a team of people (HITO) that think, put their knowledge (CHIE) to use, and execute (JIKKO), we have to actively develop our human resources. In October 2004, we started production at the new NTN Mie Corporation plant that is a model plant for the realization of the

<sup>&</sup>lt;sup>11</sup> MONOZUKURI is a comprehensive concept of creating value at NTN as a manufacturing company, continuously adding value throughout the entire business process, including marketing, R&D, engineering, manufacturing and distribution. Monozukuri ensures an ever higher level of customer satisfaction promised by NTN's competitive advantages in quality, cost, delivery, development and service.

<sup>&</sup>lt;sup>(2)</sup> HITOZUKURI is NTN's concept for a system of continuously developing personnel that has essential technical skills and can work internationally. By discovering the skills of each individual and passing down various engineering and technical skills, NTN plans to increase on-site capabilities and achieve worldclass high-quality and low cost operations and shorten its production leadtime.

MONOZUKURI targets. The Mie plant features an integration of our production technology and facilities development and quality management capabilities. We intend NTN Mie Corporation to serve as an example for our other production bases of a bearing manufacturing company with comprehensive competitiveness.

In technology and research, under the concept of "Design decides everything," we targeted speeding up our development, making progress with our VA / VE activities, and worked to standardize our components. In product development, we developed high-precision bearings for the auto-mobile and industrial machinery industries. We also developed low vibration, lightweight, compact types of CVJs and steering shaft CVJs.

We also implemented measures to expand our production bases. In Japan. we started NTN Mie Corporation. Overseas, we established and began production at our fifth production base, Changzhou NTN-Guangyang Corporation in China. Changzhou NTN-Guangyang Corporation is a joint venture with a private sector company in China, and is producing and selling automotive bearings, primarily needle roller bearings. We plan to expand the role of this production base into a supply base not only for China but also for other overseas markets. During fiscal 2004, we also constructed a specialized plant in Thailand for fluid dynamic bearings parts, with production commencing in November 2004. We are expanding production capacity because the hard disk drive (HDD) industry has decided to use our fluid dynamic bearing units not only in conventional 3.5-inch HDDs, but also in less-than-one-inch HDDs, increasing applications for HDDs. Because the less-than-one-inch HDDs are expected to be used in music players and mobile phones, we experienced notable growth in our fluid dynamic bearing operations during the fiscal year under review.

# Toward the Future (Attaining Sustainable Growth)

We are now in the second year of our medium-term business plan. Since this is a critical period for the plan in order to reach our goals for the fiscal year ending March 2007, we are accelerating our efforts to enhance corporate value.

To enhance the value of our sales and technology, we are improving our proposal method of sales and speeding up our product development. At the same time, we are pursuing product design that will expand our accumulation of proprietary technology, giving top priority to developing best-in-class and unique products. Strengthening our development of new products and technology, we will seek to be able to guickly respond to the technical needs of our customers in the five regions of Japan, the Americas, Europe, Asia, and China. At the same time, we will reinforce our network of patents to protect intellectual assets and increase utilization of these assets, seeking the position dominant in our technological fields for the long term.

To enhance the value of our production, we are pursuing further implementation of our MONOZUKURI innovations, which aim to achieve a dramatic improvement in production efficiency. In addition, we believe that the development our human resources, centered on the sharing of technology and skills, is essential to this process.

We are working to increase production capacity, especially in our automotive bearing, CVJ, and industrial machinery bearing. In addition, we are investigating new business establishment in the potential growth markets, such as China, Eastern Europe, and India.

To strengthen our profit structure, we are emphasizing cost reductions and improvements in asset efficiency ratios, such as the inventory turnover and machine operating rates. To minimize such risks as business, exchange rate, and country risk inherent in the global expansion of our business, we are increasing our cost competitiveness through our VA / VE activities and greater global and local procurement.

We recognize the importance of corporate social responsibility (CSR), and intend to contribute to society not only through economic activities, such as technology and services, but also through socially-conscious management of our business based on our compliance and social contribution activities. Environmentally, we hold coexistence with the environment to be a top priority issue, and undertake a variety of activities to reduce environmental impact. We are expanding our development and sale of products that are environmentally friendly and safe for people (environmentally friendly products). We are working to eliminate the use of environmentally harmful substances. And, we are supporting component manufacturers and cooperative companies in their efforts to obtain ISO 14001 environmental management certification.

In fiscal 2004, we achieved sales and profit growth for the third consecutive fiscal year, but our operating environment is getting more difficult. Prices for steel, and other raw materials and crude oil, are skyrocketing, and are a concern to our future performance. Coming as it does as we enter the middle phase of our Rapid Advance 21 plan, we shall have to make a leap forward that can overcome this severe business environment.

The employees of the NTN Group will return to basics, sharing a sense of these dangerous times in working to achieve results. In doing so, we will work to achieve sustainable increases of corporate value and to return profits to shareholders.

In carrying out these measures, we look forward to the continued support of our shareholders.

June 2005

Lugaker Yasunolu

Yasunobu Suzuki President

Since November 2001, NTN has achieved good results with you at its helm from the implementation of its structural reform plan NEW Plan 21 and the currently underway medium-term business plan Rapid Advance 21. Looking back on this period, what are your impressions?

When I became president in 2001, the difficult business climate had made our business structure very fragile, and under those conditions it was only a matter of time before we fell into the red. Based on that sense of crisis, I decided to carry through on my promise to put some muscle back on our corporate structure over a space of two years. I chose two years because I thought that it would be better to make the period of trial and tribulation before making another leap forward short and to provide some impetus to the reforms. The structural reform plan NEW Plan 21 was a top down action plan that strongly implemented my thinking. During the two-year period, we reviewed many structural issues that had developed over our more than 80 years of history and cut ¥40 billion in costs, including reductions in personnel, external procurement, and logistics expenses. During the reform process, we had to make the difficult decision to implement an early retirement program to restructure our labor costs. The benefits of these structural reforms provided the foundation for the three consecutive fiscal years of consolidated sales and profits growth and record high earnings. The medium-term business plan Rapid Advance 21 that commenced in fiscal 2004 is a different type of plan from the top down action NEW Plan 21. Rapid Advance 21 seeks to bring together the actions of all employees of the NTN Group to achieve Value Creation, and is linked to our long-term vision up to 2010. Eighty years of history cannot be easily changed over two or three years—our employees will need to exhibit self-discipline and fight their own difficult battles to make it work. There are many steps we have yet to take to make the change from reform to innovation.

NTN's long-term vision was disclosed at the time of the announcement of the medium-term plan Rapid Advance 21. Would you please tell us about your image of NTN in the year 2010?

> In 2010, NTN should have a strong presence in five regions around the world. On a consolidated basis, overseas sales already account for more than 50% of the NTN Group's sales. Increasing our market presence overseas, we will position ourselves as a real global company

manufacturing products that no other company can match. Our CVJs currently hold a 20% share of the global market. We are aiming to increase our market share to 24% by the end of Rapid Advance 21 in March 2007, and to push it above 30% in 2010 to become bestin-class worldwide. There is much international restructuring of the bearing industry going on in the United States and Europe, and this trend is Creating a profit structure expected to continue to spread. that does not However, I see NTN using its depend on scale strenathen cost original products, technology, competitiveness and business model to expand introduce GAM system introduce 24-hour its Group power globally and development system establish itself as a major player restructure production system in the market. implement early





The current Rapid Advance 21 plan aims to enhance corporate value. From the perspective of the Company, what actions will enhance corporate value the most?

> The role of our Rapid Advance 21 plan is to directly focus all the activities of our employees on enhancing corporate value. Most importantly, we have to get each and every one of our employees to be aware of and realize the fact that their individual actions are responsible in part for enhancing corporate value. To optimize economic value added (EVA®), a company must increase earnings while reducing the capital costs of the underlying assets as much as possible. The employees of our sales, production, technology and research, and administrative divisions have already begun to realize that NTN is enhancing its corporate value through specific action plans of Rapid Advance 21, such as sales innovation, productivity improvement, VA / VE progress, higher inventory turnover ratios, strengthening of innovative production technology, and proposal-type development of products.

# NTN is now into the second year of the Rapid Advance 21 plan. What overall strategies are you emphasizing this year in the development of the business?

In the first year of our Rapid Advance 21 plan, we expanded sales by acquiring new customers based on the success of our sales innovation programs. We plan to further expand sales through aggressive sales activities targeting these new customers. In fiscal 2005, we are aiming to improve our quality standard by one rank based on our MONOZUKURI innovations, and are emphasizing improvement in our production activities through our HITOZUKURI innovations. NTN has always insisted on a comprehensive production line, including the forging process. As one of the strengths of our manufacturing technology, pre-fabrication processes, such as forging and heat treatment, have an important position in our production. In procurement, the start to our MONOZUKURI innovation process, we are building an organization that can attain a stable supply chain of raw materials and parts around the world even in the current difficult raw material procurement conditions. For inhouse pre-fabrication processes, we are aiming to increase profitability through such measures as improving VA/VE and reducing material loss right from the design stage. Spreading the concept of "Design decides everything" throughout the Company, we are working to realize MONOZUKURI production processes that raise our quality one step above our current standards.

Note: EVA is a registered trade mark of Stern Stewart & Co.

#### Are there any differences in your strategies for your core products, bearings and CVJs?

In our bearing business, we have started reorganizing our production network based on a strategy of being focused and selective in order to establish a global production network to manufacture products in the regions where demands exist. As a major manufacturer serving worldwide demand for bearings, we recognized that NTN has to differentiate itself from its competitors. In doing that, it is important we grasp the needs and seeds of our customers and link that information to our product development. We are organizing our proprietary technology, such as the essential technology and patents we have developed and accumulated over the years in our industrial machinery bearing business. Using this technology, we are emphasizing strengthening our sales proposal-making organization to enable us to rapidly propose a solution to our customers' requirements based on combination and integration of our proprietary technology. In each of our product portfolios, we have positioned products as strategic, core, and selected. Strategic products include axle units and needle roller bearings for the automobile industry, large and precision bearings for the industrial machinery industry, and fluid dynamic bearings for IT-related industries. We are focusing our business resources on strategic products because of their superior technology and high profit margins. In the automobile industry, we are further expanding our sales of such design-based products as axle units and needle roller bearings. In our axle unit business, we are working on the shift from third- to fourth-generation axle units, while in the needle roller bearing business, we are actively developing the overseas market and increasing sales of rocker arm bearings. We are presently concentrating on sales of large and precision bearings to the industrial machinery industry. However, we want to increase sales of these products not only to the construction machinery, machine tool, office equipment, and rolling stock market that currently predominate our sales, but also to the wind power-generation and medical equipment fields that have strong demand growth potential and in which we are beginning to see results from our sales efforts.

Looking at our CVJ business, in this market we have specialized manufacturers and manufacturers that are members of automobile maker conglomerates to compete with. The number of companies with comprehensive manufacturing capabilities, including product development, however, has dwindled down to a few companies in recent years. In this environment, we have acquired the second largest share of the global market, and through our long-term vision are developing the business with the goal of becoming best-in-class. Thanks to our allinclusive production line, starting right from the forging stage, we have been able to maintain the profitability of our CVJs. Now, we are strengthening our innovative technological capabilities to enable us to maintain high profitability while strategically aiming to increase our share through new essential technology and new product development. Focusing primarily on increasing market share in the North American market, we are targeting a global market share of 24% by March 2007. The major issues in this drive for growth, however, lie with expanding market share in markets other than Japan and North America. In Europe, we are trying to receive large orders from manufacturers other than Renault. By strengthening our cost competitiveness based on establishing a comprehensive production organization and by proposing new products with superior technology, we are seeking to expand sales in Europe, including selling into the internal production system of European automobile makers. Among other regions, we are thinking of and researching the possibility of entering the market in BRICS countries (Brazil, Russia, India, China), where the size of the automobile market is expected to grow. In China, we are already producing and selling CVJs from locations in Shanghai, Guangzhou, and Beijing, and our business is developing favorably.



Would you explain your thinking on returning profits to shareholders?

We see returning profits to shareholders as one of our highest priorities. We decide cash dividends based on our consolidated performance, our targeted payout ratio and others. In fiscal 2004, cash dividends to shareholders for the full fiscal year amounted to ¥8.5 per share, an increase of ¥3 per share from fiscal 2003. On a consolidated basis, this represents a dividend payout ratio of 23%. The capital received from our cash flow from operations is tagged for use to expand our businesses centering on strategic products. We look to increase cash dividends in stages while maintaining a balance between returning profits to shareholders and reinvesting for the future.

# Although NTN uses an auditor system, there are no outside directors on the board. How do you feel about using outside opinions as a reference point in running your business?

At the end of June last year, we introduced an executive officer system, aiming to speed up our decision-making and separate the roles of management and business execution. As a result, our decision-making has sped up. As to the need for outside opinions as a reference point for our business, we have three outside auditors monitoring the job performance of our directors. And we are working to improve a transparent and proper management organization. Although the number of companies introducing outside directors or changing to the committee system has increased in recent years, we are still looking at the benefits of such systems and will consider their introduction in the future.

#### In closing, would you tell us what role investor relation (IR) activities have at NTN?

Because of changes in the shareholder base of Japanese companies in recent years and the revision of the Commercial Code of Japan, capital markets in Japan are steadily regaining their originally intended functions and standards. In addition, if companies are willing to do so, there is increasingly ample room for implementing measures to enhance shareholder value. On the other hand, there is a lot of talk in the media about protecting against hostile takeovers. Right now, companies that have inefficiently utilized assets or that have a markedly discounted corporate value are easy targets of merger and acquisition attempts. At NTN, we are dealing with this situation by increasing shareholder value, aiming to expand operating income by strategically developing our business on a global scale. At the same time, we plan to maximize the efficiency of the capital resources lent us by our shareholders by carefully scrutinizing risk and return by product, business, and region for all our capital investments.

Through active IR activities, we explain the future value of NTN to our investors and incorporate their feedback on the evaluation of our business into our management system. We believe this process results in the true value of the Company being reflected in our stock price. **Special Feature** Medium-Term Business Plan "Rapid Advance 21" April 2004 – March 2007

# "Rapid Advance 21"

# **Increase NTN Group Corporate Value**

## Long-Term Vision: Improved Market Presence

- A corporation that has unrivalled products and best-in-class businesses in the world.
- A corporation with a presence (name recognition) in five key regions: Japan, the Americas, Europe, China and the rest of Asia.
- A global corporation that maximizes human resources and contributes to society.

Basic Strategies: NTN will implement individual measures for each product strategy to achieve the targets of "Rapid Advance 21." At the same time, the Company will link the corporate actions of employees with "Value Creation" to make a strong leap forward toward the goals of its long-term vision in 2010

Planned Sales by Division							
			(Billions of yen)				
Consolidated	FY2003 (Actua <b>l</b> )	FY 2006 (Planned)	Increase				
Bearings	228.6	290.0	+27%				
CVJs	103.0	134.0	+30%				
Precision Equipment	25.8	26.0	+1%				
Tota	357.4	450.0	+26%				

#### Bearings

- Further concentrate and strengthen sales of strategic product groups (needle roller bearings, axle bearings, large-size bearings, precision bearings, fluid dynamic bearing units)
- Expand sales of industrial machinery bearings
- Further cultivate bearing technology
- Strengthen cost competitiveness: reorganize production bases

#### CVJs

- Become No. 1 globally
- Establish dominant position in technology (light, compact, low vibration)

#### Precision Equipment

Expand business in leading-edge technology sectors (LCDs and PDPs)

# **Planned Sales by Region**

			(Billions of yen)
Consolidated	FY2003 (Actua <b>l</b> )	FY 2006 (Planned)	Increase
Japan	176.2	194.0	+10%
North America	86.1	124.0	+44%
Europe	58.2	71.0	+22%
Asia and others	36.9	61.0	+65%
Total	357.4	450.0	+26%

#### Japan

- Reorganize production/establish new production system based on MONOZUKURI innovation
- Further cultivate essential production technologies
- Expand sales of industrial machinery bearings

#### North America

- Reorganize production/increase local procurement
- Expand sales to maintenance market

#### Europe

- Establish production bases in Central and Eastern Europe
- Improve presence to local automobile manufacturers (strengthen R&D Center)
- Reorganize agency sales network (expand sales of industrial machinery bearings)

#### China

- Make China the product and parts supply base for global market
- Strengthen profit structure of local production bases
- Reinforce sales network
- Reorganize as a holding company/establish R&D Center

#### Asia and others

- Expand sales by increasing production capacity of the factory in Thailand (grow fluid dynamic bearing unit business)
- Strengthen measures in the Indian market



						(Billions of yen)
Management Goals	Consolidated	FY2003 (Actua <b>l</b> )	FY 2006 (P <b>l</b> anned)	Consolidated	FY2003 (Actua <b>l</b> )	FY 2006 (Planned)
	Net sales	357.4	450.0	Net income	11.0	22.0
	Operating income	24.7	42.0	ROE	8.0%	12.0%
* Foreign exchange rates:	Operating margin	6.9%	9.3%	ROA	2.4%	4.2%
FY2003: US\$1=¥113. EURO1=¥133 FY2006: US\$1=¥105. EURO1=¥130	Recurring income	20.8	37.0	Inventory turnover	4.3 times	5.6 times

# Key Point of Medium-Term Business Plan: Value Creation

The core concept of Rapid Advance 21 is increasing corporate value. To achieve this goal, we need to promote value creation for customers by enhancing customer satisfaction in terms of quality, delivery time, and price of products.

To implement value creation, we plan to transform the thinking of each of the business divisions in the NTN Group as well as their way of working.

