# Development Bank of Japan Research Report No. 17

## Survey on Planned Capital Spending for Fiscal Years 2000 and 2001 (Conducted in February 2001)

June 2001

**Economic and Industrial Research Department**
**Development Bank of Japan**

# Contents

# I Outline

### Objectives

This survey has been conducted biannually (in February and August) since FY 1956 by Development Bank of Japan to assess major trends in the capital spending of Japanese industry.

### The Scope of Capital Spending

In this survey, capital spending refers to domestic investment in the tangible fixed assets of one's own corporation; they include buildings, structures and equipment (including ships, aircraft, rolling stock, tools and furnishings), as well as the purchase and development of land (excluding the purchase of land for subdivision in the real estate industry). Accordingly, intangible fixed assets are excluded, as are capital spending abroad and investment in subsidiaries/affiliated firms (except that "information technology investment" includes intangible fixed assets, etc. as indicated later).

### Survey Methods

The survey was conducted by means of questionnaire (sent to and completed by individual firms).

Capital spending is calculated on a construction basis. In general, it is defined as the sum total of tangible fixed assets including the construction in progress account (without deducting resale value, depreciation and loss).

### Target Firms

This survey covers all private firms in Japan's major industries capitalized at ¥1 billion or more.

However, it excludes agriculture, forestry, finance and insurance, medicine, etc. In addition, the Teito Rapid Transit Authority has been included in the survey despite the fact that it is classified as a (non-financial) public corporation under the System of National Accounts (SNA).

### Date of Survey

February 10, 2001

### Contents of the Survey

(i) Anticipated actual capital spending for FY 2000 and planned capital spending for FY 2001, (ii) Details of individual construction projects in each of the above years, (iii) Anticipated revenues and expenditures in FY 2000 and FY 2001, (iv) Investment motives in FY 2000 and FY 2001, (v) Trends in land investment in FY 2000 and FY 2001, (vi) Information technology investment in FY2000 and FY2001.

## Responses

The responses to the survey are shown below. This survey is the largest among similar national surveys on the trend of capital spending in terms of the number of targeted firms and respondents.

| | No. of Firms Targeted | No. of Firms Giving Valid Responses | Proportion of Valid Responses |
|---|---|---|---|
| Principle Business Classification | 3,524 | 3,061 | 86.9% |
| Investment Specific Classification | 4,278 | 3,752 | 87.7% |

## On the Totals

On industrial classification

There are two types of industrial classification: principal business classification and investment specific classification. The former classifies and totals the companies' responses based on the main business interest of each company, while the latter classifies and totals the amount of investment for each business department in a company's response according to industrial sector. As a rule, the principal business classification is used for analysis, and the investment specific classification is only adopted in some specific cases.

Timing of survey and years covered

The survey is conducted twice a year, in February and in August. Since the survey is conducted five times concerning the same fiscal year until the planned investments are materialized, the result reveals business sentiments in minute detail, through the extent to which planned investments have been modified for example.

| Targeted FY / Timing of survey | 1998 | 1999 | 2000 | 2001 | 2002 |
|---|---|---|---|---|---|
| August, 1999 | Actual | Modified plan | Plan for next FY | | |
| February, 2000 | | Estimate | Initial plan | | |
| August, 2000 | | Actual | Modified plan | Plan for next FY | |
| February, 2001 | | | Estimate | Initial plan | |
| August, 2001 | | | Actual | Modified plan | Plan for next FY |

On the number of common firms

The number of common firms for actual capital spending in FY1999 and anticipated actual capital spending in FY2000 refers to the number of firms responding to both the previous survey (August) regarding actual capital spending in FY1999 and the current survey (February) regarding anticipated actual capital spending in FY2000 (number of responses based on principal business classification). The number of common firms for anticipated actual capital spending in FY2000 and planned capital spending for FY2001 refers to the number of firms responding to the current survey (February) regarding anticipated actual capital spending in FY2000 and planned capital spending for FY2001.

# Capital spending Decreased, Mainly in Non-manufacturing: Surge in investment in information technology seems to have stopped

## II Summary

### 1. Overall Condition

Overall anticipated actual capital spending for all industries in FY 2000 rose 7.8%, the first increase in four years. (All figures are on a construction basis; the rate of growth or decline is compared with the previous year.) Looking at planned capital spending for FY 2001, investment will turn down in both the manufacturing sector (down 0.7%) and the non-manufacturing sector (down 7.4%), meaning the resumption of decline (down 5.2%) for all industries.

### 2. Anticipated Actual Capital Spending for FY 2000

Looking at anticipated actual capital spending for FY 2000, investment rose for all industries (up 7.8%) for the first time in four years as it increased rapidly in the manufacturing sector (up 18.0%) and recovered in the non-manufacturing sector (up 3.2%).

### 3. Planned Capital Spending for FY 2001

Planned capital spending for FY 2001 points to a decrease in both the manufacturing sector (down 0.7%) and the non-manufacturing sector (down 7.4%). Thus, overall investment is expected to resume its decline (down 5.2%).

In the manufacturing sector (down 0.7%), investment will turn down in electric machinery, which accounts for over half of the capital spending in the sector. Under a restrictive mood, it will also fall in iron and steel as well as in automobiles, due to the repercussion from a stepped-up investment in new models. Meanwhile, capital spending will increase in chemicals, led by high value added products and in non-ferrous metals, led by optical cable-related products. Although capital spending will also increase in general machinery, mainly for office and household machinery, the lack of strength in investment growth will result in overall decline in capital spending.

In the non-manufacturing sector (down 7.4%), a slight increase in spending planned in telecommunications and information will be more than offset by declines in railways due to the termination of construction and expansion projects in the Tokyo metropolitan area, in wholesale and retail due to reaction to the accelerated establishment of new outlets prior to the promulgation of the Large-scale Retail Store Law and in real estate due to slowdown in the establishment of new retail outlets. Decline is also expected in the electric power industry, which accounts for a major part of capital spending in the non-manufacturing sector. Taken as a whole, these factors point to a drop in capital spending in the sector for the coming fiscal year.

In comparison with the previous survey (August 2000), investment was revised upwards in both the manufacturing sector (up 7.9%) and the non-manufacturing sector (up 2.8%). This means an overall upward revision of 3.8%.

A comparison of each half of FY 2001 with the corresponding period in the previous year for all industries predicts an overall increase of 5.4% in the first half of FY 2001, and a contraction of

13.2% in the second half.

Looking at the respective shares of different investment motives for manufacturing, increase can be observed in “product development and upgrading” and “research and development.” for the materials industry and in “expansion of production capacity” for the processing and assembly industry including electric machinery and transport equipment. In the non-manufacturing sector, the share of “maintenance” is slated to increase to the detriment of “expansion of production capacity,” which still accounts for some 60% of capital spending.

Land investment shows a substantial drop of 39.7% from the previous year, with double-figure reductions planned in both the manufacturing and non-manufacturing sectors. Land investment represents 3.4% of the planned capital spending.

The ratio of capital spending to cash flow (net profit/loss plus depreciation expenses) will fall in both the manufacturing sector and the non-manufacturing sector, because of a larger number of firms that project improvements in their profit picture.