## Sales ... [Sales Innovation]

<Conscious innovation in sales...aggressive sales>

Expand sales to major users

## Development, Design, Procurement... Design decides everything

- <Achieve ¥10 billion in cost reductions over three years>
- Reorganize cooperative manufacturers and provide technical guidance (two-way communication)
- Cut raw materials costs by increasing local procurement overseas
- Further strengthen VA/VE

# Production...Ultimate "MONOZUKURI" (Production) Methods

#### <Improve productivity by ¥18.0 billion over three years>

- Reorganize production...overseas and domestically
  - Strategic products: Reorganize based on development of basic strategies for individual products
    Utilize Mie Works as a model plant
- Raise productivity (review and reform production sites from the
  - starting point)
  - Cut material flow costs
  - Increase operating rates (employees, facilities)
  - Increase inventory turnover ratio

#### Logistics...Logistics Reform

- Establish an optimum distribution system within Japan
   Collect and combine stocks in branch offices throughout Japan
  - Relocate export delivery center
- Increase efficiency of overseas distribution network
   Close and combine warehouses in Europe to increase efficiency

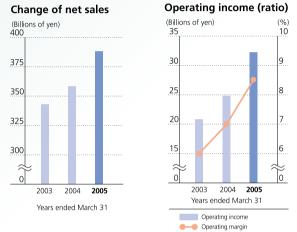
# Research and Technology...Sensitivity to Market Changes

- Accumulate original technologies and develop products using them (24-hour system)
- Pursue product design that will increase value-added content

#### Personnel Assets Utilization...Promote "HITOZUKURI" Human Resource Development

- Increase utilization of personnel
  - Thorough performance-based evaluation
  - Strengthen development programs for employees (globally aware employees, passing down of technical skills)
- Greater personnel efficiency
  - Diversification in employment programs (use of temporary workers and retired employees)
  - Review way of working

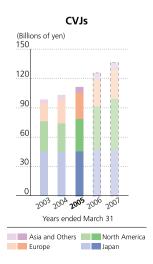
Results of the First Year of the Rapid Advance 21 Plan	The first year of the medium-term business plan Rapid Advance 21 is over. In that first year, the Group achieved consolidated net sales of ¥388.3 billion and operating income of ¥33.2 billion, achieving growth in sales and profits for the third consecutive fiscal year as well as record highs for profits.
Management Perfor- mance Goals Achieved	Performance results for the first year of the Rapid Advance 21 plan were consolidated net sales of ¥388.3 billion and operating income of ¥33.2 billion—the third consecutive fiscal year of sales and profit growth. Operating income was negatively influenced by the depreciation of the U.S. dollar and the high price of steel, but still reached a record high driven by sales growth and cost reductions. The operating margin rose to 8.5%, reflecting the multiplier effect of the profit structure created under our structural reform plan NEW Plan 21 and the results achieved by the Rapid Advance 21 plan.

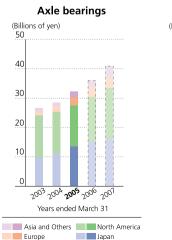


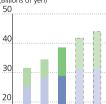
#### **Sales Reform Success**

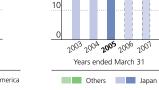
Net sales expanded 9% from the previous fiscal year, with sales rising in all three divisions—Bearings, CVJs, and Precision Equipment. The benefits of the Global Account Manager (GAM) system implemented during NEW Plan 21 are beginning to emerge.

Major contributors to sales growth during the fiscal year under review included the strategic products for the automobile industry—CVJs, axle bearings, and needle roller bearings. Precision bearings and large bearings for such industrial machinery as construction machinery, machine tools, and rolling stock also contributed significantly to sales growth. In addition, sales of fluid dynamic bearing units, which are being spotlighted for their application in the IT industry, doubled compared with fiscal 2003.









Needle bearings (Billions of yen) 50 40 30

Action Plan for the Second Year of the Rapid Advance 21	Our performance goals for the second year of the Rapid Advance 21 plan are consolidated net sales of ¥420.0 billion and operating income of ¥37.0 billion.
Plan	During the second year of the plan, we are aiming to further develop our HITOZUKURI and MONOZUKURI reforms targeting the quality of "one rank abo
NTN Targets Extreme MONOZUKURI	NTN is pursuing the enhancement of corporate value companywide from the point of view by implementing its MONOZUKURI concept in its development, design, procurement and production divisions. In such divisions as development and design, we are seeking to design products that are easy to manufacture, increasing our ability to respond to our customers requirements for speed and low cost. In the procurement division, we are carrying out two-way communications with cooperative manufacturers, providing guidance on methods of lowering costs, while also reducing costs by shifting to local procurement, aiming to source components on a global basis. In the production division, we are reducing personnel expenses through thorough pursuit of operating efficiency. We are also introducing production facilities with multiple-product, small-lot capabilities and raising operating efficiency by designing the facilities to achieve the most effective use of personnel. The corporation, operating as an "Extreme MONOZUKURI" model plant.
Developing HITOZUKURI	In the current fiscal year, in addition to enhancing corporate value from the point of vie of our MONOZUKURI concept, we will also be giving priority to our HITOZUKURI efforts. We will work to stimulate our human resources by passing down of skills and improving our on-site capabilities to achieve quick and flexible responses to problems when they arise and by thorough performance-based evaluation. On the other hand, we will pursu greater personnel efficiency by diversifying our employment programs, including the us of temporary workers and retired technicians, and by normalizing various working conc tions.
Expanding Business in China	NTN has been operating in China—the world's largest market—for three years. While pressing forward with a faster pace of expansion than in the beginning, we are using a combination of our own assets and joint ventures to develop our strategic businesses ir recognition of such risks as the exposure of our proprietary technologies.
• Beijing	<ul> <li>Beijing NTN-Seohan Driveshaft Co., Ltd. (CVJs)</li> <li>Changzhou NTN-Guangyang (Needle Bearings and other</li> </ul>
Changzhou Shanghai Zhejiang	Automotive Bearings) and other products)
hou NTN China Ltd.	The second se

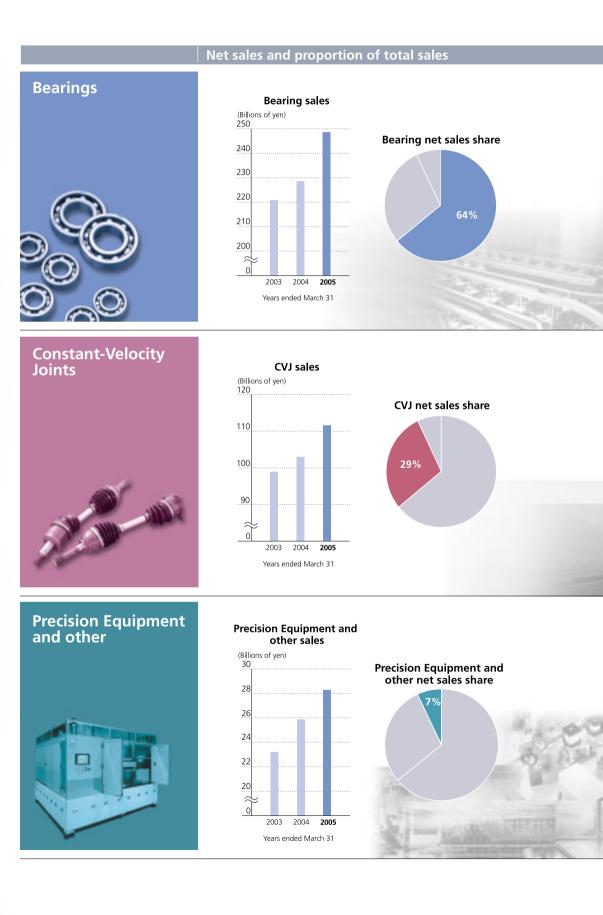
Guangzhou NTN Yulon Drivetrain Co., Ltd. (CVJs)

A1 - 1911

(Sales Office)

• NTN-NIDEC (Zhejiang) Corp. (Fluid Dynamic Bearing Unit)





machinery, semiconductor, medical,

In particular, demand is growing sharply

biotechnology, and IT industries.

#### Bearing units of the global market. for its fluid dynamic bearings, which are Large bearings used in hard disk drives (HDDs). Manufactured from a sintered alloy developed by NTN began international expansion of its Precision bearings sales offices in the 1960s and followed NTN using its own proprietary technology, Fluid dynamic bearings with the development of a global manuthese fluid dynamic bearings are regarded Sliding bearings facturing network a decade later. Today. highly by the market. Other bearings NTN is using its expertise as a leading bearing manufacturer to create new (\*NTN Estimation) value-added products and services to meet the needs of customers in a wide range of industries. NTN serves the core automotive industry as well as the A strategic product with strong growth These operations are supported by a Automotive CVJs potential, constant-velocity joints (CVJs) trilateral development system covering the (for halfshafts, propeller shafts, currently generate 29% of consolidated three key regions of Japan, the Americas and steering shafts) sales. NTN currently holds 38%\* of and Europe. A five-sided production and CVJs for industrial machinery Japan's market and 20% \* of the global sales system encompassing these three regions as well as China and other parts of market. Asia has also been formed. Starting CVJ production in Japan in 1963, the cumulative production of our Based on its advanced technological CVJs has already surpassed 300 million expertise developed over the years, NTN units. Aggressively expanding produchas established a solid reputation as a tion worldwide in the 1990s, today NTN leader in the CVJ sector. has firmly established a strong base of operations in response to the global (\*NTN Estimation) sourcing needs of the automotive industry, major customers for CVJs. Accounting for 7% of consolidated net surface mounted device (SMD) feeder. LCD repair devices sales, the precision equipment business which enables high-speed alignment and • PDP rib barrier defect repair segment combines leading-edge technolfeeding during the production process for system ogy products and products for special microchips in mobile phones and other Parts feeders fields. Using highly sophisticated devices. • XY tables mechatronic technologies developed over Magnetic-bearing spindles the years. NTN supplies products with We supply the automobile industry with a special features to this market. variety of products, such as auto- Auto-tensioners tensioners, which automatically adjust the Engineering plastics parts We provide the IT industry with a range of tension of the timing belt for engines. In Machines, apparatus, and other mechatronic products, including our liquid addition, we offer a diverse lineup of crystal display (LCD) repair devices, which clutch units, including mechanical clutch efficiently repair defects in LCDs. Our units (MCUs), which enable vehicles to be parts feeders automatically align various shifted easily and quickly between differparts and feed them into production ent drive-train systems. machinery. Of particular note is our

Outline of business segments Bearings are NTN's principal business,

accounting for 64% of consolidated

sales. Currently, NTN bearings have a

27%\* share of Japan's market and 8%\*

Major products

Ball bearings

Roller bearings

Axle bearings

# Introduction by segments



# Bearings

## **Overview of Performance**

During the fiscal year under review, bearing sales rose ¥20.1 billion, or 8.8%, to ¥248.8 billion. Although the depreciation of the U.S. dollar had a negative impact on sales, the contribution from newly commissioned jobs from the automobile industry and strong sales of axle bearings in Japan and Europe and of needle bearings in North America, Asia, and other regions supported higher overall sales.

In Japan, sales of large bearings and precision bearings increased, thanks to the activities of our global application managers (GAMs) that focus on individual industries, such as construction machinery, machine tools, and rolling stock. Increased automobile production contributed to sales growth for related bearings. As a result, domestic sales climbed ¥10.8 billion, or 9.9%, to ¥119.9 billion. For the future, the Company is further accelerating a whole new approach to "MONOZUKURI" in the pursuit of increased production efficiency. NTN Mie Corporation, established in April 2004, is acting as a model plant for the new approach.

In North America, in addition to favorable sales to the automotive industry, sales of bearings for general industrial machinery such as construction and agricultural machinery increased. Consequently, sales of bearings in North America rose ¥1.5 billion, or 2.7%, to ¥57.8 billion. Looking ahead, the Company is implementing measures to expand sales of axle bearings and needle bearings, while keeping an eye on changes in demand.

In Europe, sales growth was supported by strong sales of bearings to the automotive industry and by growth in bearing sales for general industrial machinery such as hydraulic equipment and speed reduction units. Sales increased ¥3.0 billion, or 9.7%, to ¥34.2 billion. As a part of the process of reorganizing global production, the Company is establishing an optimal production site system, considering sites in Central and Eastern Europe.

In Asia and other areas, sales of fluid dynamic bearings and bearings for office equipment in China were favorable. In addition, bearing sales to the automobile industry in ASEAN countries and, thanks to GAM activities, sales of precision bearings for machine tools in Korea also contributed to overall sales growth. Asian regional sales grew ¥4.8 billion, or 15.1%, to ¥36.9 billion. In response to growing demand for fluid dynamic bearings, NTN Nidec (Zhejiang) Corporation will increase sales of fluid dynamic bearing units while NTN Manufacturing (Thailand) Co., Ltd., will expand production of hydrodynamic bearings.

# Strategic Product Axle Bearings

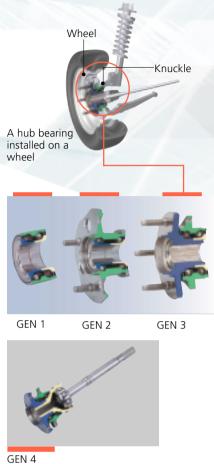
# Hub Bearings and NTN

Attached to the wheels of automobiles, a hub bearing enables the wheels to turn while also bearing the weight of the vehicle body. Although extremely basic, the hub bearing plays an essential role in vehicle movement.

Hub bearings have evolved from first generation to third generation hubs in pursuit of simplified assembly. Modularization is increasing with each generation, achieving lighter and more compact designs through reduction in the number of components.

In addition to having a complete lineup of all types of hub bearings, from first generation to third generation, the Company has set up a global supply network by establishing production bases in Japan, the United States, Europe, and Asia, including China. Through this network, NTN supplies hub bearings to the world's major automotive companies.

NTN continues to demonstrate leading-edge technology in modularization. The Company has developed a fourth generation hubjoint by combining third generation hub bearings with CVJs in one



Unifying third generation hub bearings with CVJs to achieve a lightweight and compact product

unit, a distinctly NTN product made possible by the Company's command over hub bearing and CVJ manufacturing technologies.

🗕 Key Data	
Sales contribution	Consolidated sales: ¥32.3 billion (up 12.9% YoY) Consolidated net sales contribution: 8.3% Proportion of overseas sales: 58%
Production bases	Japan: NTN (Okayama Works), North America: American NTN Bearing Mfg. Corp. (Elgin Plant), Germany: NTN Kugellagerfabik (Deutschland) G.m.b.H., Thailand: NTN Manufacturing (Thailand) Co., Ltd., China: Shanghai NTN Corp.
Market shares (NTN estimation)	Japan: 26% Global: 12%
Strengths	<ul> <li>NTN is a manufacturer of both axle bearings and CVJs. Leveraging this technological advantage, the Company had developed fourth generation hub joints and is leading the industry in modularization.</li> </ul>
Strategies	<ul> <li>Expand sales through marketing activities that integrate produc- tion, sales, and engineering division based on NTN's Global Account Manager (GAM) system.</li> </ul>

#### • New Product

# Hub Bearing with Wireless ABS Sensor

Automotive wheel speed sensors are used for anti-lock brakes and vehicle stability and traction control systems on low-friction road surfaces such as snowcovered roads. For these applications, active ABS sensors with zero speed detection capability are typically used, but these sensors generally have expensive cable wiring harnesses and connectors.

NTN has developed a wireless system where not only the rotation signal from the sensor is wireless, but also the electrical power driving the sensor. The wireless active ABS sensor can detect wheel speed and direction of movement at extremely low speeds. The new wireless sensor eliminates the problem of the cable wiring system being damaged or incapacitated by flying stones or freezing conditions. In addition, the sensor is housed in the hub bearing, making the system even more compact.



Hub bearing with wireless ABS sensor

# **Strategic Product Needle Bearings**

Consolidated sales: ¥38.6 billion (up 11.6% YoY) Consolidated net sales contribution: 9.9% Proportion of overseas sales: 25%
Japan: NTN (Iwata Works), NTN Mikumo Co., Ltd., NTN Mie Corp., NTN Omaezaki Co., Ltd., North America: NTN-BCA Corp., Thailand: NTN Manufacturing (Thailand) Co., Ltd., China: Shanghai NTN Corp.
Japan: 41% Global: 15%
<ul> <li>In-house manufacture of needle bearings, a structural component, makes NTN highly cost competitive.</li> <li>The Company's wide array of needle roller bearing products find application in a diverse range of products, from automobiles to industrial machinery.</li> </ul>
<ul> <li>To expand its share of overseas markets, NTN is using sales to the overseas production bases of Japanese companies as a base to build on.</li> <li>The Company is also developing new products that take advantage of its material development, surface processing and other proprietary technology, and welding cage production technology capabilities.</li> </ul>

# Needle Bearings and NTN

Needle bearings are classified as roller bearings, and have relatively small diameter cylindrical, needle-like rolling elements. The outstanding feature of needle bearings is their high loadbearing capacity and rigidity relative to size. Needle bearings enable compact and lightweight designs for customers. Because of these special features, needle bearings are used in many applications for automobile transmissions and other parts where there are space conservation or high loadbearing capacity requirements.

NTN commenced production of needle bearings in 1962. Having operated as a compact unit encompassing production, sales, and technology, these operations have the full trust of their customers. NTN manufactures its own needle rollers and specializes in pressprocessed cages. Against the backdrop of this cost competitiveness and

its strong technology, NTN has actively been developing a network of overseas production bases: Thailand in 1999, the United States in 2000, and China in July 2003.



Various needle bearings

#### • New Product

## FA Needle Bearings for **Rocker Arm**

As automotive engines produce higher output power and become more compact, demand has grown for longer service life and greater compactness in the needle bearings used in the rocker arms for engines.

To meet this market need, NTN used proprietary FA\* treatment to give needle bearings a service life that is four times that of conventional needle bearings. Under the same conditions of use, it is also possible to reduce bearing width and weight by 75%, resulting in lighter, more compact bearings.

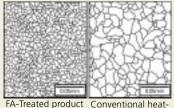


\* Fine Austenite Strengthening (FA) treatment is a special heat treatment method to produce ultra-fine austenite grains less than half the size of conventional bearing steels. Focusing on the fact that reducing the grain size of steel gives it greater strength and durability, NTN has developed the world's first specialized heat treatment—FA treatment.

#### **Special Properties:**

- Useful rolling fatigue life—four times conventional product
- Low dimensional transformation with age-40% less than conventional product
- High static fracture strength—1.2 times conventional product

#### Grain Microstructure



# Fluid Dynamic Bearings

# Importance of fluid dynamic bearings

Personal computers, digital video cameras, mobile devices, car navigation system, and mobile phones are increasingly becoming convenient tools that we cannot do without in our lives. The hard disk drives (HDDs) in these devices require not an increased memory capacity only, but also extremely high-precision rotation in some components of their motors. Fluid dynamic bearings have superior rotation precision and quietness compared with conventional ball bearings. Leveraging these advantages, they are expected to become the mainstream bearings used in hard disk drive motors.