The domestic capital spending of foreign-affiliated firms (firms with over one-third foreign ownership; 144 respondents) shows a growth of 3.8% to ¥1,120.9 billion thanks to increased contributions from manufacturing industries such as electric machinery, transport equipment and petroleum. Foreign-affiliated firms now account for 4.6% of total capital spending in Japan.

Looking at information technology investment on the user side, mainly for improving the efficiency of corporate businesses, substantial increase is expected in both the manufacturing sector (up 16.4% among common firms for FY2000 and 2001) and the non-manufacturing sector (up 10.5%). Accordingly, the total for all industries will rise further by 12.2%, while total capital spending is expected to make a downturn (down 8.9%). The tone remains strong for IT investment as firms seek to improve competitiveness through system integration in line with their reorganization and through system renewal for business efficiency.

## 4. Features of Planned Capital Spending for FY 2001

Following a significant increase in the previous year, IT investment is expected to peak out on the supply side including electric machinery, while it will experience a reactionary drop in the non-manufacturing sector. All in all, capital spending is slated to turn downward, mainly due to the slump in non-manufacturing.

The previous survey (August 2000) indicated that IT investment had substantial influence over a wide range of industries through chain reaction. Although it will continue to increase in industries related to digital technology (consumer electronics, and office and household machinery) or optical cables (non-ferrous metals), the deterioration of market environment for personal computers and general-use memories will result in a decline in IT investment in the electric machinery industry, a heavy investor in information technology, mainly for electronic parts. Thus, the tone will become increasingly restrictive for related products such as semiconductor-production devices (precision machinery) and glass for liquid crystal display (cement ceramics and glass). Capital spending in telecommunications and information is expected to slow down but will remain at a substantial level thanks to increased demand for, and investments in, next-generation cellular phones.

In the non-manufacturing sector, restrictive mood lingers on in the heavy-spending electric power industry. In addition, the retail industry will experience reaction from the stepped-up establishment of outlets, and large-scale projects will be completed in industries such as railways and services. The result is an unprecedented drop in non-manufacturing capital spending for a February survey.

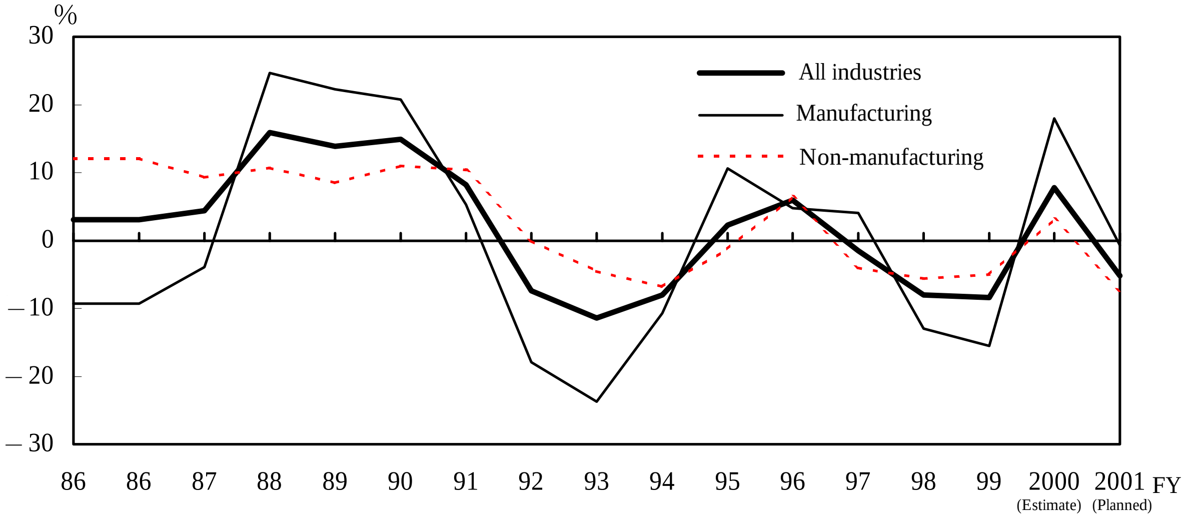
In the final analysis, capital spending is waiting for a new leading industry to emerge.

## Trends in Capital Spending for FY 2000 and FY 2001

(Units: 100 million yen, %)

| | FY 2000 Survey (Estimate) (2,918 common firms) | | | FY 2001 Survey (Planned) (3,061 common firms) | | |
|---|---|---|---|---|---|---|
| | FY 1999 (Actual) | FY 2000 (Estimate) | Growth rate 2000/99 | FY 2000 (Estimate) | FY 2001 (Planned) | Growth rate 2001/2000 |
| Total | 230,224 | 248,106 | 7.8 | 254,918 | 241,778 | -5.2 |
| *(except Electric Power)* | *(191,356)* | *(208,545)* | *(9.0)* | *(215,356)* | *(202,953)* | *(-5.8)* |
| Manufacturing | 71,395 | 84,241 | 18.0 | 85,453 | 84,893 | -0.7 |
| Non-Manufacturing | 158,829 | 163,866 | 3.2 | 169,465 | 156,885 | -7.4 |
| *(except Electric Power)* | *(119,961)* | *(124,305)* | *(3.6)* | *(129,904)* | *(118,060)* | *(-9.1)* |
| *(Electric Power)* | *(38,868)* | *(39,561)* | *(1.8)* | *(39,561)* | *(38,825)* | *(-1.9)* |

## Growth of Capital Spending, FY 1986-FY 2001



## Capital Spending by Industry for Fiscal Years 2000-2001

(Units: 100 million yen, %)

| | Capital Spending (hundred million yen) | | | | Growth Rate (%) | | Component Rate (%) | |
|---|---|---|---|---|---|---|---|---|
| | FY1999 (Actual) | FY2000 (Estimate) | FY2000 (Estimate) | FY2001 (Planned) | 2000/99 | 2001/2000 | FY2000 (Estimate) | FY2001 (Planned) |
| | (2,918 firms) | | (3,061 firms) | | | | (3,061 firms) | |
| Total | 230,224 | 248,106 | 254,918 | 241,778 | 7.8 | -5.2 | 100.0 | 100.0 |
| *except Electric Power* | *(191,356)* | *(208,545)* | *(215,356)* | *(202,953)* | *(9.0)* | *(-5.8)* | *(84.5)* | *(83.9)* |
| Manufacturing | 71,395 | 84,241 | 85,453 | 84,893 | 18.0 | -0.7 | 33.5 | 35.1 |
| Food and Beverages | 5,725 | 5,521 | 5,577 | 5,407 | -3.6 | -3.1 | 2.2 | 2.2 |
| Textiles | 806 | 742 | 742 | 777 | -7.8 | 4.7 | 0.3 | 0.3 |
| Paper and Pulp | 1,729 | 2,261 | 2,265 | 2,432 | 30.8 | 7.4 | 0.9 | 1.0 |
| Chemicals | 9,170 | 10,448 | 10,592 | 11,183 | 13.9 | 5.6 | 4.2 | 4.6 |
| *Organic Chemicals* | *(4,097)* | *(4,552)* | *(4,652)* | *(4,931)* | *(11.1)* | *(6.0)* | *(1.8)* | *(2.0)* |
| *Pharmaceuticals* | *(1,922)* | *(2,369)* | *(2,371)* | *(2,491)* | *(23.3)* | *(5.1)* | *(0.9)* | *(1.0)* |
| Petroleum | 1,479 | 1,108 | 1,108 | 1,308 | -25.1 | 18.1 | 0.4 | 0.5 |
| Cement, Ceramics and Glass | 1,721 | 2,439 | 2,492 | 2,465 | 41.7 | -1.1 | 1.0 | 1.0 |
| Iron and Steel | 4,966 | 4,186 | 4,190 | 3,678 | -15.7 | -12.2 | 1.6 | 1.5 |
| *Ordinary Steel* | *(4,207)* | *(3,515)* | *(3,517)* | *(3,068)* | *(-16.5)* | *(-12.7)* | *(1.4)* | *(1.3)* |
| Non-Ferrous Metals | 1,905 | 3,135 | 3,166 | 3,668 | 64.6 | 15.9 | 1.2 | 1.5 |
| General Machinery | 4,514 | 4,999 | 5,049 | 5,287 | 10.7 | 4.7 | 2.0 | 2.2 |
| Electric Machinery | 19,370 | 27,673 | 28,423 | 27,550 | 42.9 | -3.1 | 11.1 | 11.4 |
| *Electronic Parts, etc.* | *(12,816)* | *(20,544)* | *(20,983)* | *(20,307)* | *(60.3)* | *(-3.2)* | *(8.2)* | *(8.4)* |
| Precision Machinery | 1,078 | 1,658 | 1,700 | 1,458 | 53.8 | -14.3 | 0.7 | 0.6 |
| Transport Equipment | 13,657 | 14,340 | 14,402 | 14,203 | 5.0 | -1.4 | 5.6 | 5.9 |
| *Automobiles* | *(12,835)* | *(13,632)* | *(13,686)* | *(13,415)* | *(6.2)* | *(-2.0)* | *(5.4)* | *(5.5)* |
| Other Manufacturing | 5,278 | 5,733 | 5,747 | 5,477 | 8.6 | -4.7 | 2.3 | 2.3 |
| Non-Manufacturing | 158,829 | 163,866 | 169,465 | 156,885 | 3.2 | -7.4 | 66.5 | 64.9 |
| *except Electric Power* | *(119,961)* | *(124,305)* | *(129,904)* | *(118,060)* | *(3.6)* | *(-9.1)* | *(51.0)* | *(48.8)* |
| Construction | 1,952 | 1,831 | 1,831 | 1,576 | -6.2 | -13.9 | 0.7 | 0.7 |
| Wholesale and Retail | 12,279 | 12,931 | 13,233 | 9,088 | 5.3 | -31.3 | 5.2 | 3.8 |
| *Retail* | *(9,535)* | *(10,542)* | *(10,809)* | *(7,273)* | *(10.6)* | *(-32.7)* | *(4.2)* | *(3.0)* |
| Real Estate | 9,663 | 9,852 | 10,077 | 7,140 | 2.0 | -29.1 | 4.0 | 3.0 |
| Transport | 18,449 | 19,382 | 19,652 | 16,136 | 5.1 | -17.9 | 7.7 | 6.7 |
| *Railways* | *(12,567)* | *(14,541)* | *(14,645)* | *(10,459)* | *(15.7)* | *(-28.6)* | *(5.7)* | *(4.3)* |
| *Marine Transport* | *(688)* | *(381)* | *(480)* | *(339)* | *(-44.6)* | *(-29.4)* | *(0.2)* | *(0.1)* |
| *Airlines* | *(2,175)* | *(1,284)* | *(1,284)* | *(875)* | *(-41.0)* | *(-31.8)* | *(0.5)* | *(0.4)* |
| *Warehousing, etc.* | *(1,808)* | *(1,845)* | *(1,875)* | *(3,130)* | *(2.1)* | *(66.9)* | *(0.7)* | *(1.3)* |
| Electric Power and City Gas | 42,073 | 43,230 | 43,264 | 42,036 | 2.8 | -2.8 | 17.0 | 17.4 |
| *Electric Power* | *(38,868)* | *(39,561)* | *(39,561)* | *(38,825)* | *(1.8)* | *(-1.9)* | *(15.5)* | *(16.1)* |
| *Gas* | *(3,205)* | *(3,669)* | *(3,703)* | *(3,212)* | *(14.5)* | *(-13.3)* | *(1.5)* | *(1.3)* |
| Telecom. and Information | 30,722 | 32,020 | 36,364 | 36,649 | 4.2 | 0.8 | 14.3 | 15.2 |
| Leasing | 38,631 | 39,479 | 39,664 | 40,865 | 2.2 | 3.0 | 15.6 | 16.9 |
| Services | 4,696 | 4,837 | 5,076 | 2,970 | 3.0 | -41.5 | 2.0 | 1.2 |
| Other Non-Manufacturing | 364 | 304 | 304 | 425 | -16.7 | 39.9 | 0.1 | 0.2 |

Note: Other Manufacturing Industries includes Publishing and Printing, Rubber, Metal Products and Others.
Other Non-Manufacturing Industries includes Fishing, Mining and Others.

# III Survey Results

## 1. Anticipated Actual Capital Spending for FY 2000

### Outline

Overall anticipated actual capital spending for FY 2000 increased for the first time in four years (up 7.8%) as investment turned up in both the manufacturing and non-manufacturing sectors.

In the manufacturing sector (up 18.0%), capital spending declined in food and beverages, and iron and steel due to the termination of large-scale investment projects. It also dropped in petroleum under a heavily restrictive mood. However, spending increased substantially in electric machinery, led by capacity investment in electronic parts such as semiconductors and liquid crystals, which was accompanied by parallel increases in related industries including precision machinery, non-ferrous metals and cement, ceramics and glass. Moreover, investment turned up in automobiles mainly in new models as well as in chemicals, led by pharmaceuticals and other chemicals. This broad-based growth has resulted in the first increase in three years for the whole manufacturing sector.

In the non-manufacturing sector (up 3.2%), the increase in spending was led by telecommunications and information, mainly due to a growing demand for cellular phones and investment in their next generation models. Capital spending also increased in railways due to the progress of construction and extension projects in the Tokyo metropolitan area as well as in wholesale and retail due mainly to the establishment of new outlets in time for the promulgation of the Large-scale Retail Store Law and investment in information technology. Coupled with increased spending in leasing and other industries, anticipated actual capital spending in the non-manufacturing sector increased for the first time in four years.

### Trends by Industrial Sub-sector

The trends in anticipated actual capital spending for FY 1999, classified according to industrial sub-sector, are as follows. Numbers in curly brackets {} show the percentage of total capital spending accounted for by each sub-sector.

#### *Materials (up 14.4%) {9.4%}*

Total capital spending in the materials sub-sector increased for the first time in three years despite continued decline in iron and steel, and textiles, as double-digit growth was recorded in chemicals, which represents a large portion of materials sub-sector spending, and as investment turned to significant increase in non-ferrous metals and cement, ceramics and glass, boosted by IT-related capacity investment, as well as in paper and pulp.