#### Special Features of NTN Fluid Dynamic Bearings

The use of oil-impregnated sintered bearings (which contain lubricating oil within the actual bearing) in NTN fluid dynamic bearing units eliminates the occurrence of sudden death in hard disk motors. Consequently, hard disk drive





Fluid dynamic bearing unit



Unit components

systems using these bearings do not exhibit any loss of data as do systems using the solid bearings of competitors.

An additional advantage of NTN fluid dynamic bearing units is their high cost competitiveness—the result of volume production made possible by a superior press manufacturing system.



Parts for the 1-inch HDD, this production of which started at NTN's new plant in Thailand.

#### Expansion of Fluid Dynamic Bearing Business

NTN began producing these increasingly popular fluid dynamic bearing units for HDD motors in March 2003, and cumulative production has already exceeded 70 million units. NTN's production bases are NTN-Nidec (Zheijang) Corporation, established in 2002. and owned 60% by NTN and 40% by Nidec Corporation, in China and NTN Manufacturing (Thailand) Co., Ltd. (NMT), a wholly owned NTN subsidiary that makes sintered alloy hydrodynamic bearings, the core part of the fluid dynamic bearing unit. In 2004, NTN Manufacturing (Thailand) Co., Ltd. added a new plant, and has the capacity to produce a full-line of fluid dynamic bearing units, from the standard products for the 3.5-inch HDD to products for the 1-inch HDD, the production of which started recently.

NTN is preparing mass production of these parts, including parts for the 0.85-inch HDD, the world's smallest.



Exterior of NTN-Nidec (Zhejiang) Corp.



Exterior of new plant specializing in the production of the fluid dynamic bearings at NMT

# Introduction by segments



# **Constant-Velocity Joints**

# **Overview of Performance**

The CVJ business segment faced difficulties during the fiscal year under review, impacted by the weaker dollar and lower prices due to intensified competition. Due to increase of sales in Japan and North America, CVJ sales rose ¥8.3 billion, or 8.1%, as compared with the previous term to ¥111.3 billion.

In Japan, sales expanded favorably because of growth in sales of CVJs for mini-cars and for propeller shafts. Sales were held to ¥45.7 billion, an increase of ¥0.6 billion, or 1.4%.

Sales in North America were assisted by strong sales to Japanese automobile manufacturers there, climbing ¥4.1 billion, or 14.1%, to ¥33.2 billion.

European sales were given a boost by the appreciation of the Euro as well as the contribution of Renault sales, rising ¥1.9 billion, or 7.5%, to ¥26.5 billion. NTN continues to plan detailed sales activities in Europe based on its GAM system.

Asian sales jumped ¥1.8 billion, or 43.6%, to ¥5.9 billion because of the start up of volume production by Guangzhou NTN-Yulon Drivetrain Co., Ltd. in China. Shanghai NTN Corporation is producing and supplying CVJ components to Guangzhou NTN-Yulon Drivetrain Co., Ltd. and Beijing NTN-Seohan Driveshaft Co., Ltd. Shanghai NTN is also planning to supply CVJ components to NDI in North America and NTN Transmissions Europe in Europe.

🛑 Key Data	
Sales contribution	Consolidated sales: ¥111.3 billion (up 8.1% YoY) Consolidated net sales contribution: 29% Proportion of overseas sales: 59%
Production bases	Japan: NTN (Iwata and Okayama works); North America: NTN Driveshaft, Inc.; France: NTN Transmissions Europe, Thailand: NTN Manufacturing (Thailand) Co., Ltd., Taiwan: Taiway Ltd.; Australia: Unidrive Pty. Ltd.; China: Guangzhou NTN-Yulon Drivetrain Co., Ltd., and Beijing NTN-Seohan Driveshaft Co., Ltd.
Market shares	Japan: 38% Global: 20%
Strengths	<ul> <li>Proprietary technology allows NTN to stay one step ahead of its competi- tors in offering a lineup of lightweight, compact, and low-vibration products.</li> </ul>
Strategies	<ul> <li>Expand sales through marketing activities that integrate sales, technology, and production sections based on NTN's GAM system.</li> <li>The Company will also be seeking to expand sales by taking advantage of the increased use of propeller shaft CVJs in automobiles and its more diversified product lineup compared with competitors. NTN will optimize production, making use of its production bases in China. NTN's Chinese locations are expanding business to become global suppliers of components and semi-finished products are also targeting demand in the automobile manufacturing market in China.</li> </ul>

# Strategic Product Constant Velocity Joints

# CVJs and NTN

Because CVJs can smoothly transmit engine torque at a constant velocity to the front wheels of an automobile, they are essential components in powering front-wheel drive vehicles.

In Japan, NTN brought its first fixed CVJs to market in 1963, following up by adding the DOJ, TJ, and other plunging CVJs to its lineup. Attaching fixed and plunging CVJs to a drive shaft, the Company started supplying these products to automotive manufacturers that were making frontwheel drive vehicles.

Taking advantage of the oil shock in 1973, sales of front-wheel drive vehicles began to climb because of their fuel efficiency and production of CVJs leaped. Furthermore, automotive manufacturers increased their use of CVJs in halfshafts for rear-wheel drive and in propeller shafts for 4WD vehicles to improve the ride. As CVJ demand expands, NTN is proceeding with global business development by setting up a network of production bases covering Japan, United States, Europe, and Asia, including China.

In recent years, there has been strong demand for developments that will reduce environmental impact, lighten component weight (contributing to greater automobile design freedom), achieve greater compactness, and improve noise, vibration, and harshness (NVH).

Because the function and quality of CVJs directly and indirectly affect the functioning of automobiles, we have kept up with trends in automobile technology and have carried out a variety of specific improvements.

NTN's E series or CSJ (lightweight and compact type) and PTJ or EPTJ (ultralow vibration type) fully address these requirements. Their reputation for improved function is well-known among our customers.

# Lightweight and Compact E Series

The EBJ developed by NTN uses smaller balls, but has eight balls compared with the conventional sixball BJ. This design enables the EBJ to maintain the same load-bearing capabilities as conventional products while being lighter and more compact. Compared with conventional BJs, it is 15% lighter, has a 7% smaller outer circumference, and a 30% higher torque transmission ratio.



## Meeting Divers Automobile Needs with Compact, Large-Angle CVJs (CSJs) for Steering Systems

NTN has developed a new product in response to the special layout requirements for steering systems in sports utility vehicles (SUVs) and mini-vans that have limited space for steering systems due to their narrow noses. The Company has developed a largeangle, compact, and lightweight balltype CSJ for steering systems. Compared with a conventional product, the CSJ is 50% smaller and lighter. In addition, thanks to the optimal design of the ball rolling race, the CSJ can achieve a maximum operating angle of 48 degrees.



## PTJ Offers Substantial Improvement in NVH (Noise, Vibration, and Harshness)

Many NVH problems, such as automobile idling vibration and the horizontal vibration that occurs when the car first moves forward result from slide resistance and the induced thrust of the plunging CVJ on the gearbox side. The pillow journal tripod joint (PTJ) improves on the conventional inducedthrust-resistant product, the double roller type SFJ, by improving the contact conditions of the inner parts and stabilizing the position of the roller cassette to achieve a significant reduction in friction. In addition, the PTJ is 15% to 20% lighter than the SFJ. Moreover, the high efficiency pillow journal tripod joint (EPTJ) further reduces the outer diameter of the outer race by about 4% and is approximately 8% lighter. These two new products have further expanded NTN's lightweight, compact, high-performance E series lineup.



CVJ for steering shaft

Knuckle

CVJ for halfshaft

# Introduction by segments



# **Precision Equipment**

# **Overview of Performance**

Supported by the sales of LCD repair and plasma display panel (PDP) rib barrier repair systems, which meet the needs of the digital electronics industry, sales of the precision equipment business segment rose ¥2.4 billion, or 9.3%, from the previous fiscal year, to ¥28.2 billion.

NTN boasts a wide lineup of clutch products for everything from office equipment to automobiles. Because of the Company's recent focus on developing clutch systems for automobiles, sales of clutches have steadily grown. For mechatronic products and other precision equipment supplied to the semiconductor, LCD, electronic devices, and other industries, NTN set up a separate division in April 2002 to adapt flexibly to the rapid technological innovation and fluctuating production levels of these major customers. The Company also continues to successfully introduce new products in a timely fashion to the expanding liquid crystal and plasma display markets. Recent examples include the world's first system for repairing rib barrier defects in color filters for LCDs with one piece of equipment.

In the future, the Company will increase sales, especially for LCD manufacturers in Taiwan and Korea.



<ul> <li>Key Data</li> <li>Sales contribution Consolidated sales: ¥28.2 billion (up 9.3% YoY) Consolidated net sales contribution: 7.3%</li> <li>Strengths • NTN is developing leading-edge technology businesses with its mechatronics products using proprietary technologies.</li> <li>• A diverse product lineup of clutches is available, ranging from office equipment to automobiles.</li> <li>Strategies • NTN is concentrating on the repair system market, where there is strong sales growth potential driven by expanding needs among customers and growing demand for FPD TVs.</li> </ul>		
Consolidated net sales contribution: 7.3%         Strengths       • NTN is developing leading-edge technology businesses with its mechatronics products using proprietary technologies.         • A diverse product lineup of clutches is available, ranging from office equipment to automobiles.         Strategies         • NTN is concentrating on the repair system market, where there is strong sales growth potential driven by expanding	Key Data	
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there is strong sales growth potential driven by expanding	Strengths	<ul><li>its mechatronics products using proprietary technologies.</li><li>A diverse product lineup of clutches is available, ranging</li></ul>
	Strategies	there is strong sales growth potential driven by expanding

#### New Product

## Spotlight on the Growth Potential of Defect Repair Systems for LCD and PDP Fields

## World's First PDP Substrate Rib Barrier Defect Repair System

NTN has commercialized the first system for repairing rib barriers in plasma display panels (PDPs). Rib barriers separate the fluorescent colors in the display. In PDPs, gas is inserted into the space between the rib barriers, and voltage is applied between electrodes to cause an electrical discharge-producing fluorescence. If there is a defect in the rib barrier, light bleeds into the neighboring space causing the colors to mix. Amid rising production of PDPs, quality, productivity, and disposal cost issues created a demand for the development of a system that could repair this defect.

The new rib barrier defect repair system is based on NTN's patented repair paste coating technology. This method restores the defective rib

Rib barrier defect repair system

barrier to the same thickness as a normal rib barrier and eliminates the defect in the surface of the rib barrier through a high-precision fabrication process.



#### World's First 3-in-1 Multi-Repair System for Liquid Crystal Color Filter

This multi-repair system is a sophisticated "all-inone" repair unit that combines the specialty color filter repair technologies of NTN and Takano Co., Ltd., to complete three different procedures necessary to repair color filters for large-size liquid crystal displays (LCDs).

The expanding market for LCD televisions that use these large color filter substrates has increased the demand for



eliminate fractional defects in the filters. These defects can be broadly grouped into three categories: "black defects" (unwanted

black matrix pattern protrusion or adjacent filter discoloration), "white defects" (color loss in portion of black matrix or color filter), and "particle defects" (contamination). In the past, there was no single device that could repair all of these defects and several different devices had to be used depending on the type of defect.

To solve this problem, joint development work was done to combine NTN's ink coating and laser cutting technologies with Takano's tape polishing technology. The two companies have succeeded in developing a multi-repair system that repairs all three of the previously mentioned types of defects with just one unit.

Compared with using conventional repair devices, the multi-repair system costs half as much and accomplishes its tasks using 50% less space and total repair time. In addition, it is possible to combine the device with defect inspection equipment.

## Medium-to-Long-Term Research and Development

NTN carries out medium-to-long-term research and development (R&D) programs based on the direction of trends in leading-edge areas of the automobile, environment and energy, and medical and welfare fields. These state-of-the-art areas include in-wheel-motor-powered and fuel-cell vehicles, clean energy, and robotics.

In our development of next-generation CVJs in the automotive field, we are pursuing maximum noise, vibration, and harshness (NVH) performance, such as "ultra-low vibration and ultra small", and "compact and lightweight" features. We are also targeting improved safety through the use of electric-powered components, and increasing automobile capabilities through the development of "intelligent" hub bearings that incorporate high-performance sensors. In addition, for application in in-wheel-motor-powered, fuel-cell, and other next-generation vehicles, we are progressing with the development of axle bearings for in-wheel motors and actuator bearings for drive-by-wire use.

In the industrial machinery field, we are developing high-precision and high-speed products, and improved environmental friendliness in response to the technological needs of the machine tool, rolling stock, and wind-power generator markets.

Among development efforts in the information technology field, we are working on defect-repair equipment needed for the production of large-scale and high-definition flat panel displays (FPDs).

In leading-edge technologies, we are proceeding with research into applications of the expected blockbuster technologies of the future, such as nanotechnology and micro-electro-mechanical systems (MEMS), for materials, and medical treatment robot fields.

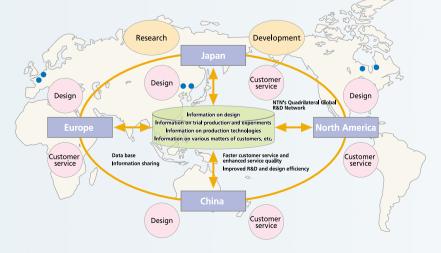
#### Disseminating New Products and Technologies Globally

NTN is responding to rapidly developing technical innovations and progressively borderless markets. The Company has established the NTN R&D Center within NTN Iwata Works Co., Ltd. This new center is to serve as the base for the dissemination of new products and technologies globally.

Other measures NTN has taken toward the establishment of a quadrilateral global R&D network include the opening of a Europe Technology Center in a bid to reorganize its technology bases in the region. The Company also set up a technology center in China that is responsible for bearings and automobile parts.



Artist's concept of the NTN R&D Center (Expected completion in October 2005)



# Intellectual Property Strategy

NTN puts out a constant stream of new and improved products to meet customer needs. As part of our efforts to strengthen intellectual property, we consistently apply for patents to cover the valuable intellectual property created as a result of this development process. During the fiscal year under review, we applied for more than 1,200 patents (twice as many as in the previous year). In particular, for proprietary products and technologies that have the potential to be a source of earnings, we seek to build a comprehensive web of patents around the main patent, including peripheral and essential technologies, to achieve a dominant and proprietary position in the field that competitors cannot assail.

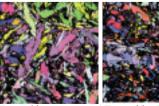
At March 31, 2005, NTN's total portfolio of patents, including utility models, included approximately 900 patents in Japan and about 900 patents in other countries. (as of March 31, 2005.) In the future, we plan to apply for patents on strategic products and to effectively use them as business resources. In addition, we will adhere to the following basic policies in our intellectual property strategy.

- Effective use and security of patent information for R&D
- A wide-ranging and effective net of intellectual rights
- Active use of intellectual property, such as licensing and other applications

#### Examples of NTN Proprietary Product and Technology patents

#### 1. Fine Austenite Strengthening Treatment Technology

NTN was the first in the world to develop a special heat treatment technology for its roller bearings, calling it Fine Austenite Strengthening (FA) treatment. The heat treatment reduces the grain size of the steel used in the bearing to less than half that of conventional bearings, strengthening its resistance to rolling fatigue and increasing service life. NTN has in excess of 120 outstanding patent applications for FA treatment technologies, including the composition for roller bearings, the heat treatment method, the production equipment, and application technologies for each type of automotive and industrial machine bearing in Japan and around the world.



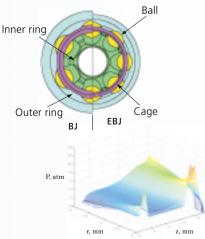
Treated by carbonitriding processing

Treated by Fine Austenite Strengthening (FA) processing

Distributive image of crystal azimuthal error by FE-SEM/EBSP measuring instrument

#### 2. CVJ E Series

In our E series CVJs, the EBJ and EDJ use smaller balls, but have eight balls compared with the conventional six ball types, maintaining the same capabilities and functions as the conventional types. The ETJ is an improved tripod joint that has advantages in size and weight over the conventional design. For these joints, we have filed for more than 180 patents in Japan and other countries, covering the basic structure, proportions, materials, manufacturing methods, and other aspects.



Distribution of Bearing Pressure (Sleeve)

#### 3. Fluid Dynamic Bearings

Having been developed for HDD motors applying oil-impregnated sinter technology, fluid dynamic bearings offer long service life and high quality, can be manufactured in volume, and are highly reliable thanks to their herringbone-shaped grooves formed by press processing.

On the other hand, in the electrical machinery industry, where there are frequent launches of new products, we try to maintain our originality and dominance in the market by patenting new ideas ahead of competitors. We have applied for in excess of 400 patents in Japan and abroad to acquire the rights to the herringboneshaped groove structure, the lubricating mechanism and lubricant, the manufacturing method, and other essential aspects. For the future, we are committed to achieving even higher rotation speeds and targeting technological challenges and trends, such as low cost components, thereby aggressively driving innovation.

NTN aims for long-lasting, stable, and sustainable growth to fulfill its responsibilities to shareholders, customers, suppliers, regional communities, and all other stakeholders in the Company. To that end, the Company is committed to addressing environmental issues, complying with laws and regulations, and contributing to society, as well as providing technology and services.

#### Corporate Governance

Against the backdrop of intensifying competition between companies based on global market principles, it has become increasingly important to develop and execute business strategies in a timely manner. On the other hand, amid the succession of corporate scandals, it has become important to increase the transparency of business management through the quick and accurate disclosure of information to all stakeholders.

NTN does employ an auditing system. However, to reinforce its corporate governance organization, the Company is strengthening its board of directors and, through its corporate auditors, its management oversight organization. The board of directors discusses and makes decisions related to fundamental business policies and to legal and important business issues. Including extraordinary meetings, the board meets at least once a month. On the other hand, the Business Strategy Committee, which considers fundamental business policies and important business strategies, generally meets at least two times a month. Furthermore, NTN introduced an executive officer system last year to separate the role of business decisionmaking, and auditing, and that of business execution. Based on this organization, NTN accomplishes full discussion of important business issues and achieves rapid decisionmaking.