In the iron and steel industry, capital spending continued to decline as large-scale investment projects launched in the previous fiscal year have been terminated. Continued decline in investment was also observed in textiles.

In the chemical industry, double-digit increase was recorded in organic chemicals thanks to investments in high value added products and the construction of pharmaceutical plants. Capital spending turned to significant growth in non-ferrous metals led by investment in optical cables and semiconductor wafers including 300mm type. A similar movement can be observed in cement, ceramics and glass, due to capacity investment in glass for liquid crystal display and ceramic products. A significant increase was also recorded in paper and pulp, largely due to the introduction of new machines accompanying the reconstruction of production systems for corrugating medium and whiteboard.

### *Processing and Assembly (up 20.8%) {24.2%}*

Spending in the processing and assembly sub-sector increased substantially for the first time in three years due to a rapid increase in electric machinery and precision machinery and to an upturn in automobiles and general machinery, despite an increase in food and beverages.

In electric machinery, spending increased substantially in electronic parts, which account for more than half of the investment in this industry, led by capacity investment in semiconductors, liquid crystals, etc. Spending also increased rapidly in electronic devices, mainly in computers and telecommunication/digital products. As regards precision machinery, investment doubled in semiconductor-production devices, mainly in 300mm wafers, and grew substantially in clocks and other measuring instruments, thus resulting in the first substantial increase in three years.

In spite of continued restrictive mood in general, spending in automobiles recorded the first increase in three years, led by investment in new models and business restructuring. In general machinery, spending was controlled on boilers and motors, but double-digit increase was recorded for office and household machinery led by new products, and capacity investment continued to increase in general machinery parts due to tight market conditions, thus resulting in the first increase in three years.

### *Energy (up 1.7%) {17.9%}*

The energy sector recorded the first increase in capital spending in seven years.

Despite an underlying tone of curbs on investment, capital spending in the electric power industry increased as nuclear and other power source development works made headway. In the gas industry as well, investment increased for the first time in five years as LNG-related projects were in full swing. In contrast, capital spending declined for the eighth consecutive year in petroleum with the termination of investment projects for lowering benzene content in gasoline.

### *Non-Manufacturing, excluding Energy (up 3.4%) {48.6%}*

Despite cutback on spending in the construction industry, total spending in non-manufacturing excluding energy rose for the first time in four years, reflecting growth in telecommunications and information, transport, leasing, wholesale and retail, real estate and services.

In construction, continued control on investment resulted in a decline for the eighth consecutive year.

Capital spending turned up in telecommunications and information thanks to increased demand for cellular phones and investments in their new models, as well as in wholesale and retail due to the establishment of new outlets in time for the promulgation of the Large-scale Retail Stores Law. The transport industry experienced the first increase in investment in four years with the progress of construction and extension projects in the Tokyo metropolitan area, while spending increased for the first time in three years in real estate as large-scale projects made headway in the metropolitan area. Increase in spending continued in leasing and services, the former due to asset purchasing and substitution of owned plant and equipment with leasing, and the latter due to the construction of a large theme park in the waterfront area.

## Trends in Capital Spending by Industrial Sub-sector

| | Growth Rate (%) | | | | | Share (%) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | FY1997 | FY1998 | FY1999 | FY2000 | FY2001 | FY1997 | FY1998 | FY1999 | FY2000 | FY2001 |
| Materials | 3.6 | -12.8 | -21.5 | 14.4 | 3.2 | 10.0 | 9.7 | 8.5 | 9.2 | 10.0 |
| *Paper and Pulp* | *(4.8)* | *(-33.8)* | *(-29.4)* | *(30.8)* | *(7.4)* | *(1.3)* | *(1.0)* | *(0.7)* | *(0.9)* | *(1.0)* |
| *Chemicals* | *(14.5)* | *(-10.2)* | *(-22.4)* | *(13.9)* | *(5.6)* | *(4.3)* | *(4.3)* | *(3.9)* | *(4.2)* | *(4.6)* |
| *Iron and Steel* | *(-12.0)* | *(0.3)* | *(-14.0)* | *(-15.7)* | *(-12.2)* | *(2.0)* | *(2.2)* | *(2.0)* | *(1.6)* | *(1.5)* |
| Processing *and* Assembly | 7.3 | -12.1 | -12.2 | 20.8 | -2.5 | 21.7 | 21.0 | 20.8 | 23.9 | 24.6 |
| *Food and Beverages* | *(13.5)* | *(-12.1)* | *(-2.7)* | *(-3.6)* | *(-3.1)* | *(2.2)* | *(2.2)* | *(2.4)* | *(2.2)* | *(2.2)* |
| *Electric Machinery* | *(-1.1)* | *(-21.9)* | *(-0.0)* | *(42.9)* | *(-3.1)* | *(8.0)* | *(7.2)* | *(8.2)* | *(11.1)* | *(11.4)* |
| *Automobiles* | *(17.0)* | *(-4.2)* | *(-18.6)* | *(6.2)* | *(-2.0)* | *(5.6)* | *(5.9)* | *(5.3)* | *(5.4)* | *(5.5)* |
| Energy | -9.4 | -9.2 | -7.4 | 1.7 | -2.0 | 17.8 | 17.6 | 18.0 | 17.5 | 18.0 |
| *Petroleum* | *(-32.2)* | *(-32.5)* | *(-32.3)* | *(-25.1)* | *(18.1)* | *(1.1)* | *(0.8)* | *(0.6)* | *(0.4)* | *(0.5)* |
| *Electric Power* | *(-7.9)* | *(-8.0)* | *(-5.6)* | *(1.8)* | *(-1.9)* | *(15.3)* | *(15.4)* | *(16.0)* | *(15.5)* | *(16.1)* |
| Non-Manufacturing excluding Energy | -2.8 | -4.8 | -4.5 | 3.4 | -9.1 | 50.5 | 51.6 | 52.7 | 49.5 | 47.4 |
| *Construction* | *(-10.5)* | *(-16.6)* | *(-35.0)* | *(-6.2)* | *(-13.9)* | *(1.3)* | *(1.2)* | *(0.8)* | *(0.7)* | *(0.7)* |
| *Wholesale and Retail* | *(-7.0)* | *(-1.7)* | *(-8.5)* | *(5.3)* | *(-31.3)* | *(4.4)* | *(4.8)* | *(5.2)* | *(5.2)* | *(3.8)* |
| *Real Estate* | *(2.0)* | *(-19.2)* | *(-19.2)* | *(2.0)* | *(-29.1)* | *(4.6)* | *(4.3)* | *(4.0)* | *(4.0)* | *(3.0)* |
| *Transport* | *(-10.2)* | *(-8.8)* | *(-2.7)* | *(5.1)* | *(-17.9)* | *(7.2)* | *(7.0)* | *(7.6)* | *(7.7)* | *(6.7)* |
| *Telecom and Information* | *(-6.1)* | *(3.7)* | *(-12.5)* | *(4.2)* | *(0.8)* | *(14.5)* | *(16.4)* | *(15.4)* | *(14.3)* | *(15.2)* |
| *Leasing* | *(5.1)* | *(-6.5)* | *(7.6)* | *(2.2)* | *(3.0)* | *(17.3)* | *(16.5)* | *(17.6)* | *(15.6)* | *(16.9)* |
| *Services* | *(-5.3)* | *(-7.1)* | *(38.9)* | *(3.0)* | *(-41.5)* | *(1.2)* | *(1.3)* | *(2.1)* | *(2.0)* | *(1.2)* |
| All Industries | -1.5 | -8.0 | -8.4 | 7.8 | -5.2 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| *excluding Electric Power* | *(-0.2)* | *(-8.0)* | *(-8.9)* | *(9.0)* | *(-5.8)* | *(84.7)* | *(84.6)* | *(84.0)* | *(84.5)* | *(83.9)* |
| Manufacturing | 4.1 | -13.0 | -15.5 | 18.0 | -0.7 | 32.8 | 31.6 | 29.9 | 33.5 | 35.1 |
| Non-Manufacturing | -4.0 | -5.6 | -5.0 | 3.2 | -7.4 | 67.2 | 68.4 | 70.1 | 66.5 | 64.9 |
| *excluding Electric Power* | *(-2.8)* | *(-4.9)* | *(-4.8)* | *(3.6)* | *(-9.1)* | *(51.9)* | *(53.0)* | *(54.1)* | *(51.0)* | *(48.8)* |

Note 1: Materials: textiles; paper and pulp; chemicals; cement, ceramics and glass; iron and steel; non-ferrous metals
Processing and assembly: food and beverages; general machinery; electric machinery; precision machinery; transport equipment; other manufacturing.
Energy: petroleum; electric power; gas; coal, crude oil and natural gas
Note 2: Share % for FY 2000 and FY 2001 are based upon 3,061 companies that responded to the survey for both years

## 2. Planned Capital Spending for FY 2001

### Outline

For FY 2001, capital spending is expected to turn down in both the manufacturing (down 0.7%) and non-manufacturing (down 7.4%) sectors, resulting in the resumption of decline in all industries (down 5.2%).

In the manufacturing sector (down 0.7%), spending will turn down in electronic parts, which account for more than half of investment in electric machinery. Under a restrictive mood, spending will also decline in iron and steel as well as in automobiles, as investments in new models will be completed. On the other hand, investment is expected to grow in chemicals, mainly for high value added products, as well as in non-ferrous metals, mainly for optical cables. Although investment will also grow in general machinery led by office and household machinery, capital spending in the manufacturing sector is expected to decline as a whole with no industry to ensure sustained growth.

In the non-manufacturing sector (down 7.4%), slight growth of spending expected in telecommunications and information will be offset by decreases in railways, wholesale and retail and real estate, due respectively to the completion of construction and extension projects in the Tokyo metropolitan area, reaction to the stepped-up establishment of outlets in time for the promulgation of the Large-scale Retail Stores Law and slowdown in the establishment of new retail outlets. Investment will also decline in the heavy-spending electric power industry. On balance, capital spending is expected to drop in the non-manufacturing sector as a whole.

**Trends by Industrial Sub-sector**

The trends in planned capital spending for FY 2001, classified according to industrial sub-sector, are as follows. Numbers in curly brackets {} show the percentage of total planned capital spending accounted for by each sub-sector.

***Materials (up 3.2%) {10.0%}***

Spending in the materials sub-sector will increase for the second consecutive year led by continued growth in chemicals, non-ferrous metals and paper and pulp, although investment will continue to decline in iron and steel, and turn to a slight decrease in cement, ceramics and glass.

Capital spending in the iron and steel industry will continue to decline under a heavily restrictive mood in general, despite investment for replacement planned by some blast furnace steel manufacturers. In cement, ceramics and glass, capacity investment in IT-related products such as glass for liquid crystal display will be largely offset by the termination of projects launched in the previous year. As the curb on spending is expected to continue in cement, the substantial increase recorded by the industry in the previous year will turn to slight decline.

In the chemical industry, capital spending will increase in organic chemicals mainly for high value added products as well as in pharmaceuticals and other chemicals due to the construction of new plants, resulting in an overall increase for the second straight year. Double-digit increase will continue in non-ferrous metals as continued expansion of investment is expected in optical cables and semiconductor wafers (including 300mm wafers). The paper and pulp industry will also experience increased spending for the second consecutive year thanks to capacity investment mainly in special paper, although general curb on investment will still be in effect.

***Processing and Assembly (down 2 .5%) {24.6%}***

Capital spending in the processing and assembly sub-sector is expected to turn down despite continued growth in general machinery, as investment will turn to negative growth in electric machinery, precision machinery and automobiles and will continue to slide in general machinery.

In the electrical machinery industry, changing market conditions will result in a downturn in spending on electronic parts (including semiconductors and liquid crystals), which account for more than half of spending in the industry. Capital spending is expected to decline for the whole industry, as investment will decrease in electric machines and electronic devices due to the completion of large projects. In precision machinery, spending will turn to substantial decline, as investment in semiconductor-production devices will experience a huge drop with the peaking out of investment related to 300mm wafers. Likewise, capital spending is expected to turn down in automobiles, as spending will be curtailed on parts and bodies with the completion of investments for new models, and investment in four-wheeled vehicles will continue to drop under a restrictive mood, despite some projects related to business restructuring. Also, some investments accompanying the reconstruction of production systems will not be strong enough to stop the continued slide in capital spending in food and beverages.

In contrast, investment will continue to increase in general machinery, led by office and household machinery.

### *Energy (down 2.0%) {18.0%}*

The energy sub-sector is expected to show decline in capital spending.

In the electric power industry, spending is expected to decline, as investment will be reduced in the distribution department under the continuing restrictive tone. The gas industry will experience a downturn in capital spending with the peaking out of investment in city gas production and supply equipment. Meanwhile, the petroleum industry envisages the first increase in capital spending in nine years, with investment for the consolidation of distribution facilities and the desulphurization of light oil.

### *Non-Manufacturing, excluding Energy (down 9.1%) {47.4%}*

Looking at the non-manufacturing sector excluding energy, increased spending in leasing and telecommunications and information will be more than offset by decreases in wholesale and retail, transport, real estate, services and construction, resulting in an overall downturn.

Increase in demand is expected in leasing, while the high level of investment in cellular phones will continue and investment in information systems and head offices are expected in the telecommunications and information. Capital spending will continue to grow in those two industries.

Capital spending will turn down in wholesale and retail due to reaction to the stepped-up establishment of outlets in time for the promulgation of the Large-scale Retail Stores Law. Investment will turn to substantial decline in transport as well, with the completion of major projects on the construction and extension of lines in the Tokyo metropolitan area. Spending will also turn down in real estate due to slowed establishment of new retail outlets. In services, it will turn to sharp drop as investment in a large theme park in the waterfront area has reached its pinnacles. Capital spending in construction will decline for the ninth consecutive year with continued restriction on investment.

## Trends and Features of Planned Capital Spending for FY 2001 by Industry

Trends and features of capital spending for main industries are shown below. The figures in parentheses ( ) indicate the rate of growth in capital spending for the industry in question (FY 2000→ FY 2001). The figures in curly brackets {} show each industry's share of planned spending for FY 2001 as a percentage of the total value for all industries.