NTN has four corporate auditors, two of whom are standing auditors, and three of the four auditors are outside auditors. The auditors audit the board's execution of business operations by attending board meetings and expressing their opinions, working to maintain and improve the transparency and fairness of the management oversight system. Standing auditors also participate in the meetings of the Business Strategy and Operating committees and can express their opinions on the matters of those committees. Furthermore, the corporate auditors work to increase the efficiency of the overall auditor process, meeting regularly and cooperating with others regarding their own audit, the independent public audit firm's audit, and internal audits.

# Compliance

In December 1997, NTN first established a Corporate Ethical Behavior Committee to formulate its own code of ethics and encourage thorough compliance with these principles. In May, 2003, the NTN Group reorganized the Corporate Ethical Behavior Committee into the Corporate Ethics Committee and reformed the compliance organization as the compliance system of NTN Group.

#### **Compliance Organization**

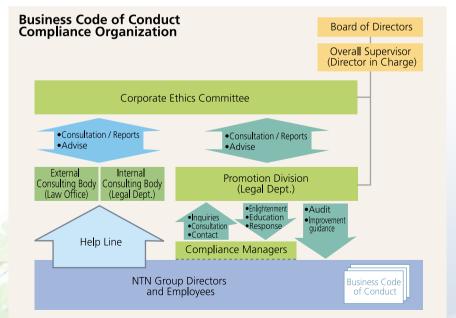
The Company has appointed the director in charge of the Legal Department as the coordinating executive for compliance activities and given the Legal Department the responsibility of promoting corporate compliance. To ensure thorough compliance with business behavior standards, NTN has appointed compliance managers at each management unit, establishing a systematic supervisory organization.

#### **Help Line Established**

The Company introduced a Help Line for NTN's employees and officers to provide a route for direct inquiries, consultations, reports, and other contact with the Corporate Ethics Committee.

#### Activities

The Company is practicing compliance activities by ensuring that employees and officers of the Company share the same values based on a strong sense of ethics. Activities include the distribution of a Business Code of Conduct Card to all employees, training courses, and activities to teach and raise awareness of compliance issues.



#### Human Resource Training and Safety and Health in the Workplace

NTN implements a variety of programs to promote human resource training and to provide an environment conducive to work.

In achieving the MONOZUKURI reforms of our medium-term business plan Rapid Advance 21, the highest priority for our human resource training is HITOZUKURI (development of personnel). Recognizing that it was essential to create a group of people who would put their heads together and realize such a program, we are strongly promoting human resource development. We recently also set up a "Meister" system, which provides an organized way for highly accomplished engineers to transfer their technology and skills to the next generation of engineers. In addition, we have established a "Fellow" system, certifying certain technicians as the top person in their field at NTN, and enabling them to represent the Company in that capacity inside and outside NTN.

For development of personnel outside our manufacturing divisions, we have established various training programs that include a studying abroad scholarship system and an overseas trainee system which gives trainees on-the-job training in overseas offices. Starting with the fiscal year under review, we have introduced an overseas study program that sends employees overseas to take masters of business administration (MBA) courses. Through these programs we develop future candidates for top executive positions, employees with advanced expertise in technology or other knowledge, and employees who are globally minded.

To provide an environment conducive to work, we strive to maintain the safety and health of employees in the workplace as well as creating an easy to work in environment. Aiming for zero accidents, we have introduced a policy to avoid recurrence of accidents and a preventative-type safety policy based on newly introduced risk assessment methods practiced in each workplace. At the same time, to prevent psychological illness, we have appointed counselors and set up mental health activities centered on education for managers and supervisors.

#### Social Contribution Activities

One of the resolutions in our business code of conduct is to make a positive contribution to society and exist in harmony with it.

In addition to contributing to society through our corporate activities, as a good corporate citizen, we support social-contribution, cultural, educational, and sports activities. The offices and plants of the NTN Group throughout the world, in accordance with the regional situations, actively participate in activities that contribute to society by making donations to charitable organizations, dispatching staff to assist with disaster relief or other community activities, and supporting educational, cultural, and sports events. Through such programs as providing our products free to a university motor sports club participating in the Student Formula SAE Competition of Japan, we also help young engineers achieve their dreams. Among other activities, we have systems that allow employees to take time off work to partake in volunteer activities in their own communities, or participate in the new bone marrow transplant volunteer program in Japan.

# NTN has been included in the following SRI indices.

- \* FTSE4 Good Global Benchmark Index \* Morning Star SRI Price Index of Stocks





NTN provides its products free to a team participating in the 1st Student Formula SAE Competition of Japan (NTN, Japan)



NTN donates to forestation and greening organization (NTN, Japan)



Official sponsor of the Lu Mans (France) professional basketball team MSB in the Europe Cup League (NTN Transmission Europe, France)



Participation in Day of Economy held by teenagers (NTN Kugellagerfabrik, Germany)



# Refining Technologies through Participation in Motor Sports

# NTN Signs Team Partner Agreement with B·A·R Honda

NTN has entered into a team partnership contract with the B·A·R Honda Formula One (F1) racing team, which continues to achieve rapid progress in the F1 Championships rankings. As the curtain was raised on the start to a new season in March 2005, the NTN logo was being displayed on the nose pillar of the front wing of the B·A·R Honda F1 machine as well as on the team's trucks.

The B·A·R Honda team is known as a strong and persistent challenger for the F1 Championship. As a major supplier of automobile-related components to Honda in Japan and abroad, NTN intends to share and support that spirit of challenge as a B·A·R Honda team partner. Through our participation, we will spread recognition of the NTN brand name around the world, and strive to provide the highest standard of products and services to the world.



# NTN Becomes Sponsor of Toyota's Entry in U.S. Auto Racing

NTN entered into the NASCAR (National Association for Stock Car Auto Racing) Craftsman Truck Series with Toyota Racing Development, USA, Inc. and Darrell Waltrip Motorsports in January 2004, as the primary sponsor of Truck #17 driven by David Reutimann.

The NASCAR Craftsman Truck Series is one of NASCAR's three premier series. With more than fifty years of history, NASCAR is currently the second most popular professional spectator sport behind the National Football League, with more than ten million viewers watching the races annually.

NTN is sponsoring a U.S. made Toyota Tundra Truck, featuring a 5.8-liter engine that puts out 650 horsepower and attains speeds in excess of 300 kilometers an hour. Through its active support and strong focus on research and development in the sport, NTN intends to showcase to the world the competitiveness of its products and its creative capabilities.





# Motor Sports / Environmental Activities

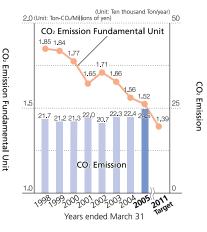
# **Environmental Activities**

At NTN, environmental activities receive the highest priority. We dedicate ourselves through our daily business activities to reducing the environmental impact of our operations and to helping convert our world into a recycling-oriented society. Through these efforts, we are working to create a healthful environment on earth.

#### Energy Reduction Exceeds Target Reduction of Global Warming

During the last fiscal year, as a result of efforts throughout the Company to reduce energy use, we achieved an 18% reduction in our CO<sub>2</sub> emission fundamental unit compared with fiscal 1997, exceeding our target of 17%. Following the effectuation of the Kyoto Protocol in February 2005, greater voluntary efforts are being expected of companies. Therefore, we have set an even higher hurdle of a company-wide 20% reduction in energy consumption in the fiscal year ending March 2006, and are working toward that new goal. Energy reduction highlights in the fiscal year under review included the high-efficiency energy generation and the recycling of exhaust heat of our cogeneration facilities, the use of an engine compressor during the summer, and the use of a heat-treating furnace to convert waste to energy.

## Change of CO<sub>2</sub> Emission Rate



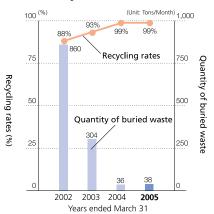
#### Industrial Waste Reduction—Zero-Waste Achieved Again

At NTN, we have defined a recycling rate of 98% or greater to be "zerowaste," and have made this our target to aim for. During the fiscal year under review, we achieved zero-waste at all of our domestic locations.

Among the factors underpinning the achievement of zero-waste at all our locations was the introduction of our grinding swarf solidification system. The system made an especially significant contribution by making it possible to recycle grinding swarf, which was previously disposed of in landfill. In other words, the solid briquettes made from swarf are now sold to steel manufacturers to be recycled and the oil collected from the process is reused in grinding equipment at the plants. The grinding swarf solidification system has also greatly reduced NTN's landfill disposal expenses.

In the current fiscal year, the Company is actively working toward again achieving its zero-waste target, expanding its program to encompass its overseas bases and the operations of its business partners.

#### Change of Recycling Rates and Quantity of Buried Waste



#### NTN Launches Ultracompact Grinding Swarf Solidification System

We have begun sales of the GSB-15S, an ultracompact grinding swarf solidification system that has a 40% smaller footprint than our previous model. The new model provides the same options in price, processing capability, and footprint size as the previous model.



## Compliance with Regulations and Voluntary Activities

#### Proactive Elimination of Environmentally Harmful Substances

Regarding the End of Life Vehicles (ELV<sup>\*1)</sup>) Directive for the automobile industry and the Restriction on the use of certain Hazardous Substances in electrical and electronic equipment directive (RoHS<sup>\*2)</sup>) for the electrical and electronic equipment industry issued by the European Union (EU). Since October 2003, NTN has switched to a procurement system that eliminates the use of all hazardous substances in the manufacture of its bearings. As of March 2003, the Company has also eliminated the use of all hazardous substances in the production of CVJs for automobiles by proposing the use of substitute materials to customers.

NTN is currently proceeding with the elimination of the use of phthalate ester<sup>\*3)</sup>, which was recently added to the EU's list of restricted carcinogens, mutagens, and reprotoxins (CMR<sup>\*4)</sup>) substances. This chemical substance is used as an additive in rubber seals and CVJ boots. The Company aims to completely eliminate its use by the end of 2007 through the use of substitutes.

For substances that have a large impact on the environment or are thought to present some future danger, NTN does not limit its efforts to compliance with legal regulation but proactively seeks to be an industrial leader in voluntarily restricting or eliminating the use of such substances.

- \*1) The ELV Directive targets the use of lead, mercury, cadmium, and hexavalent chromium
- \*2) The RoHS Directive targets the use of above metals and bromine-treated fire the retardants (2 kinds)
- \*3) Phthalate ester: a class of organic chemical, use of which has been restricted under the EU Directive (2003/36/EC) because of possible toxicity to human beings
- <sup>\*4)</sup> The CMR list restricts the use of approximately 60 chemical substances

## Soil Remediation and Groundwater Purification Activities

#### Complete Purification of Idle Land Achieved

NTN had been carrying soil remediation programs at two of its idle land sites in Japan that were previously factory sites, and as a result, successfully out completed purification of the sites during the fiscal year under review.

The two sites being cleaned up were idle land in Kishiwada and Kawachinagano in Osaka. The Kimitsu\* Method was used to determine the degree of contamination and perform the soil remediation. Before doing the evaluation and the soil remediation, we held explanation meetings with and made reports to the neighboring residents and to the regulatory authorities to obtain approval. In addition, timely reports were made on the progress of the purification process.

Consequently, we completed soil remediation at the Kishiwada site in August 2004 and at the Kawachinagano site in January 2005. Following a report to the regulatory authorities, we received formal certificates of approval. Similarly, we reported on the results of the soil remediation programs to the neighboring residents, also receiving their approval.



Soil gas testing



Groundwater purification equipment

\* The Kimitsu Method uses detailed testing to pinpoint the area of contamination to more effectively achieve complete purification. Since contamination testing and purification activities can take place anytime during the process, NTN is also using this method for its soil remediation project at the Kuwana Works.



Rubber seals and CVJ boots

to be replaced with non-

phthalate substitutes



Lead-free grease for CVJs





Directors: Back row/left: Naohiko Fujimura (Managing Director), Tadatoshi Kato (Managing Director), Osamu Wakisaka (Managing Director), Kenji Okada (Managing Director), Hirotsugu Mori (Managing Director), Tatsuo Kondo (Managing Director), Osamu Kato (Director), Takeshi Yoshimura (Director) Front row/left: Yasunobu Suzuki (President), Naokazu Iyama (Deputy President)

# **Directors**

President Yasunobu Suzuki

Deputy President Naokazu Iyama

Managing Directors Tadatoshi Kato Osamu Wakisaka Naohiko Fujimura Kenji Okada Hirotsugu Mori Tatsuo Kondo

#### Directors

Osamu Kato Takeshi Yoshimura

# **Statutory Auditors**

Standing Statutory Auditors Mitsunobu Matsuo Akio Imanishi

Statutory Auditors Teruo Takashima Tadao Kagono

# **Executive Officers**

Managing Executive Officers Yoshikazu Fukumura Yasuo Fujioka

Executive Officers

Katsuhiko Machiyama Makoto Onoda Koji Sahashi Tsugito Nakazeki Hitoshi Inoue Mitsuhiro Tsutsumi Yukio Morita Kazuhiro Shigeta Tetsuji Goto Junichi Yokoi

# Eight-year Summary of Selected Financial Data

NTN Corporation and Consolidated Subsidiaries Years ended March 31

	Millions of yen (except per share amount)		
—	2005	2004	2003
OR THE YEAR DATA			
Net sales	¥ 388,349	¥ 357,394	¥ 342,745
Operating income	33,201	24,709	20,785
Income (loss) before income taxes*	26,586	18,181	6,198
Net income (loss)	16,740	11,032	2,657
Capital expenditures	49,670	38,092	25,264
Depreciation	24,870	23,979	23,838
R&D expenditures	14,952	13,543	12,255
(EAR-END DATA			
Total assets	¥ 516,578	¥ 460,341	¥ 467,198
Shareholders' equity	157,952	142,487	134,928
Number of employees	12,788	11,885	11,810
PER SHARE DATA			
Shareholders' equity	¥ 341.93	¥ 308.27	¥ 291.82
Net income (loss)			
–Basic	35.83	23.54	5.70
–Diluted	32.94	21.87	5.51
Cash dividends	8.5	5.50	5.00
OTHER INFORMATION			
Net income (loss)/Total assets (ROA)	3.4%	2.4%	0.6%
Net income (loss)/Shareholders' equity (ROE)	11.1%	8.0%	1.9%
Shareholders' equity ratio	30.6%	31.0%	28.9%

SEGMENT INFORMATION		Millions of ye	n
	2005	2004	2003
By business			
Bearings	¥ 248,811	¥ 228,615	¥ 220,685
CVJs	111,307	102,959	98,875
Precision equipment	28,231	25,820	23,185
By region			
Japan	¥ 189,990	¥ 176,202	¥ 170,010
North America	92,046	86,084	92,696
Europe	62,593	58,243	47,871
Asia and other areas	43,720	36,865	32,168

Notes: 1) U.S. dollar amounts have been converted from yen, for convenience only, using the approximate exchange rate at March 31, 2005, which was U.S.\$1=¥107.39.

-0

Thousands of U.S. dolla (except per share amour			s of yen hare amount)		
2005	1998	1999	2000	2001	2002
\$ 3,616,249	¥ 347,919	¥ 325,812	¥ 326,474	¥ 340,551	¥ 324,339
309,163	20,816	13,633	9,675	14,335	8,140
247,565	14,144	9,726	(41,822)	6,888	(701)
155,880	7,690	4,067	(24,677)	4,289	(132)
462,520	26,265	27,609	26,013	24,123	21,088
231,586	24,411	24,835	24,122	23,402	24,400
139,231	9,015	9,274	9,779	10,618	11,706
\$ 4,810,299	¥ 473,320	¥ 487,477	¥ 494,677	¥ 478,945	¥ 462,895
1,470,826	172,046	171,969	143,874	138,625	138,532
12,788	12,675	12,554	12,770	12,619	11,989
\$ 3.18	¥ 371.55	¥ 371.39	¥ 310.77	¥ 299.44	¥ 299.27
0.33	16.61	8.78	(53.30)	9.26	(0.29)
0.31	15.44	8.31	_	8.78	_
0.08	9.00	8.00	6.50	6.00	5.50
3.4%	1.6%	0.8%	(5.0%)	0.9%	(0.03%)
11.1%	4.5%	2.4%	(15.6%)	3.0%	(0.1%)
30.6%	35.3%	35.3%	29.1%	28.9%	29.9%

Thousands of U.S. dollars		Millions of yen				
2005	1998	1999	2000	2001	2002	
\$ 2,316,892	_	_	¥ 224,819	¥ 230,017	¥ 215,558	
1,036,475	_	_	81,382	86,318	86,785	
262,883	-	-	20,273	24,216	21,996	
\$ 1,769,159	-	_	¥ 183,936	¥ 195,134	¥ 169,080	
857,119	_	_	86,399	85,925	87,774	
582,857	-	-	27,602	30,449	38,748	
407,114	_	_	28,537	29,043	28,737	

# Scope of Consolidation

As of March 31, 2005, NTN had 34 consolidated subsidiaries, including 10 domestic and 24 overseas subsidiaries. There were a total of five affiliates (overseas) that were accounted for by the equity method. The following were the changes in the scope of consolidation for the fiscal year under review.

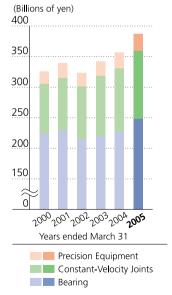
Consolidated (3 companies added):

NTN Omaezaki Corporation (increase in materiality)

- NTN Mie Corporation (increase in materiality)
- Changzhou NTN-Guangyang Corporation (newly established)
- (1 company removed)
  - NTN Kishiwada Corporation (liquidated)

# Net sales (Billions of yen) 400 350 300 250 0 200020012002200320042005 Years ended March 31

#### Sales by business segment



# Sales Performance

Sales and Income

Consolidated net sales for the fiscal year ended March 31, 2005 amounted to ¥388,349 million, increasing ¥30,955 million, or 8.7%, from the previous fiscal year. Consolidated net sales increase would have been ¥35,335 million, considering the ¥4,380 million reduction caused by the currency impact. Overseas sales totaled ¥198.359 million, rising ¥17.167 million, or 9.5%, year-on-year. Overall, overseas sales contributed 51.1% of net sales, edging up 0.4 percentage points from the prior fiscal year. Overseas sales contributions by region were North America, 23.7%; Europe, 16.1%; and Asia and others, 11.3%.