### *Materials*

*Chemicals: (13.9% → 5.6%) {4.6%}*

For organic chemicals, which accounts for the majority of the chemical industry, spending will increase thanks to investment in high value added products. For pharmaceuticals and other chemicals, spending will rise mainly due to plant construction. Coupled with the increase planned in inorganic chemicals, capital spending in the industry as a whole is expected to rise for the second consecutive year.

*Iron and Steel: (-15.7% → -12.2%) {1.5%}*

Despite investment in facility replacement by some blast furnace steel makers, the industry will once again see an overall decline in total spending as restrictive tone continues.

*Non-Ferrous Metals: (64.6% → 15.9%) {1.5%}*
Thanks to increased investment related to optical cables and semiconductor wafers including 300mm wafers, the industry will record an increase in capital spending for the second consecutive year.

*Paper and Pulp: (30.8% → 7.4%) {1.0%}*
Despite continued checks on spending, investment in the industry will rise for the second consecutive year due to the introduction of new machines for some products, such as special paper.

*Cement, Ceramics and Glass: (41.7% → -1.1%) {1.0%}*
In addition to continued spending restriction in cement, some investment projects launched in the previous year will be terminated in glass and others, resulting in an overall decline.

*Textiles: (-7.8% → 4.7%){ 0.3%}*
Largely due to capacity investment in non-woven fabrics, the industry will experience the first increase in capital spending in four years.

### *Processing and Assembly*

*Electric Machinery: (42.9% → -3.1%){11.4%}*
For electronic parts (including semiconductors and liquid crystals), which account for the majority of the electric machinery industry, spending will turn downward in the context of changing market conditions despite continued large-scale investment projects that accompany business restructuring. Spending will also turn down in electronic and electric devices with the termination of large investment projects. Thus, overall spending is expected to decline.

*Automobiles: (6.2% → -2.0%) {5.5%}*
For four-wheel vehicles, capital spending will decline due to continued restriction, despite some investments as part of business restructuring program. For parts/bodies, spending will also drop, as investments in new models will be completed. As a result, overall capital spending will turn downward in this industry.

*Food and Beverages: (-3.6% → -3.1%) {2.2%}*
Although spending will increase in flour milling, sugar manufacture and edible oils due to investments accompanying the reconstruction of production systems, this will be more than offset by cutbacks on spending in processed meat and dairy products, beer and other alcoholic beverages and other foodstuffs, resulting in continued decline overall.

*General Machinery: (10.7% → 4.7%) {2.2%}*
Although restriction will continue for boilers and motors and a downturn is expected for general machinery parts as capacity buildup peaks out, continued double-digit growth is expected for office and household machinery mainly in response to new products. Moreover, spending will continue to increase in metal processing machinery and industrial machinery, led by investment for rationalization. Thus, capital spending is expected to increase for the general machinery industry as a whole.

*Precision Machinery: (53.8% → -14.3%) {0.6%}*
Decline in spending will continue for medical instruments. In addition, it will turn down for semiconductor-production devices with the peaking out of investments related to 300mm wafers, as well as for clocks and other measuring equipment due to the termination of investment projects started in the previous year. On balance, capital spending in the industry is expected to turn down as a whole.

### *Energy*

*Electric Power: (1.8% → -1.9%) {16.1%}*
In the context of continued restrictive tone, the nine electric power companies plan to reduce their capital spending by cutting back on investment in the distribution department. Spending will also decline in the rest of the electric power industry with the completion of power source development projects.

*Gas: (14.5% → -13.3%) {1.3%}*
For city gas, spending will decline as investments in production and supply facilities have peaked out. Spending will also turn to substantial drop for LNG suppliers with the completion of major investment projects. Added to the planned cutback on spending for heat supplies, capital spending in the gas industry will turn down as a whole.

*Petroleum: (-25.1% → 18.1%) {0.5%}*
In addition to increases in spending on distribution facilities related to consolidation, investments at refineries in environmental measures such as light oil desulphurization will result in the first increase in capital spending in nine years.

### *Non-Manufacturing Industries, excluding Energy*

*Leasing: ( 2.2% → 3.0%) {16.9%}*
Capital spending in leasing is expected to increase as a result of growing demand for leasing in asset replacement as well as for the leasing of information equipment.

*Telecommunications and Information: (4.2% → 0.8%) {15.2%}*
For telecommunications, which is the mainstay of this industry, spending will only decline slightly as reduction in fixed phones and satellite communication will be largely offset by rising demand for cellular phones and investments in their next generation models. Although broadcasting will cut back on spending, substantial increase in investment is expected in information services, mainly for information systems and head offices. On balance, capital spending in the industry will increase for the second consecutive year.

*Railways: (15.7% → -28.6%) {4.3%}*
Substantial drop in capital spending is planned due to the completion of construction and extension projects in the Tokyo metropolitan area.

*Wholesale and Retail: (5.3% → -31.3%) {3.8%}*
In wholesale, spending will be cut for the third straight year despite investments related to head offices and redevelopment. In retail, department stores will continue to cut back on spending, focusing investments on the expansion and renewal of existing stores. As for supermarkets and

specialized stores, a substantial drop in spending is expected in reaction to the stepped-up establishment in time for the promulgation of the Large-scale Retail Stores Law in the previous year, coupled with checks on investment amidst uncertainties regarding the actual administration of the said law and the response of competitors, as well as reduction in scale of new outlets to avoid the application of the law. Thus, the industry will experience a sharp drop in capital spending as a whole.

*Real Estate: (2.0% → -29.1%) {3.0%}*
A substantial drop is expected for retail-affiliates as the establishment of new outlets slows down. Investment in redevelopment projects, etc. will be terminated in the Tokyo metropolitan area. For railway-affiliates, investment will be terminated for the acquisition of existing assets and for the construction of new buildings. Overall capital spending in the industry will be reduced as a result.

*Services: (3.0% → -41.5%) {1.2%}*
Capital spending will turn to substantial decline as the construction of a theme park in the waterfront area has reached its peak.