#### Sales by Business Segment

In the bearing segment, new business from the automobile industry contributed to sales growth during the fiscal year. By regions, sales of axle bearings were strong in Japan and Europe while needle roller bearing sales led overall sales growth in North America and Asia. Sales to the general machinery industry achieved growth thanks to GAM activities which are grouped by industry—sales of large and precision bearing sales increased to construction machinery, machine tool, and rolling stock manufacturers. In Asia, in the information technology field, sales of fluid dynamic bearings for HDD motors expanded. Sales to distributors, both in Japan and overseas, were also firm during the fiscal year. Overall sales of bearings increased 8.8%, to ¥248,811 million.

In the constant-velocity joint (CVJ) segment, sales rose 8.1%, to ¥111,307 million. In Japan, CVJs sales for mini-cars and for propeller shafts were firm. In North America, the weakening of the U.S. dollar had some negative impact on sales, but overall sales expanded significantly centered on Japanese automakers in the region. In Europe, sales to Renault were robust. The start up of mass-production by Guangzhou NTN-Yulon Drivetrain Co., Ltd. in China also contributed to the overall growth in CVJ sales.

In the precision equipment segment, sales drives for our precision system products, the LCD repair device and the PDP rid defect repair device. (which serves the needs of the digital consumer electronic industry) contributed to a 9.3% increase in sales, to ¥28.231 million.

#### Sales by Region

In Japan, sales of bearings for automobiles and the precision system product, our LCD repair device, rose in reflection of the growth in automobile production and the robust digital consumer electronics market. GAM activities, which are grouped by industry, focused on the general machinery industry and contributed to strong growth in sales of large and precision bearings to construction machinery, machine tool, and rolling stock manufacturers. Sales to distributors were also firm. As a result, overall sales in Japan advanced 7.8%, to ¥189,990 million.

The weakening U.S. dollar had some negative impact on sales in North America. However, sales of CVJs and bearings to the general machinery industry for construction and agricultural machinery were favorable. Overall, North American sales increased 6.9%, to ¥92,046 million.

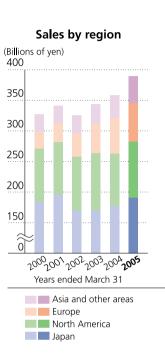
European sales expanded 7.5%, to ¥62,593 million. The increase could be attributed to robust of CVJs to the automobile industry, and solid sales of bearings to the general machinery industry for hydraulic equipment and speed reduction devices.

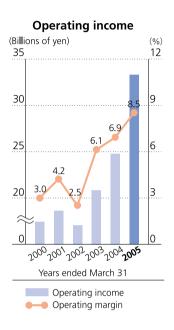
In Asia and other areas, sales of fluid dynamic bearings and bearings for office equipment were strong in China, while volume production of CVJs also contributed to sales growth in that market. In addition, sales of bearings to auto manufacturers in ASEAN countries continued to be robust and GAM-driven sales of precision bearings for the machine tool industry were favorable in Korea. Overall sales in Asia and other areas jumped 18.6%, to ¥43,720 million.

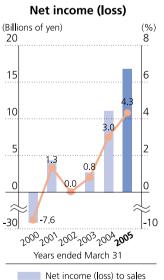
#### Cost of Sales and Selling, General, and Administrative Expenses

Cost of sales amounted to ¥303,233 million, and the percentage of cost to overall sales improved 1.0 percentage point to 78.1%. This improvement was principally achieved through revisions in vendor prices, promotion of VA/VE activities, and productivity gains. These areas, which were specifically targeted under the Company's medium-term business plan, Rapid Advance 21, contributed to overall cost reductions.

Selling, general, and administrative expenses amounted to ¥51,915 million, and the percentage of cost to overall sales improved 0.6 percentage points to 13.4%. The improvement can be mainly attributed to lower logistics costs.







Ratio of net inome (loss) to sales

#### Income

Operating income increased ¥8,492 million, or 34.4%, compared with the previous fiscal year, to ¥33,201 million. Operating margin rose 1.6 percentage points from the previous term, to 8.5% due to improvements in the ratios of selling, general, and administrative expenses and cost of sales to net sales.

Other non-operating income and expenses amounted to a net expense of ¥6,615 million. Non-operating income totaled ¥1,219 million and included ¥933 million in equity in earnings of affiliates and ¥286 million in interest and dividend income. Non-operating expenses totaled ¥7,834 million. Among the major expense items were a ¥2,460 million interest paid and a ¥1,800 million reserve provision for product defect compensation.

As a result, the Company reported income before income taxes and minority interests of ¥26,586 million, up ¥8,405 million from the previous year. Consolidated net income amounted to ¥16,740 million, increasing ¥5,708 million year-on-year. Net income per share for the fiscal year was ¥35.83.

In fiscal 2004, cash dividends totaled ¥8.50 per share. The Company increased the fiscal year-end cash dividend by ¥1.50 over the interim dividend, to ¥5.00 per share.

# R&D and Capital Expenditures

## Research and Development

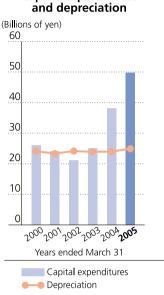
In line with its Rapid Advance 21, the Company concentrated its business resources on strategic products—including CVJs, axle units, needle roller bearings, precision bearings, and automobile clutches— during fiscal 2004. In addition, the Company worked to shorten development times by pursuing an R&D structure that operates around the clock.

Reflecting these efforts, R&D expenditures for the fiscal year increased ¥1,409 million, or 10.4%, to ¥14,952 million, representing 3.9% of consolidated net sales. The breakdown of R&D expenses by business segment was ¥8,638 million for bearings, up 12.4% year-on-year; ¥5,324 million for CVJs, up 11.8%; and ¥990 million for precision equipment, down 9.5% from the prior fiscal year.

#### Capital Expenditures

Capital expenditures for the fiscal year were primarily focused on increasing production capacity, implementing labor savings and rationalization, maintaining and upgrading present facilities, enhancing the safety of those facilities, and new product R&D. In total, capital expenditures increased ¥11,578 million, or 30.4%, from the prior fiscal year to ¥49,670 million.

Financial Section



**Capital expenditures** 

A total of ¥33,364 million was invested in the bearing segment, an increase of ¥9,763 million from the previous fiscal year. Expenditures were made for construction of new facilities and installation of new production equipment at the NTN Mie Corporation; for increase of production equipment at NTN-BOWER Corp.; the installation of fluid dynamic bearing production equipment at NTN Manufacturing (Thailand) Co., Ltd.; and increase of production equipment at the parent company's Iwata Works' Needle Roller Bearing Plant, and Okayama Works' Axle Unit Plant.

In the CVJ segment, the Company increased its capital expenditures by ¥2,234 million, to ¥15,863 million. Major allocations included the expansion of manufacturing facilities at NTN Driveshaft, Inc., and NTN Transmissions Europe, as well as for facilities at the CVJ plants at NTN's lwata and other works.

Capital investment in precision equipment amounted to ¥442 million, down ¥419 million from the prior fiscal year. Funds were principally invested in manufacturing-related areas at the Company's Iwata Works.

All expenditures were funded with internally generated funds and loans. Depreciation in the fiscal year under review amounted to ¥24,871 million, up ¥892 million year-on-year.

## Financial Position and Cash Flows

## Financial Position

As of March 31, 2005, total assets amounted to ¥516,578 million, expanding ¥56,237 million from the previous year. The turnover ratio of total assets declined slightly from the previous fiscal year, edging down 0.03, to 0.75.

Total current assets at year-end amounted to ¥262,397 million, increasing ¥27,326 million. Inventories increased ¥9,602 million. Excluding the effect of ¥983 million increase in currency translations, inventory rose ¥8,619 million on a real basis. Cash and cash equivalents increased ¥9,144 million, while notes and accounts receivable increased ¥9,793 million, reflecting sales growth. The inventory turnover ratio for the year declined 0.11 from the previous year to 4.17.

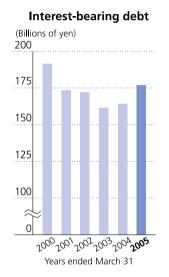
Current liabilities at year-end were ¥212,409 million, increasing ¥42,724 million. Major changes included a ¥15,494 million increase in short-term bank loans and a ¥16,698 million increase in trade payables. As a result, net working capital decreased ¥15,398 million to ¥49,988 million, and the liquidity ratio declined 15.0 percentage points from the previous year to 123.5%.

Interest-bearing debt increased ¥12,095 million during the fiscal year, to ¥176,186 million. Excluding the effect of ¥2,052 million in currency adjustments, interestbearing debt actually expanded ¥10,043 million. This increase can be attributed to ¥3,146 million from the inclusion of new subsidiaries in the scope of consolidation, and greater capital investment due to the substantial expansion in operations. The interest-bearing debt-to-total assets ratio declined 1.5 percentage points, to 34.1%.

During the fiscal year, shareholders' equity increased ¥15,465 million, to ¥157,952

## 





million. Major items included a ¥13,586 million advance in retained earnings and a ¥1,772 million increase in translation adjustments. The shareholders' equity ratio declined 0.3 percentage points from the previous fiscal year, to 30.6%. The shareholders' equity ratio on a market value basis was 53.2%, climbing 0.4 percentage points from the prior fiscal year. Based on shares outstanding at the end of the fiscal year, shareholders' equity per share amounted to ¥341.93, an increase of ¥33.66 per share year-on-year.

Note: Shareholders' equity ratio on a market value basis = market value of shares/total assets

## Cash Flows

For the fiscal year ended March 2005, net cash provided by operating activities amounted to ¥47,830 million, increasing ¥26,688 million, or 126.2%, from the previous fiscal year. This increase can be mainly attributed to cash inflows of ¥26,586 million in income before income taxes and minority interests, ¥24,871 million in depreciation and amortization, and ¥15,656 million increase in trade payables, reduced by cash outflows of a ¥8,524 million increase in inventories and a ¥7,650 million increase in trade receivables.

From this net cash, the Company made expenditures of ¥47,465 million in payments for property, plants, and equipment among net cash used in investing activities totaling ¥46,151 million, which were up ¥11,161 million, or 31.9%, year-on-year.

In financing activities, the Company paid out ¥3,004 million for cash dividends paid and earned a net of ¥9,664 million in proceeds from short- and long-term loans. Net cash used in financing activities, therefore, amounted to ¥6,693 million, up ¥649 million, or 10.8%, from the previous fiscal year.

Currency adjustments and adjustment for new consolidated subsidiaries increased cash and cash equivalents by ¥597 million and ¥175 million, respectively. Therefore, cash and cash equivalents at end of the year totaled ¥51,302 million, up ¥9,144 million, or 21.7%, from the prior fiscal year.

The difference between net cash provided by operating activities and net cash used in investing activities—free cash flow—amounted to ¥1,679 million. In addition, the proportion of net cash provided by operating activities to net sales was 12.3%.



Business results and the financial position of the NTN Group are subject to the following risks. It should be noted that forward-looking statements contained in the following reflect judgments of the NTN Group as of June 30, 2005.

## 1. Economy

The NTN Group operates global production and sales networks, and supplies to customers in various industrial sectors. Business results and the financial position of the NTN Group operations may be affected by the economic and business conditions in specific countries where the NTN Group engages in sales and production activities.

## 2. Foreign exchange fluctuations

Overseas sales of the NTN Group account for over 50% of consolidated sales. This percentage is expected to increase further due to continued acceleration in the global business development of the NTN Group.

Overseas subsidiaries' foreign currency denominated business results and financial positions are converted to yen for the preparation of consolidated financial statements. Moreover, many export transactions with overseas customers of the Company are conducted in foreign currencies. Although the NTN Group hedges risks through forward foreign exchange contracts and expansion of local procurement, including optimizing of the location of production sites, effects of exchange rate fluctuations on business results and financial positions cannot be fully eliminated.

## 3. Declines in market prices

The competitive environment surrounding production and sales activities of the NTN Group is becoming harsher worldwide. As products from China and Eastern Europe are gaining ground, bearings have been affected by falling market prices. At the same time, against a backdrop of global price competition, calls for price reductions are mounting in the automotive industry, which accounts for over half of the NTN Group sales. Although the NTN Group works continuously to reduce cost while developing new products of high quality and high added value, business results and the NTN Group's financial position may be affected by downward pressure on market prices.

## 4. Rise in raw materials prices

The NTN Group procures a wide range of raw materials from outside sources. To deal with cost increases, especially of steel materials, which pose a high weighting in materials costs, measures have been taken such as mark-ups on selling prices to reflect higher materials cost. In addition, the Group is targeting cost reductions through enhanced production yields and VA/VE methods. Nevertheless, business results and the NTN Group's financial position may be affected by stronger than expected increases in raw materials costs.

#### 5. Disasters and accidents

Production plants and facilities of the NTN Group and its transaction counterparts are exposed to the risk of damage

from natural disasters such as earthquakes, floods, and fires. Although the NTN Group has put into place crisis management systems and stands ready to engage in measures to contain damage as much as possible, risks cannot be completely eliminated. Business performance and the financial status of the NTN Group may be affected by natural disaster or by accidents.

## 6. Dependence on specific industries

The NTN Group's Bearings Division derives approximately half of its sales revenues from the automotive industry, which also buys more than half of the components that the Constantvelocity Joints Division produces for automotive power transmission to the drive axle. Dependence on the automotive industry is therefore high. Although the NTN Group works to increase sales of bearings and precision equipment products to the industrial machinery sector and implements policies to achieve a balanced sales structure, a rapid shift in demand in the automotive industry could potentially affect the NTN Group's business results and financial position.

## 7. Product defects

To ensure product quality, the NTN Group works to satisfy customers' requirements concerning product functions and specifications, and strives to provide appropriate quality and product safety by enforcing quality assurance globally. However, a substantial product defect leading to serious accident, claim for damages, or product recall could entail huge product warranty costs and potentially affect business performance and the financial position of the NTN Group. Although the NTN Group has taken out global product liability insurance, complete coverage for loss is not possible.

## 8. Intellectual property

The NTN Group generates a wealth of innovative technologies and know-how in the process of new product development, representing valuable intellectual property for which the NTN Group files patent applications to protect its rights. However, business performance and the financial position of the NTN Group may be affected if a legal challenge is initiated against its intellectual property or if its intellectual property is infringed by a third party.

#### 9. Risks associated with global operations

The NTN Group develops its business operations worldwide with overseas sales exceeding 50% of consolidated sales. Overseas business development is associated with the following risks:

- a. Risks from unforeseen change in tax systems of or between individual countries
- b. Risks from unforeseen change in laws of individual countries
- c. Difficulty in hiring and retaining appropriate staff
- d. Evolving technology levels and unstable labor relations in emerging economies
- e. Political instability in emerging economies

**Consolidated Balance Sheets** 

NTN Corporation and Consolidated Subsidiaries March 31, 2005 and 2004

	2005	20	04	2005
	(1)	lillions of yen)		(Thousands of U.S. dollars) (Note 1)
Assets				
Current assets:				
Cash and cash equivalents (Note 3)	¥ 51,302	¥ 42,1	158	\$ 477,717
Short-term investments	114		66	1,061
Trade receivables:				
Notes	18,296			170,370
Accounts	82,593			769,094
Allowance for doubtful accounts	(63	) (3	399)	(587
	100,826	91,0	033	938,877
Inventories (Note 4)	93,167	83,5	565	867,558
Deferred income taxes (Note 14)	6,534	7,8	350	60,844
Other current assets	10,454	10,3	399	97,346
Total current assets	262,397	235,0	071	2,443,403
Land	23,041			214,554
	123,611	109,7		214,554 1,151,048
Land Buildings and structures Machinery, equipment and vehicles	123,611 461,009	109,7 427,9	756 992	1,151,048 4,292,848
Land Buildings and structures	123,611 461,009 13,164	109,7 427,9 13,8	756 992 377	1,151,048 4,292,848 122,581
Land Buildings and structures Machinery, equipment and vehicles Construction in progress	123,611 461,009 13,164 620,825	109,7 427,9 13,8 575,4	756 992 377 417	1,151,048 4,292,848 122,581 5,781,031
Land Buildings and structures Machinery, equipment and vehicles Construction in progress Less accumulated depreciation	123,611 461,009 13,164 620,825 (413,166	109,7 427,9 13,8 575,4 ) (394,2	756 992 377 417 283)	1,151,048 4,292,848 122,581 5,781,031 (3,847,341
Buildings and structures Machinery, equipment and vehicles Construction in progress	123,611 461,009 13,164 620,825	109,7 427,9 13,8 575,4 ) (394,2	756 992 377 417 283)	1,151,048 4,292,848 122,581 5,781,031
Land Buildings and structures Machinery, equipment and vehicles Construction in progress Less accumulated depreciation Property, plant and equipment, net	123,611 461,009 13,164 620,825 (413,166 207,659	109,7 427,9 13,8 575,4 ) (394,2 181,7	756 992 377 417 283) 134	1,151,048 4,292,848 122,581 5,781,031 (3,847,341 1,933,690
Land Buildings and structures Machinery, equipment and vehicles Construction in progress Less accumulated depreciation Property, plant and equipment, net nvestments and other assets: Investment securities (Note 3)	123,611 461,009 13,164 620,825 (413,166 207,659	109,7 427,9 13,8 575,4 ) (394,2 181,7 14,3	756 992 377 417 283) 134	1,151,048 4,292,848 122,581 5,781,031 (3,847,341 1,933,690
Land Buildings and structures Machinery, equipment and vehicles Construction in progress Less accumulated depreciation Property, plant and equipment, net Investments and other assets: Investment securities (Note 3) Investments in unconsolidated subsidiaries and affiliates	123,611 461,009 13,164 620,825 (413,166 207,659 14,755 7,409	109,7 427,9 13,8 575,4 ) (394,2 181,7 14,2 7,4	756 992 377 417 283) 134 317 434	1,151,048 4,292,848 122,581 5,781,031 (3,847,341 1,933,690 137,396 68,992
Land Buildings and structures Machinery, equipment and vehicles Construction in progress Less accumulated depreciation Property, plant and equipment, net Investments and other assets: Investment securities (Note 3) Investments in unconsolidated subsidiaries and affiliates Deferred income taxes (Note 14)	123,611 461,009 13,164 620,825 (413,166 207,659 14,755 7,409 18,809	109,7 427,9 13,8 575,4 <b>)</b> (394,2 181,7 14,5 7,4 17,4	756 992 377 417 283) 134 317 434 409	1,151,048 4,292,848 122,581 5,781,031 (3,847,341 1,933,690 137,396 68,992 175,147
Land Buildings and structures Machinery, equipment and vehicles Construction in progress Less accumulated depreciation Property, plant and equipment, net nvestments and other assets: Investment securities (Note 3) Investments in unconsolidated subsidiaries and affiliates	123,611 461,009 13,164 620,825 (413,166 207,659 14,755 7,409	109,7 427,9 13,8 575,4 (394,2 181,7 14,5 7,4 17,4 4,9	756 992 377 417 283) 134 317 434 409 976	1,151,048 4,292,848 122,581 5,781,031 (3,847,341 1,933,690 137,396 68,992