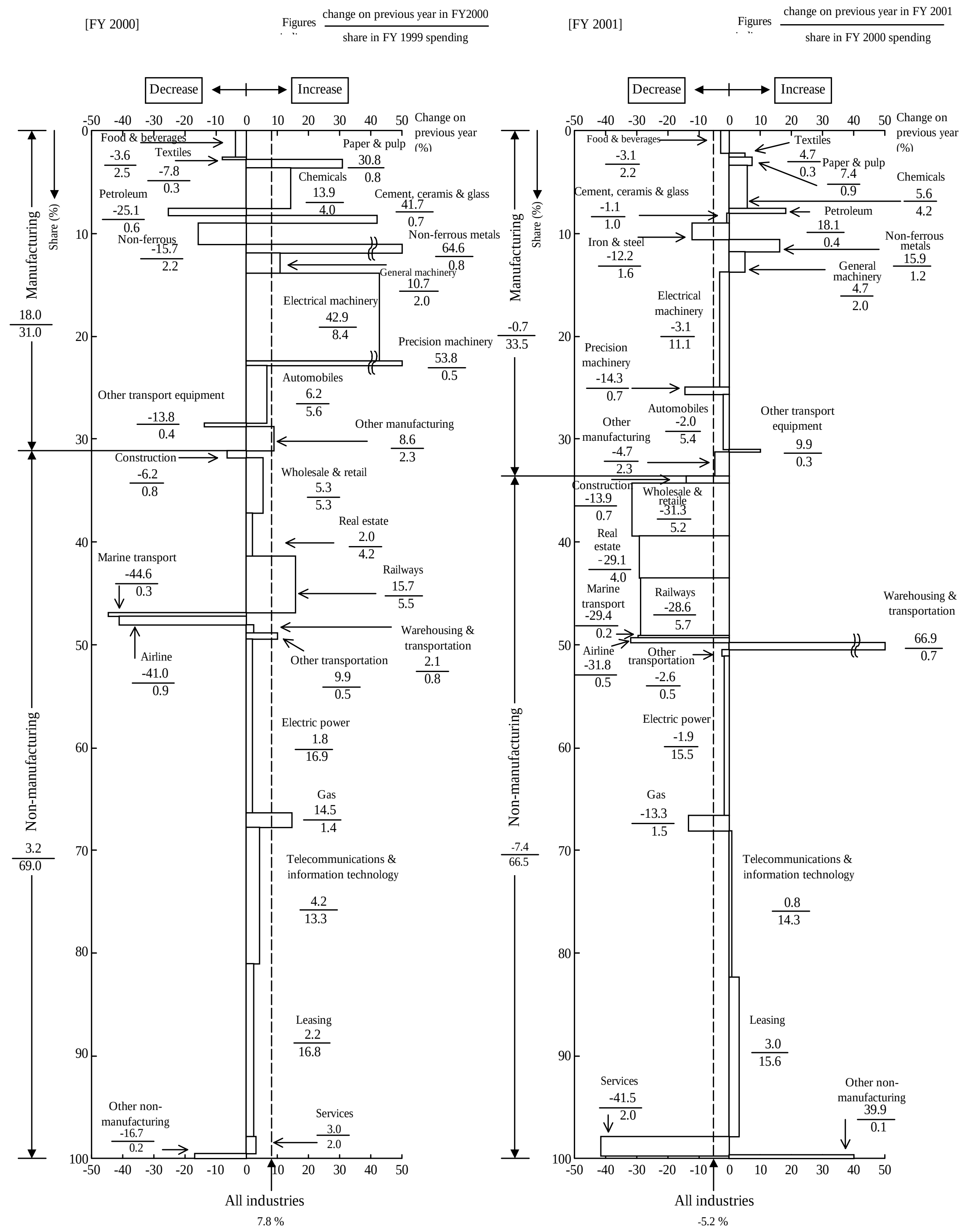
*Warehousing and Transportation: (2.1% → 66.9%) {1.3%}*
Capital spending will increase sharply as airport construction progresses in full swing.

*Construction: (-6.2% → -13.9%) {0.7%}*
In construction, there will be reduced investment for the ninth straight year, with the continuation of overall restraints on investment, as future business conditions remain uncertain.

*Airlines: (-41.0%→ -31.8%) {0.4%}*
Despite increase in spending for spare parts and capacity investment related to systems, etc., capital spending as a whole will decline for the second straight year, as the introduction of new airplanes will be restrained, particularly in major companies.

*Marine Transport: (-44.6% → -29.4%) {0.1%}*
Investment will continue to decline as the construction of LNG transport ships for Qatar has been completed.

# Characteristics of Capital Spending by Industry



## 3. Investment Motives

### Investment Motives in the Manufacturing and Non-Manufacturing Sectors for FY 2001

Looking at the respective shares of each category of investment motive for the manufacturing sector in FY 2001, one finds increases in "expansion of production capacity" and "research and development" as well as decreases in "maintenance," "product development and upgrading" and "rationalization and labor saving."

In the non-manufacturing sector, "expansion of production capacity" still holds a large share of around 60%, but the share has declined mainly in railways and retail. Meanwhile, an increase can be observed in the share of "maintenance."

### Investment Motives in the Manufacturing Sector for the "Materials" and "Processing and Assembly" Sub-sectors

We now look at the respective shares of each category of investment motive within the manufacturing sector, comparing the materials sub-sector and the processing and assembly sub-sector. For the materials sub-sector, the motives "maintenance" and "rationalization and labor saving" are traditionally at high levels, whereas the processing and assembly sub-sector is characterized by the importance of "product development and upgrading" as investment motive.

The characteristics of investment motives for the materials sub-sector in FY 2001 are:

i) Increased share of "product development and upgrading" (8.6% → 11.3%) in all industries except paper and pulp, including chemicals and non-ferrous metals.

ii) Increased share of "research and development" (7.5% → 9.1%) in all industries including chemicals (mainly pharmaceuticals) and non-ferrous metals (related to electronic materials, optical fiber, etc.).

On the other hand, the processing and assembly sub-sector is characterized by increased share of "expansion of production capacity (38.3% → 41.6%) led by electric machinery. Active capacity investment can be observed in electronic parts in particular, mainly for the construction of new plants. Thus, the shares of other investment motives are on the decline.

### Shift in Investment Motives within the Manufacturing Sector

We now look at the change in the percentage share of each category of investment motive for the manufacturing sector. The share of "expansion of production capacity" is on the rise, mainly due to plant construction and capacity investment in electronic parts, which tend to require large sums of investment.

For "product development and upgrading", the share increases in the materials sub-sector including non-ferrous metals but declines in the processing and assembly sub-sector including automobiles and electric machinery, resulting in a slight overall decline from 15.0% to 14.6%.

The share of "rationalization and labor saving" is down slightly from 12.5% to 12.3% with declines recorded in iron and steel, automobiles and cement, ceramics and glass among others.

For "research and development," the share increases from 8.4% to 8.8% in the whole manufacturing sector, led by the materials sub-sector including non-ferrous metals (non-ferrous metal refining, wire) and pharmaceuticals.

The share of "maintenance" as a spending incentive shows a decline from 18.5% to 17.1%, due to a sharp drop in iron and steel.

### Investment Motives

(Unit: %)

| | Total | | Manufacturing | | | | | | Non-Manufacturing | |
|---|---|---|---|---|---|---|---|---|---|---|
| | (1,943 firms) | | | | Materials | | Processing and Assembly | | | |
| | FY2000 Estimate | FY2001 Planned | FY2000 Estimate | FY2001 Planned | FY2000 Estimate | FY2001 Planned | FY2000 Estimate | FY2001 Planned | FY2000 Estimate | FY2001 Planned |
| Expansion of Production Capacity | 56.1 | 54.4 | 33.9 | 36.4 | 25.3 | 26.4 | 38.3 | 41.6 | 62.8 | 60.7 |
| Product Development and upgrading | 6.7 | 7.2 | 15.0 | 14.6 | 8.6 | 11.3 | 18.4 | 16.6 | 4.2 | 4.6 |
| Rationalization and Labor Saving | 5.2 | 5.6 | 12.5 | 12.3 | 17.5 | 17.4 | 10.3 | 9.8 | 3.0 | 3.3 |
| Research and Development | 2.7 | 3.2 | 8.4 | 8.8 | 7.5 | 9.1 | 9.0 | 8.9 | 1.0 | 1.2 |
| Maintenance | 15.7 | 16.6 | 18.5 | 17.1 | 28.3 | 25.2 | 13.4 | 12.8 | 14.9 | 16.5 |
| Others | 13.5 | 13.0 | 11.8 | 10.8 | 12.9 | 10.6 | 10.6 | 10.2 | 14.0 | 13.8 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

## 4. Trends in Land Investment (Classified According to Principal Business Sector)

### Anticipated Actual Land Investment for FY 2000

Anticipated actual land investment for FY 2000 (based on figures for the 1,774 firms that gave responses regarding both FY 1999 and FY 2000) was down 23.9% compared with the previous year, the fourth consecutive annual decline. Apart from investment for new airport sites in transport and the acquisition of land related to redevelopment in the Tokyo metropolitan area in real estate, land investment declined sharply from the previous year despite some movements accompanying business restructuring. Thus, the share of land investment in total capital spending dropped to 5.5% (3.3% for manufacturing and 6.2% for non-manufacturing).