**¥ 516,578** ¥ 460,341 **\$ 4,810,299** 

Total assets

	2005	2004	2005
	(Mil	lions of yen)	(Thousands of U.S. dollars) (Note 1)
Liabilities, minority interests and shareholders' equ	ity		
Current liabilities:			
Short-term bank loans (Note 5)	¥ 82,013	¥ 71,362	\$ 763,693
Current portion of long-term debt (Note 5)	6,067	1,224	56,495
Trade payables:			
Notes	33,178	28,231	308,949
Accounts	51,524	39,773	479,784
	84,702	68,004	788,733
Accrued income taxes (Note 14)	7,623	3,171	70,984
Deferred income taxes (Note 14)	16	13	149
Other current liabilities	31,988	25,911	297,868
otal current liabilities	212,409	169,685	1,977,922
	,	,	.,
ong-term liabilities:			
Long-term debt (Note 5)	88,106	91,505	820,430
Accrued retirement benefits for employees (Note 6)	47,347	46,305	440,888
Accrued retirement benefits for directors and			
statutory auditors	329	450	3,064
Reserve for product defect compensation	1,918	2,657	17,860
Deferred income taxes (Note 14)	2,225	2,093	20,719
Other long-term liabilities	2,226	1,669	20,728
otal long-term liabilities	142,151	144,679	1,323,689
Ainority interests	4,066	3,490	37,862
Contingent liabilities (Note 8)			
Shareholders' equity (Notes 7 and 17):			
Common stock			
Authorized – 800,000,000 shares			
Issued – 463,056,775 shares at March 31, 2005 and 2004	39,599	39,599	368,740
Capital surplus	52,623	52,623	490,018
Retained earnings	72,918	59,332	679,001
Net unrealized holding gain on securities (Note 3)	5,231	4,967	48,710
Translation adjustments	(11,911)	(13,683)	(110,913)
	158,460	142,838	1,475,556
Treasury stock, at cost; 1,109,722 shares			
in 2005 and 834,186 shares in 2004	(508)	(351)	(4,730)
Net shareholders' equity	157,952	142,487	1,470,826
otal liabilities, minority interests and shareholders' equity	¥ 516,578	¥ 460,341	\$ 4,810,299

See accompanying notes to the consolidated financial statements.

**Consolidated Statements of Income** 

NTN Corporation and Consolidated Subsidiaries Years ended March 31, 2005 and 2004

		2005		2004		2005
Interest and dividend income		(Millions of yen)				housands of J.S. dollars) (Note 1)
Net sales	¥	388,349	¥	357,394	\$	3,616,249
Cost of sales (Note 12)		303,233		282,594		2,823,661
Gross profit		85,116		74,800		792,588
elling, general and administrative expenses (Note 12)		51,915		50,091		483,425
Operating income		33,201		24,709		309,163
Other income (expenses):						
Interest and dividend income		286		294		2,663
Interest expense		(2,460)		(2,792)		(22,907)
		933		569		8,688
		-		(2,596)		-
(Note 2(j))		(1,800)		_		(16,761)
Other, net		(3,574)		(2,003)		(33,281)
		(6,615)		(6,528)		(61,598)
Income before income taxes and minority interests		26,586		18,181		247,565
ncome taxes (Note 14):						
Current		9,263		3,021		86,256
Deferred	_	339		3,948		3,157
		9,602		6,969		89,413
Income before minority interests		16,984		11,212		158,152
Ainority interests in subsidiaries		(244)		(180)		(2,272)
Net income	¥	16,740	¥	11,032	\$	155,880

See accompanying notes to the consolidated financial statements.

**Consolidated Statements of Shareholder's Equity** 

NTN Corporation and Consolidated Subsidiaries Years ended March 31, 2005 and 2004

		2005		2004	2005
		(Millio	ns of ye	en)	Thousands of U.S. dollars) (Note 1)
Common stock:					
Balance at beginning and end of the year	¥	39,599	¥	39,599	\$ 368,740
Capital surplus:					
Balance at beginning of the year	¥	52,623	¥	52,622	\$ 490,018
Gain on sales of treasury stock		-		1	-
Balance at end of the year	¥	52,623	¥	52,623	\$ 490,018
Retained earnings:					
Balance at beginning of the year	¥	59,332	¥	50,722	\$ 552,491
Decrease in retained earnings resulting from merger					
with an unconsolidated subsidiary		-		(89)	-
Net income		16,740		11,032	155,880
Appropriations:					
Cash dividends		(3,004)		(2,311)	(27,973)
Bonuses to directors and statutory auditors		(150)		(22)	(1,397)
Balance at end of the year	¥	72,918	¥	59,332	\$ 679,001
Net unrealized holding gain on securities:					
Balance at beginning of the year	¥	4,967	¥	865	\$ 46,252
Net change during the year		264		4,102	2,458
Balance at end of the year	¥	5,231	¥	4,967	\$ 48,710
Franslation adjustments:					
Balance at beginning of the year	¥	(13,683)	¥	(8,609)	\$ (127,414)
Net change during the year		1,772		(5,074)	16,501
Balance at end of the year	¥	(11,911)	¥	(13,683)	\$ (110,913)

See accompanying notes to the consolidated financial statements.

**Consolidated Statements of Cash Flows** 

NTN Corporation and Consolidated Subsidiaries Years ended March 31, 2005 and 2004

		2005		2004		2005
		(Millio)	ns of ye	n)	(Ti L	housands of J.S. dollars) (Note 1)
ash flows from operating activities:						
come before income taxes and minority interests djustments for:	¥	26,586	¥	18,181	\$	247,565
Depreciation and amortization		24,871		23,979		231,595
Amortization of consolidation adjustments		(40)		(1,057)		(372)
Increase in allowance for doubtful accounts		88		32		819
Increase (decrease) in accrued retirement benefits for employees Payments of employees' retirement benefits under		788		(7,164)		7,338
employees' early retirement incentive plans Decrease in accrued retirement benefits		-		20,446		-
for directors and statutory auditors		(121)		(69)		(1,127)
Decrease in reserve for employees' early retirement incentive plans		_		(10,988)		_
Decrease in reserve for product defect compensation		(738)		(1,843)		(6,872)
Interest and dividend income		(286)		(294)		(2,663)
Interest expense		2,460		2,792		22,907
Translation adjustments and foreign exchange (gain) loss, net		(630)		648		(5,866)
Equity in earnings of affiliates		(933)		(569)		(8,688)
Increase in trade receivables		(7,650)		(7,262)		(71,236)
(Increase) decrease in inventories		(8,524)		7,192		(79,374)
Increase in trade payables Payments of bonuses to directors and statutory auditors		15,656		1,503		145,786
Other		(154) 2,127		(22) 138		(1,434) 19,806
Subtotal		53,500		45,643		498,184
erest and dividend income received		853		953		7,943
erest paid /ments of employees' retirement benefits under		(2,374)		(2,921)		(22,106)
employees' early retirement incentive plansome taxes paid		_ (4,149)		(20,446) (2,087)		_ (38,635)
t cash provided by operating activities	¥	47,830	¥	21,142	\$	445,386
sh flows from investing activities:						
ncrease) decrease in short-term investments	¥	(48)	¥	190	\$	(447)
rchases of property, plant and equipment		(47,465)		(36,414)		(441,987)
rchases of other assets		(1,062)		(712)		(9,889)
rchases from sales of property, plant and eqipment		2,217		-		20,644
oceeds from sales of investment securities and other		447		1,645		4,162
her		(240)		301		(2,234)
t cash used in investing activities	¥	(46,151)	¥	(34,990)	\$	(429,751)
sh flows from financing activities:	v	0.244	V			77 600
rease (decrease) in short-term bank loans, net	¥	8,344	¥	(5,965)	\$	77,698
peeds from long-term loans payment of long-term loans, including current portion		1,826		4,362		17,003 (4,712)
uance of bonds		(506)		(1,140) 59,758		(4,712)
demption of bonds		_		(50,000)		-
Jance of common stock assigned to minority shareholders		_		(30,000)		-
of consolidated subsidiaries		223		1,384		2,077
sh dividends paid		(3,004)		(2,311)		(27,973)
ner		(190)		(2,311)		(1,769)
t cash provided by financing activities	¥	6,693	¥	6,044	\$	62,324
		597		(328)		5,559
ect of exchange rate changes on cash and cash equivalents		8.060		(8,132)		83,518
		8,969				
t increase (decrease) in cash and cash equivalents		42,158		50,240		392,569
t increase (decrease) in cash and cash equivalents sh and cash equivalents at beginning of the year rease in cash and cash equivalents resulting from merger						392,569 _
t increase (decrease) in cash and cash equivalents sh and cash equivalents at beginning of the year rease in cash and cash equivalents resulting from merger with an unconsolidated subsidiary				50,240 50		392,569 _
fect of exchange rate changes on cash and cash equivalents et increase (decrease) in cash and cash equivalents ish and cash equivalents at beginning of the year crease in cash and cash equivalents resulting from merger with an unconsolidated subsidiary crease in cash and cash equivalents arising from initially consolidated subsidiary						392,569 - 1,630

See accompanying notes to the consolidated financial statements.

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NTN Corporation and Consolidated Subsidiaries March 31, 2005

## 1. Basis of Preparation

The accompanying consolidated financial statements of NTN Corporation (the "Company") and consolidated subsidiaries are prepared on the basis of accounting principles generally accepted in Japan, which are different in certain respects as to the application and disclosure requirements of International Financial Reporting Standards, and are compiled from the consolidated financial statements prepared by the Company as required by the Securities and Exchange Law of Japan. The translation of yen amounts into U.S. dollars is included solely for the convenience of readers outside Japan and has been made at  $\pm 107.39 = U.S. \pm 1.00$ , the exchange rate prevailing on March 31, 2005. This translation should not be construed as a representation that yen can be converted into U.S. dollars at the above or any other rate.

## 2. Summary of Significant Accounting Policies

## (a) Principles of consolidation

The accompanying consolidated financial statements include the accounts of the Company and the significant companies which it controls directly or indirectly. Companies over which the Company exercises significant influence in terms of their operating and financial policies have been included in the consolidated financial statements on an equity basis. The assets and liabilities of the newly consolidated subsidiaries are stated at fair value as of their respective dates of acquisition.

The financial statements of certain consolidated subsidiaries whose fiscal year end is December 31 have been included in consolidation on the basis of a full fiscal year closing on March 31 for consolidation purposes.

The differences between the cost and the underlying net equity in the net assets at the dates of acquisition of the consolidated subsidiaries and companies accounted for by the equity method are amortized by the straight-line method over the appropriate periods.

## (b) Foreign currency translation

Monetary assets and liabilities denominated in foreign currencies are translated into yen at the rates of exchange in effect at the balance sheet date. Revenues and expenses are translated at the rates of exchange prevailing when the transactions were made.

Assets and liabilities of overseas subsidiaries and affiliates are translated into yen at the exchange rates in effect on the respective balance sheet date, and shareholders' equity is translated at the respective historical rates. Revenue and expenses are translated at the average rates of exchange for the respective years. Differences arising from translation are reflected in shareholders' equity (presented as "Translation adjustments") and minority interests in the consolidated balance sheets.

## (c) Cash and cash equivalents

Cash and cash equivalents consist of cash on hand, deposits

with banks withdrawable on demand, and short-term investments which are readily convertible to cash subject to an insignificant risk of any change in their value and which were purchased with an original maturity of three months or less.

## (d) Allowance for doubtful accounts

The allowance for doubtful accounts is computed based on the actual historical ratio of bad debts and an estimate of uncollectible amounts determined after an analysis of specific individual receivables.

#### (e) Short-term investments and investment securities

The accounting standard for financial instruments requires that securities be classified into three categories: trading, held-tomaturity or other securities. Trading securities are carried at fair value and held-to-maturity debt securities are carried at amortized cost. Marketable securities classified as other securities are carried at fair value with any changes in unrealized holding gain or loss, net of the applicable income taxes, included directly in shareholders' equity. Cost of securities sold is determined by the moving average method. Non-marketable securities classified as other securities are carried at cost based on the moving average method.

### (f) Inventories

Inventories are principally stated at cost determined by the average method.

## (g) Property, plant and equipment

Property, plant and equipment are stated at cost. Depreciation is computed at rates based on the estimated useful lives of the respective assets by the declining-balance method, except for the buildings and assets of overseas consolidated subsidiaries to which the straight-line method is principally applied.

The principal estimated useful lives are as follows:

Buildings and structures	10 to 50 years
Machinery, equipment and vehicles	5 to 12 years

## (h) Accrued retirement benefits for employees

Accrued retirement benefits for employees have been provided principally at an amount calculated based on the retirement benefit obligation and the fair value of the pension plan assets, as adjusted for net unrecognized actuarial gain or loss and unrecognized prior service cost. The estimated benefit is attributed to each period by the straight-line method over the estimated years of service of the eligible employees.

Prior service cost is amortized in the year in which the gain or loss is recognized primarily by the straight-line method over the estimated average remaining years of service of the eligible employees (principally 15 years).

Net unrecognized actuarial gain or loss is amortized commencing the year following the year in which the gain or loss was recognized primarily by the straight-line method over the estimated average remaining years of service of the eligible employees (principally 15 years).

# (i) Accrued retirement benefits for directors and statutory auditors

Subject to approval at a shareholders' meeting, directors and statutory auditors of the Company are entitled to lump-sum payments under unfunded retirement benefit plans. The provision for retirement benefits for directors and statutory auditors has been made at an estimated amount based on the Company's internal regulations.

## (j) Reserve for product defect compensation

During the year ended March 31, 2003, the Company encountered serious problems involving significant deficiencies in the quality of certain of its products. The Company provided a reserve for product defect compensation at an estimated amount in order to cover the anticipated compensation.

For the year ended March 31, 2005, the Company has updated its estimate of the required compensation and has provided an additional reserve of ¥1,800 million (\$16,761 thousand) which is presented as a component of other expenses in the consolidated statement of income.

## (k) Leases

Finance leases other than those which transfer the ownership of the leased property to the lessee are accounted for as operating leases.

# (I) Research and development costs and computer software

Research and development costs are charged to income when incurred.

Expenditures relating to computer software developed for internal use are charged to income when incurred, except if the software is expected to contribute to the generation of income or to future cost savings. Such expenditures are capitalized as assets and are amortized by the straight-line method over their estimated useful life, generally a 5-year period.

## (m) Income taxes

Deferred income taxes are provided for temporary differences between the balances of assets and liabilities reported for financial purposes and the corresponding balances for tax reporting purposes.

#### (n) Derivative financial instruments and hedging activities

All derivatives are stated at fair value with any changes in fair value included in net income for the period in which they arise, except for derivatives which meet the criteria for deferral hedge accounting under which realized gain or loss is deferred as an asset or a liability. Receivables and payables hedged by forward foreign exchange contracts which meet certain conditions are translated at the corresponding foreign exchange contract rates.

## (o) Appropriation of retained earnings

Under the Commercial Code of Japan, the appropriation of retained earnings with respect to a given financial period is made by resolution of the shareholders at a general meeting held subsequent to the close of the financial period. The accounts for the period do not reflect such appropriations. (Refer to Note 17.)

## 3. Securities

(a) Information regarding marketable securities classified as other securities at March 31, 2005 and 2004 is summarized as follows:

			Mil	lions of yen			Thousands of U.S.dollars				
	<b>2005</b> 2004						2005				
	Acquisition costs	Carrying value	Unrealized gain (loss)	Acquisition costs	Carrying value	Unrealized gain (loss)	Acquisition costs	Carrying value	Unrealized gain (loss)		
Securities whose carrying value exceeds their acquisition costs: Equity securities	V E 120	V 14 195	¥ 8.747	¥ 5,132	¥ 13,454	v o 211	\$ 50.638	¢122.090	<b>\$ 81,451</b>		
1 5		Ŧ 14,105		Ŧ J,15Z	Ŧ 15,454	•					
Subtotal	5,438	14,185	8,747	5,132	13,454	8,322	50,638	132,089	81,451		
Securities whose carrying value does not exceed their acquisition costs:											
Equity securities	83	70	(13)	388	361	(27)	773	652	(121)		
Other	42	27	(15)	42	25	(17)	391	251	(140)		
Subtotal	125	97	(28)	430	386	(44)	1,164	903	(261)		
Total	¥ 5,563	¥ 14,282	¥ 8,719	¥ 5,562	¥ 13,840	¥ 8,278	\$ 51,802	\$132,992	\$ 81,190		

(b) The carrying value of non-marketable other securities at March 31, 2005 and 2004 is summarized as follows:

		Million	ns of yen	Thousands of U.S. dollars	
-		2005	2005 2004		
 Cash and cash equivalents: Money management funds	¥	6,997	¥ 6,996	\$ 65,155	
nvestment securities: Unlisted equity securities		473	477	4,404	
		7,470	¥ 7,473	\$ 69,559	

## 4. Inventories

Inventories at March 31, 2005 and 2004 consisted of the following:

		Milli	ons of yen						ousands of I.S. dollars
-	2005		2004			2005			
Finished goods Work in process and raw materials	¥	¥ 46,393 46,774		¥ 44,763 38,802		432,005 435,553			
-	¥	93,167	¥	83,565	\$	867,558			

## 5. Short-term Bank Loans and Long-term Debt

Short-term bank loans principally represent short-term notes with average annual interest rates of 2.23% and 1.41% at March 31, 2005 and 2004, respectively.

Long-term debt at March 31, 2005 and 2004 consisted of the following:

		Millior	ns of y	<i>ien</i>	Thousands U.S. dollar		
		2005		2004		2005	
	¥	14,173 10,000 10,000 10,000 20,000 30,000	¥	12,729 10,000 10,000 10,000 20,000 30,000	\$	131,976 93,119 93,119 93,119 186,237 279,355	
Less current portion	¥	94,173 (6,067) 88,106	¥	92,729 (1,224) 91,505	\$	876,925 (56,495) 820,430	

The zero coupon unsecured convertible bonds are convertible at any time up to and including March 4, 2009 into shares of common stock of the Company at the conversion price of ¥740 (\$6.89) per share.

The assets pledged as collateral for short-term bank loans of ¥2,010 million (\$18,717 thousand) at March 31, 2005 were as follows:

	Mil	lions of yen	Th L	nousands of J.S. dollars
Land Buildings and structures	¥	1,074 816	\$	10,001 7,598
Total	¥	1,890	\$	17,599

The assets pledged as a foundation mortgage for short-term bank loans of ¥33 million (\$307 thousand) at March 31, 2005 were as follows:

	Millio	Millions of yen		ousands of .S. dollars
Land Buildings and structures Machinery, equipment and vehicles	¥	95 165 75	\$	885 1,536 698
Total	¥	335	\$	3,119

The aggregate annual maturities of long-term debt subsequent to March 31, 2005 are summarized as follows:

Year ending March 31,	Millions of yen			housands of J.S. dollars
2006	¥	6,067	\$	56,495
2007		13,071		121,715
2008		3,960		36,875
2009		40,238		374,690
2010		10,730		99,916
2011 and thereafter		20,107		187,234
	¥	94,173	\$	876,925

## 6. Accrued Retirement Benefits for Employees

The Company and certain domestic consolidated subsidiaries have defined benefit plans, i.e., corporate pension fund plans, taxqualified pension plans and lump-sum payment plans, covering substantially all employees who are entitled to lump-sum or annuity payments, the amounts of which are determined by reference to their basic rates of pay, length of service, and the conditions under which termination occurs. Certain overseas consolidated subsidiaries also have defined benefit plans.

On June 1, 2004, the Company and certain domestic consolidated subsidiaries obtained approval from the Minister of Health, Labour and Welfare for an exemption from past retirement benefit obligations with respect to the substitutional portion of their employee welfare pension fund plans ("WPFPs") which the Company and certain domestic consolidated subsidiaries operated on behalf of the Japanese government. They changed employee WPFPs to corporate pension fund plans. They paid cash in the amount equivalent to returnable pension plan asset to the Japanese government on March 30, 2005.

Effective April 1, 2005, the Company and certain domestic consolidated subsidiaries changed the tax-qualified pension plans to corporate pension plans, which are similar to cash-balance pension plans. The Company and certain domestic consolidated subsidiaries also amended the percentage of pension benefits and other factors under the pension plans.

The following table sets forth the funded and accrued status of the plans and the amounts recognized in the consolidated balance sheets at March 31, 2005 and 2004 for the Company's and the consolidated subsidiaries' defined benefit plans:

		Millions of yen				housands of U.S. dollars
		2005		2004		2005
Retirement benefit obligation	¥	(111,832)	¥	(110,042)	\$ (	1,041,363)
Plan assets at fair value		51,366		48,930		478,312
Unfunded retirement benefit obligation		(60,466)		(61,112)		(563,051)
Unrecognized actuarial loss		16,118		18,043		150,089
Unrecognized prior service cost		(2,999)		(3,236)		(27,926)
Accrued retirement benefits for employees	¥	(47,347)	¥	(46,305)	\$	(440,888)

	Millions of yen			Thousands U.S. dolla		
		2005		2004		2005
Service cost Interest cost Expected return on plan assets Amortization:	¥	3,909 3,256 (1,746)	¥	4,254 3,574 (1,374)	\$	36,400 30,319 (16,258)
Actuarial loss Prior service cost		1,335 (228)		2,272 (217)		12,431 (2,123)
Retirement benefit expenses	¥	6,526	¥	8,509	\$	60,769

The components of retirement benefit expenses for the years ended March 31, 2005 and 2004 are outlined as follows:

The assumptions used in accounting for the defined benefit plans for the years ended March 31, 2005 and 2004 are a discount rate principally of 2.6% and an expected rate of return on plan assets principally of 4.0%.

## 7. Shareholders' Equity

The Commercial Code of Japan (the "Code") provides that an amount equivalent to at least 10% of cash dividends paid and bonuses to directors and statutory auditors, and exactly 10% of interim cash dividends paid be appropriated to the legal reserve until the sum of additional paid-in capital and the legal reserve equals 25% of stated capital. The Code also provides that additional paid-in capital and the legal reserve are not available for dividends, but may be used to reduce or eliminate a capital deficit by resolution of the shareholders or may be transferred to common stock by resolution of the Board of Directors. The Code also stipulates that, to the extent that the sum of the additional paid-in capital account and the legal reserve exceeds 25% of the common stock account, the amount of any such excess is available for appropriation by resolution of the shareholders. Additional paid-in capital and the legal reserve are included in capital surplus and retained earnings, respectively, in the accompanying consolidated balance sheets and statements of shareholders' equity. The legal reserve of the Company amounted to ¥8,639 million (\$80,445 thousand) at March 31, 2005 and 2004.

## 8. Contingent Liabilities

The contingent liabilities of the Company and its consolidated subsidiaries at March 31, 2005 were as follows:

	Mil	llions of yen	ousands of J.S. dollars
Trade notes receivable discounted with banks	¥	626	\$ 5,829

## 9. Finance Leases Without Covenants Transferring Ownership of Properties to Lessees

#### (a) Lessees' accounting

The following *pro forma* amounts represent the acquisition costs, accumulated depreciation and net book value of the leased assets at March 31, 2005 and 2004, which would have been reflected in the consolidated balance sheets if finance lease accounting had been applied to the finance leases currently accounted for as operating leases:

		Millions of yen	Thousands of U.S. dollars
	2005	2004	2005
	Acquisition Accumulated Net boo costs depreciation value	k Acquisition Accumulated Net book costs depreciation value	Acquisition Accumulated Net book costs depreciation value
Building and structures Machinery, equipment	¥ 2,645 ¥ 1,557 ¥ 1,08	¥ 2,639 ¥ 1,435 ¥ 1,204	\$ 24,630 \$ 14,499 \$10,131
and vehicles	528 304 224	718 466 252	4,917 2,831 2,086
Other assets	75 38 3	97 60 37	698 353 345
	¥ 3,248 ¥ 1,899 ¥ 1,34	¥ 3,454 ¥ 1,961 ¥ 1,493	\$ 30,245 \$ 17,683 \$12,562

Lease payments relating to finance leases accounted for as operating leases in the accompanying consolidated financial statements amounted to ¥279 million (\$2,598 thousand) and ¥336 million for the years ended March 31, 2005 and 2004, respectively. Depreciation of the leased assets computed by the straight-line method over the respective lease terms amounted to ¥279 million (\$2,598 thousand) and ¥336 million for the years ended March 31, 2005 and 2004, respectively.

Future minimum lease payments subsequent to March 31, 2005 for finance leases accounted for as operating leases are summarized as follows:

ending March 31,		lions of yen	Thousands of U.S. dollars		
2006 2007 and thereafter	¥	209 1,140	\$	1,946 10,616	
Total	¥	1,349	\$	12,562	

The acquisition costs and future minimum lease payments under finance leases presented in the above tables include the imputed interest expense.

#### (b) Lessors' accounting

The following amounts represent the acquisition costs, accumulated depreciation and net book value of the leased assets relating to finance leases accounted for as operating leases at March 31, 2005 and 2004:

		Millions of yen			Millions of yen			Millions of yen			Millions of yen			Millions of yen				ısands of . dollars
		2005		2004		2005												
– Machinery, equipment and vehicles Acquisition cost Accumulated depreciation	¥	69 (63)	¥	69 (62)	\$	643 (587)												
Net book value	¥	6	¥	7	\$	56												

Lease income relating to finance leases accounted for as operating leases in the accompanying consolidated financial statements amounted to ¥6 million (\$56 thousand) and ¥7 million for the years ended March 31, 2005 and 2004, respectively. Depreciation of the assets leased under finance leases accounted for as operating leases amounted to ¥1 million (\$9 thousand) and ¥2 million for the years ended March 31, 2005 and 2004, respectively.

Future minimum lease receipts subsequent to March 31, 2005 for finance leases accounted for as operating leases are summarized as follows:

Year ending March 31,	Millions of yen		Thousands of U.S. dollars	
2006 2007 and thereafter	¥	6 6	\$	56 56
Total	¥	12	\$	112

The imputed interest income is included in the above amounts.

## **10. Operating Leases**

Future minimum lease payments subsequent to March 31, 2005 for noncancelable operating leases were as follows:

Year ending March 31,	Millions of yen		Thousands of U.S. dollars		
2006 2007 and thereafter	¥	188 1,109	\$	1,750 10,327	
Total	¥	1,297	\$	12,077	

## **11. Derivative Financial Instruments**

Derivative financial instruments are utilized by the Company and its consolidated subsidiaries principally to reduce interest rate and foreign exchange rate risk, and consist of forward foreign exchange contracts, currency options, currency swaps, interest-rate options and interest-rate swaps. The Company and its consolidated subsidiaries do not hold or issue derivative financial instruments for trading or speculative purposes.

The Company and certain consolidated subsidiaries utilized forward foreign exchange contracts during the year ended March 31, 2005. They are exposed to certain risk arising from their forward foreign exchange contracts.

The Company and its consolidated subsidiaries have established policies which include maximum upper limits and reporting obligations for derivative transactions and comply fully with these guidelines. Derivative transactions are entered into by the Company's Finance Department and its subsidiaries. The Company carries out mutual supervision and monitoring of the derivative transactions in accordance with management policies and its consolidated subsidiaries apply the same approach. Each derivative transaction of the Company is reported to the director responsible when entered into. The consolidated subsidiaries are required to report the status of their derivatives positions to the Company on a monthly basis and are also required to consult with the Company when they enter into derivative transactions other than forward foreign exchange contracts.

Disclosure of fair value information on derivatives has been omitted because all open positions qualified for hedge accounting.

## 12. Research and Development Costs

Research and development costs included in cost of sales and selling, general and administrative expenses totaled ¥14,953 million (\$139,240 thousand) and ¥13,543 million for the years ended March 31, 2005 and 2004, respectively.

## 13. Restructuring Costs

Restructuring costs for the year ended March 31, 2004 consisted of the following:

	Mill	lions of yen
		2004
Loss on reorganization of manufacturing facilities at subsidiaries in the U.S.A Loss on liquidation of subsidiaries	¥	2,119 477
	¥	2,596

## 14. Income Taxes

Income taxes applicable to the Company and its domestic subsidiaries comprise corporate tax, inhabitants' taxes and enterprise tax which, in the aggregate, resulted in statutory tax rates of 40.0% and 41.3% for the years ended March 31, 2005 and 2004, respectively. Overseas subsidiaries are subject to the income taxes of the countries in which they operate.

The effective tax rates for the years ended March 31, 2005 and 2004 differ from the Company's statutory tax rates for the following reasons:

	2005	2004
Statutory tax rates	40.0%	41.3%
Permanent non-deductible expenses	0.4	0.6
Permanent non-taxable income	(1.5)	(2.2)
Elimination of dividend income	3.4	4.3
Equity in earnings of affiliates	(1.4)	(1.3)
Decrease in deferred tax assets resulting from change in statutory tax rate	_	1.3
Other	(4.8)	(5.7)
Effective tax rates	36.1%	38.3%

The tax effects of temporary differences which gave rise to significant portions of the deferred tax assets at March 31, 2005 and 2004 are presented below:

	Millions of yen		Millions of ye		Millions of yen			Millions of yen			housands of U.S. dollars						
		2005		2004		2005											
Deferred tax assets:																	
Accrued retirement benefits for employees	¥	18,123	¥	16,890	\$	168,759											
Inventories		2,405		1,587		22,395											
Foreign tax credit carryforwards		-		931		-											
Tax loss carryforwards		3,799		5,259		35,376											
Reserve for product defect compensation		767		1,063		7,142											
Accrued expenses		3,552		2,646		33,076											
Loss on devaluation of investment securities		324		326		3,017											
Depreciation and amortization		144		180		1,341											
Other		1,616		1,445		15,047											
Total gross deferred tax assets		30,730		30,327		286,153											
Less: valuation allowance		(110)		(285)		(1,024)											
Deferred tax assets		30,620		30,042		285,129											
Deferred tax liabilities:																	
Depreciation and amortization		(3,428)		(2,959)		(31,921)											
Unrealized holding gain on securities		(3,499)		(3,329)		(32,582)											
Reserve for deferred gain on property included in retained earnings		(450)		(464)		(4,190)											
Other		(141)		(137)		(1,313)											
Deferred tax liabilities		(7,518)		(6,889)		(70,006)											
Net deferred tax assets	¥	23,102	¥	23,153	\$	215,123											

## 15. Amounts Per Share

			Yen	U.S. dollars	
		2005	2004	2005	
Net income:	v	25.02		¢ 0.22	
Basic Diluted	¥	35.83 32.94	23.54 21.87	\$ 0.33 0.31	
Cash dividends applicable to the year		8.50	5.50	0.08	
Net assets		341.93	308.27	3.18	

Basic net income per share is computed based on the net income available for distribution to shareholders of common stock and the weighted-average number of shares of common stock outstanding during the year, and diluted net income per share is computed based on the net income available for distribution to the shareholders and the weighted-average number of shares of common stock outstanding during each year after giving effect to the dilutive potential of shares of common stock to be issued upon the conversion of convertible bonds. The amount per share of net assets is computed based on the net assets available for distribution to the shareholders and the number of shares of common stock outstanding at the year end.

Cash dividends per share represent the cash dividends proposed by the Board of Directors as applicable to the respective years together with the interim cash dividends paid.

## 16. Segment Information

(1) Geographic Segment Information Segment information by geographic area for the years ended March 31, 2005 and 2004 is summarized as follows:

							Mill	ions of yen						
								2005						
		Japan		North America		Europe		Asia and ther areas		Total	E	limination	С	onsolidated
External sales Intersegment sales	¥	202,342 92,608	¥	91,670 705	¥	62,957 349	¥	31,380 928	¥	388,349 94,590	¥	_ (94,590)	¥	388,349 _
Total sales Operating expenses		294,950 272,114		92,375 88,837		63,306 60,155		32,308 29,541		482,939 450,647		(94,590) (95,499)		388,349 355,148
Operating income	¥	22,836	¥	3,538	¥	3,151	¥	2,767	¥	32,292	¥	909	¥	33,201
Assets	¥	361,293	¥	103,424	¥	54,248	¥	35,637	¥	554,602	¥	(38,024)	¥	516,578
							Mil	lions of yen						
								2004						
		Japan		North America		Europe		Asia and ther areas		Total	E	limination	C	onsolidated
External salesn. ntersegment sales	¥	188,170 76,343	¥	86,002 756	¥	58,492 216	¥	24,730 161	¥	357,394 77,476	¥	(77,476)	¥	357,394 _
Total sales Operating expenses		264,513 247,787		86,758 84,327		58,708 55,751		24,891 23,412		434,870 411,277		(77,476) (78,592)		357,394 332,685
Operating income	¥	16,726	¥	2,431	¥	2,957	¥	1,479	¥	23,593	¥	1,116	¥	24,709
Assets	¥	333,781	¥	87,867	¥	48,707	¥	24,391	¥	494,746	¥	(34,405)	¥	460,341
						Th	ousan	ds of U.S. do	llars					
								2005						
		Japan		North America		Europe		Asia and ther areas		Total	E	limination	C	onsolidated
External sales Intersegment sales	\$	1,884,179 862,352	\$	853,618 6,565	\$	586,246 3,250	\$	292,206 8,641	\$	3,616,249 880,808	\$	_ (880,808)	\$	3,616,249 _
Total sales		2,746,531		860,183		589,496		300,847		4,497,057		(880,808)		3,616,249
Operating expenses		2,533,886		827,238		560,154		275,081		4,196,359		(889,273)		3,307,086
Operating income	\$	212,645	\$	32,945	\$	29,342	\$	25,766	\$	300,698	\$	8,465	\$	309,163
Assets	\$ 3	3,364,308	\$	963,069	\$	505,149	\$	331,847	\$	5,164,373	\$	(354,074)	\$	4,810,299

## (2) Overseas sales

Overseas sales, which include export sales of the Company and its domestic consolidated subsidiaries and sales (other than exports to Japan) of the overseas consolidated subsidiaries, for the years ended March 31, 2005 and 2004 are summarized as follows:

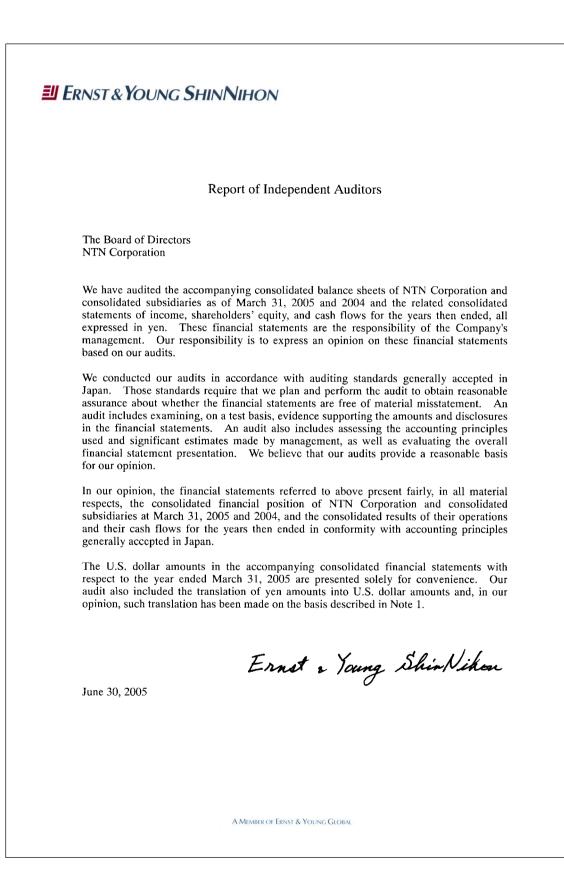
	Millions of yen									
		20	05		2004					
	North America	Europe	Asia and other areas	Total	North America	Europe	Asia and other areas	Total		
Overseas sales Consolidated net sales Overseas sales as a percentage of	¥ 92,046 _	¥ 62,593 _	¥ 43,720 _	¥ 198,359 388,349	¥ 86,084 –	¥ 58,243 _	¥ 36,865 _	¥ 181,192 357,394		
consolidated net sales	23.7%	16.1%	11.3%	51.1%	24.1%	16.3%	10.3%	50.7%		
		Thousand	s of U.S. dollars							
		2	2005							
	North America	Europe	Asia and other areas	Total						
Overseas sales	\$ 857,119	\$ 582,857	7 \$ 407,114	\$ 1,847,090						
Consolidated net sales	-	-		\$ 3,616,249						

## 17. Subsequent Event

The following appropriations of retained earnings of the Company, which have not been reflected in the accompanying consolidated financial statements for the year ended March 31, 2005, were approved at a shareholders' meeting held on June 29, 2005:

	Mili	lions of yen	Thousands of U.S. dollars
Year-end cash dividends (¥5.0 = U.S.\$0.05 per share)	¥	2,310	\$ 21,510
Bonuses to directors		130	1,211
Bonuses to statutory auditors		10	93

-





**Consolidated Subsidiaries** Paid-in capital Holding in percent NTN BEARING SERVICE CO., LTD. ¥450,000,000 100 KYOEI NTN CORP. ¥20.000.000 100 NTN KONGO CORP. ¥1.000.000.000 100 NTN ENGINEERING PLASTICS CORP. ¥100.000.000 100 NTN POWDER METAL CORP. ¥400,000,000 40[60] NTN MIKUMO COMPANY LTD. ¥450,000,000 100 NTN CASTING CORP. ¥450,000,000 100 100 NTN KINAN CORP. ¥450,000,000 NTN OMAEZAKI CORP. ¥266.000.000 97.4 NTN MIE CORP. ¥450,000,000 100 NTN USA CORP. US.\$97.820.000 100 NTN BEARING CORP. OF AMERICA US.\$24,700,000 100(100) NTN DRIVESHAFT, INC. US.\$38,580,000 100(100)AMERICAN NTN BEARING Mfg. CORP. US.\$24,330,000 100(100) NTN-BOWER CORP. US.\$67,000,000 100(100) NTN-BCA CORP. US.\$16.000.000 100(100)NTK PRECISION AXLE CORP. US.\$10,000,000 60(60) NTN BEARING CORP. OF CANADA LTD. CAN.\$20,100,000 100 NTN SUDAMERICANA, S.A. 100 US.\$700,000 NTN WÄLZLAGER (EUROPA) G.m.b.H. EURO 14,500,000 100 NTN KUGELLAGERFABRIK (DEUTSCHLAND) G.m.b.H. EURO 18,500,000 100 NTN BEARINGS (UK) LTD. STG.£2,600,000 100(0.04) NTN FRANCE S.A. 99.999(0.006) EURO 3,700,000 NTN TRANSMISSIONS EUROPE EURO 71,727,792 85 NTN BEARING-SINGAPORE (PTE) LTD. S.\$36,000,000 100(0.969) NTN CHINA LTD. HK.\$2,500,000 100 NTN BEARING-THAILAND CO., LTD. BAHT 600,000,000 100(99.999) NTN MANUFACTURING (THAILAND) CO., LTD. BAHT 611,000,000 99.999(99.999) NTN BEARING-MALAYSIA SDN.BHD. M.\$350,000 60(60) NTN KOREA CO., LTD. WON 500,000,000 100 SHANGHAI NTN CORP. US.\$26,750,000 95 NTN-NIDEC (ZHEJIANG) CORP. 60 US.\$21,000,000 GUANGZHOU NTN-YULON DRIVETRAIN CO., LTD. 60 US.\$10,000,000 CHANGZHOU NTN-GUANGYANG CORP. 51 US.\$3,600,000

## Affiliated Companies Accounted for by the Equity Method

TUNG PEI INDUSTRIAL CO., LTD.	NT.\$1,257,232,620	27.35
TAIWAY LTD.	NT.\$160,000,000	36.25
UNIDRIVE PTY. LTD.	A.\$5,000,000	40
BEIJING NTN-SEOHAN DRIVESHAFT CO., LTD	US.\$5,000,000	40
ASAHI FORGE OF AMERICA CORP.	US.\$6,100,000	32.8(32.8)

(Notes)

1. NTN Corporation's share of voting rights in NTN POWDER METAL CORP. is less than 50%. As this company is substantially controlled by NTN Corporation, however, it is treated as a subsidiary.

2. Under "Holding in percent," the figure in parentheses indicates the percentage of indirectly owned, and is included as part of the total holding. The figure in brackets indicates the percentage owned by parties having close ties with the Company. It is not included in the ownership percentage.

## NTN's Global Network

As of June 29, 2005

## JAPAN

## Sales

## **Automotive Sales Headquarters**

Industrial Sales Headquarters 6th Floor, TOC Bldg., 22-17 Nishi-Gotanda 7-chome, Shinagawa-ku, Tokyo 141-0031, Japan Phone : +81-3-5487-2826 Fax : +81-3-5487-2940

## **Precision Equipment Division**

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#### Fluid Dynamic Bearing Division

101 Katsutaba, Kanie-cho, Ama-gun, Aichi 497-8541, Japan Phone : +81-567-95-5005 Fax : +81-567-95-5939

## NTN BEARING SERVICE CO., LTD.

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#### **KYOEI NTN CORP.**

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## Manufacturing

## **Kuwana Works**

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### Iwata Works

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## **Okayama Works**

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#### Takarazuka Works

2-1 Toyo-cho, Takarazuka, Hyogo 665-0032, Japan Phone : +81-797-71-1131 Fax : +81-797-71-1818

## Nagano Works

14017-11 Oaza-Nakaminowa, Minowa-machi, Kamiina-gun, Nagano 399-4601, Japan Phone: +81-265-79-8888 Fax : +81-265-79-8881

## NTN KONGO CORP.

3-13, 1-chome, Kidonishi-cho, Kawachinagano, Osaka 586-0009, Japan Phone : +81-721-53-1317 Fax : +81-721-54-6981

## NTN ENGINEERING PLASTICS CORP.

970 Oaza Ano, Toin-cho, Inabe-gun, Mie 511-0243, Japan Phone : +81-594-76-7221 Fax : +81-594-76-7244

## NTN POWDER METAL CORP.

101 Katsutaba, Kanie-cho, Ama-gun, Aichi 497-8541, Japan Phone : +81-567-95-3913 Fax : +81-567-95-6160

#### NTN MIKUMO COMPANY LTD.

750-1 Onoe, Matsusaka, Mie 515-2109, Japan Phone: +81-598-56-3311 Fax: +81-598-56-7151

#### NTN CASTING CORP.

475-1, Nadabun-cho, Hirata, Shimane 691-0003, Japan Phone: +81-853-63-3108 Fax : +81-853-63-3463

#### NTN KINAN CORP.

2504-1 Ikuma, Kamitonda-cho, Nishimuro-gun, Wakayama 649-2103, Japan Phone : +81-739-47-1801 Fax : +81-739-47-1829

#### HIKARI SEIKI INDUSTRY CO., LTD.

8 Motohigashikata, Sanmaiden-cho, Tenri, Nara 632-0046, Japan Phone : +81-743-66-0285 Fax : +81-743-67-1512

#### NTN MIE CORP.

3601 Mizono, Tado-cho, Kuwana, Mie 511-0118, Japan Phone : +81-594-48-6711 Fax : +81-594-48-7130

## NTN OMAEZAKI CORP.

4681-3, Sakura, Omaezaki, Shizuoka 437-1604, Japan Phone : +81-537-86-2480 Fax : +81-537-86-2227

## **THE AMERICAS**

## Holding Company

#### NTN USA CORP.

1600 E. Bishop Court, P.O. Box 7604, Mount Prospect, IL 60056-7604, U.S.A. Phone : +1-847-298-7500 Fax : +1-847-294-1209

#### Sales

## NTN BEARING CORP. OF AMERICA

1600 E. Bishop Court, P.O. Box 7604, Mount Prospect, IL 60056-7604, U.S.A. Phone : +1-847-298-7500 Fax : +1-847-699-9744

#### NTN BEARING CORP. OF CANADA LTD.

305 Courtneypark Drive West, Mississauga, Ontario, L5W 1Y4, Canada Phone : +1-905-564-2700 Fax : +1-905-564-7749

#### NTN SUDAMERICANA, S.A.

World Trade Center Panama Calle 53 Este, Urbanización Marbella Piso NO.16, Oficina 1601 Apartado Postal 832-0487, Panamá, Rep.de Panamá Phone : +507-269-4777 Fax : +507-264-5592

#### NTN DE MEXICO, S.A.

Calle 22 No.2465, Esq, Calle 3, Zona Industrial, C.P. 44940 Guadalajara, Jalisco, México Phone : +52-33-3145-1490 Fax : +52-33-3145-1594

#### NTN DO BRASIL LTDA.

Av. Moema, 94-9° Andar, Conj. 92 a 94 Cep 04077-020, Indianópolis, São Paulo, SP, Brasil Phone : +55-11-5051-0600 Fax : +55-11-5051-2807

## Manufacturing

#### AMERICAN NTN BEARING MFG. CORP. Elgin Plant

1500 Holmes Road, Elgin, IL 60123, U.S.A. Phone : +1-847-741-4545 Fax : +1-847-888-1226

#### Schiller Park Plant

9515 Winona Avenue, Schiller Park, IL 60176, U.S.A. Phone : +1-847-671-5450 Fax : +1-708-681-5298

## NTN-BOWER CORP.

Macomb Plant 711 North Bower Road, Macomb, IL 61455 U.S.A. Phone : +1-309-833-4541 Fax : +1-309-837-7373

## Hamilton Plant

2086 Military Street South, Hamilton, AL 35570, U.S.A Phone : +1-205-921-2173 Fax : +1-205-921-2059

### NTN DRIVESHAFT, INC.

8251 South International Drive Columbus, IN 47201 U.S.A. Phone : +1-812-342-7000 Fax : +1-812-342-1155

## NTN-BCA CORP.

401 West Lincoln Avenue, Lititz, PA 17543-7020, U.S.A. Phone : +1-717-627-3623 Fax : +1-717-627-2581

## NTK PRECISION AXLE CORP.

741 South County Rd 200 West Rd Frankfort, IN 46041, U.S.A. Phone : +1-765-656-1000 Fax : +1-765-656-1001

## ASAHI FORGE OF AMERICA CORP.

5030 Corporate Way Richmond, KY 40475 Phone : +1-859-626-4100 Fax : +1-859-626-5611

## NTN BEARING MFG. CANADA

A DIV. OF NTN BEARING CORP. OF CANADA LTD. 6740 Kitimat Road, Mississauga, Ontario, L5N 1M6, Canada Phone: +1-905-826-5500 Fax : +1-905-821-3486

#### EUROPE

## Sales

### NTN WÄLZLAGER (EUROPA) GmbH

Max-Planck-Strasse 23, 40699 Erkrath, F.R. Germany Phone : +49-211-2508-0 Fax : +49-211-2508400

## NTN BEARINGS (UK) LTD.

Wellington Crescent, Fradley Park, Lichfield, Staffordshire, WS13 8RZ, U.K. Phone :+44-1543-445000 Fax :+44-1543-445035

## NTN FRANCE S.A.

Z.I.Sablière BP 338 Schweighouse Sur Moder 67507 Haguenau Cedex, France Phone : +33-3-88-53-2222 Fax : +33-3-88-73-4695

## • Manufacturing

## NTN KUGELLAGERFABRIK (DEUTSCHLAND) GmbH NTN Strasse 1-3, 40822 Mettmann,

F.R. Germany Phone : +49-2104-1409-0 Fax : +49-2104-13138

## NTN TRANSMISSIONS EUROPE

Z.A. des Trémelières Communauté Urbaine du Mans 72704 Allonnes Cedex, France Phone : +33-2-43-83-9000 Fax : +33-2-43-83-9030

## ASIA AND OTHER AREAS

## Sales

## NTN BEARING-SINGAPORE (PTE) LTD. No.9 Clementi Loop Singapore 129812

Phone : +65-64698066 Fax : +65-64695400

## NTN CHINA LTD.

Rm. 1914-1915, Park-in Commercial Centre, 56 Dundas Street, Mongkok, Kowloon, Hong Kong Phone : +852-2385-5097 Fax : +852-2385-2138

## NTN BEARING-THAILAND CO., LTD.

12th Floor, Panjathani Tower, 127/15 Nonsee Road, Chongnonsee Yannawa, Bangkok 10120, Thailand Phone : +66-2-681-0401 Fax : +66-2-681-0408

## NTN BEARING-MALAYSIA SDN. BHD.

Lot No. 764C, 4 1/2 Miles Jalan Kelang Lama, 58000 Kuala Lumpur, Malaysia Phone : +60-3-79817931 Fax : +60-3-79814678

## NTN KOREA CO., LTD.

10th Floor, Press Center, 25, Taepyeong-Ro 1-GA, Jung-Gu, Seoul 100-745, Korea Phone : +82-2-757-9005 Fax : +82-2-779-4150

## NTN-CBC (AUSTRALIA) PTY. LTD.

3, The Crescent, Kingsgrove, NSW 2208, LOCKED BAG 1800, Kingsgrove 1480. NSW Australia Phone : +61-2-9502-1833 Fax : +62-2-9502-4013

## Manufacturing

#### NTN MANUFACTURING (THAILAND) CO., LTD.

111/2 Moo 4,Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong 21140, Thailand Phone : +66-38-955-185 Fax : +66-38-955-191

### SHANGHAI NTN CORP.

No.666, Nanle Road, Songjiang Industrial Zone, Songjiang, Shanghai, China Phone : +86-21-5774-8666 Fax : +86-21-5774-8555

## NTN-NIDEC (ZHEJIANG) CORP.

No.600, Changsheng Road, Pinghu Economic Development Zone, Pinghu City, Zhejiang Province, China Phone : +86-573-5096688 Fax : +86-573-5096767

# GUANGZHOU NTN-YULON DRIVETRAIN CO., LTD.

No.11 Jun Da Road, East District of Guangzhou Economic and Technological Development Zone, Guangzhou, Guangdong Province, China Phone : +86-20-8226-6458 Fax : +86-20-8226-6937

## CHANGZHOU NTN-GUANGYANG CORP.

52 Hanjiang Road, New District, Changzhou, Jiangsu, China 213022 Phone : +86-519-5158888 Fax : +86-519-5150888

## BEIJING NTN-SEOHAN DRIVESHAFT

**CO., LTD.** Beijing Opto-mechatronics Industrial Park (101111), China Phone : +86-10-69507492 Fax : +86-10-69507492

## TUNG PEI INDUSTRIAL CO., LTD.

10th Floor No.142, Chung Hsiao E.Rd., Sec. 4, Taipei, Taiwan, R.O.C. Phone : +886-2-2741-7321 Fax : +886-2-2741-6623

## TAIWAY LTD.

No.14, Kwang Fu Road, Hukou 303, Hsinchu, Taiwan, R.O.C. Phone : +886-3-5983601 Fax : +886-3-5982787

## UNIDRIVE PTY. LTD.

45-49 McNaughton Road, Clayton, Victoria 3168 Australia Phone : +61-3-9542-4100 Fax : +61-3-9544-8117

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## **Head Office**

NTN Corporation 3–17 Kyomachi-bori 1-chome, Nishi-ku, Osaka 550-0003, Japan

## **Investor Relations**

 Phone:
 +81-6-6449-3528

 Fax:
 +81-6-6443-3226

 E-mail:
 irmanager@ntn.co.jp

## **NTN on Internet**

NTN's Web site offers a variety of corporate and product information, including the latest annual report and financial results. http://www.ntn.co.jp

Common Stock	(As of March 31, 2005)
Authorized	800,000,000 shares
Issued and outstanding	463,056,775 shares

Number of Shareholders (As of March 31, 2005) 29.069

#### **Transfer Agent for Common Stock**

UFJ Trust Bank Limited 4-3, 1-chome, Marunouchi, Chiyoda-ku, Tokyo 100-0005, Japan

## **Stock Exchange Listings**

Tokyo, Osaka stock exchanges (#6472)

#### Independent Accountants

Ernst & Young ShinNihon

## General Meeting of Shareholders

The General Meeting of Shareholders was held on June 29, 2005 in Osaka

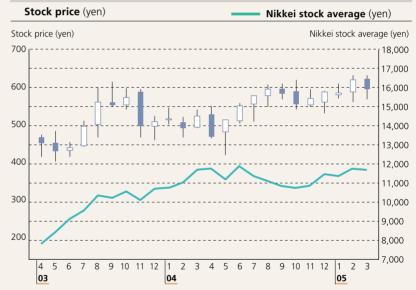
## Stock Price Range in Fiscal 2004

High: ¥632 (March 2, 2005) Low: ¥423 (May 17, 2004)

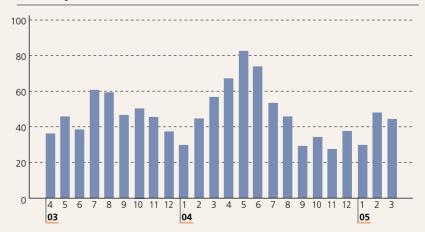
## Shareholders by Category



## Tokyo Stock Price Range



#### Monthly volume traded (Million shares)



For New Technology Network



## **NTN Corporation**

Head Office 3-17, 1-chome, Kyomachibori, Nishi-ku, Osaka 550-0003, Japan

http://www.ntn.co.jp