### Planned Land Investment for FY 2001

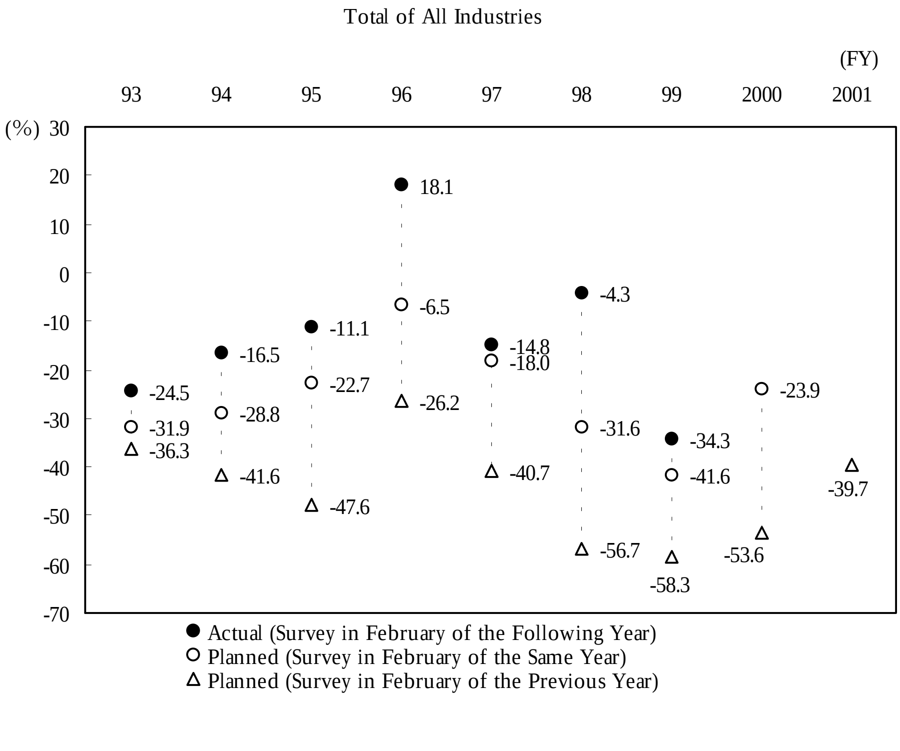
Planned land investment for FY 2001 (based on figures for the 2,069 firms that gave responses regarding both FY 2000 and FY 2001) is down 39.7% despite continued investment for new airport sites in transport and the acquisition of land related to the restructuring of distribution facilities in petroleum, as more factors remain undecided than in the plan for FY 2000. (Land investment accounts for 3.4% of all investment planned for FY 2000.)

It should be noted that there is a tendency for large upward revisions in land investment between the planning stage and actual implementation.

## Trends in Land Investment for FY 2000 and FY 2001 (Classified According to Principal Business Sector)

| | FY1999 (¥100 million) | FY2000 (¥100 million) | Growth Rate (%) | FY2000 (¥100 million) | FY2001 (¥100 million) | Growth Rate (%) |
|---|---|---|---|---|---|---|
| | (1,774 firms) | | 2000/99 | (2,069 firms) | | 2001/2000 |
| All industries | | | | | | |
| Total Investment | 119,066 | 127,861 | 7.4 | 138,681 | 128,158 | -7.6 |
| Investment except Land | 109,873 | 120,864 | 10.0 | 131,432 | 123,784 | -5.8 |
| Investment in Land | 9,194 | 6,997 | -23.9 | 7,250 | 4,373 | -39.7 |
| *(Share of Land %)* | (7.7) | *(5.5)* | | *(5.2)* | *(3.4)* | |
| Manufacturing | | | | | | |
| Total Investment | 27,883 | 31,075 | 11.4 | 37,887 | 38,897 | 2.7 |
| Investment except Land | 25,511 | 30,045 | 17.8 | 36,695 | 38,613 | 5.2 |
| Investment in Land | 2,372 | 1,030 | -56.6 | 1,192 | 283 | -76.2 |
| *(Share of Land %)* | *(8.5)* | *(3.3)* | | *(3.1)* | *(0.7)* | |
| Non-Manufacturing | | | | | | |
| Total Investment | 91,183 | 96,786 | 6.1 | 100,794 | 89,261 | -11.4 |
| Investment except Land | 84,362 | 90,819 | 7.7 | 94,737 | 85,171 | -10.1 |
| Investment in Land | 6,822 | 5,967 | -12.5 | 6,057 | 4,090 | -32.5 |
| *(Share of Land %)* | (7.5) | (6.2) | | (6.0) | (4.6) | |

## Growth Rate of Investment in Land



## 5. Trends in Capital Spending by Foreign-Affiliated Firms (Classified According to Principal Business Sector)

144 firms out of 3,061 that responded to both FY2000 and 2001 surveys are classified as foreign-affiliated firms (firms with over one-third foreign ownership). Their capital spending accounts for 4.6% of the total (FY2001).

Anticipated actual spending by foreign-affiliated firms in FY2000 shows a substantial increase of 43.9% over the previous year. In the manufacturing sector, spending grew significantly (up 44.6%) with increases recorded in the heavy-spending electric machinery industry, as well as in transport equipment and chemicals. A significant increase was also recorded in the non-manufacturing sector, with contribution from large-scale investment projects in services and increased spending in wholesale and retail among others.

Planned capital spending by foreign-affiliated firms for FY2001 shows a continued increase of 3.8% overall, as investment in manufacturing is expected to rise further (up 17.3%), led by electric machinery, transport equipment and petroleum. However, the growth will be slowed due to a double-digit drop expected in non-manufacturing (down 11.2%) resulting from the termination of major investment projects.

### Capital Spending by Foreign Affiliated Firms (Classified According to Principal Business Sector)

(Units: 100 million yen, %)

| | Capital Spending | | | | Growth rate (%) | | Share (%) | |
|---|---|---|---|---|---|---|---|---|
| | FY99 (Actual) | FY2000 (Estimate) | FY2000 (Estimate) | FY2001 (Planned) | 2000/99 | 2001/2000 | FY2001 | |
| | (127 firms) | | (144 firms) | | | | (144 firms) | (of All Firms) |
| Total | 4,917 | 7,075 | 10,892 | 11,209 | 43.9 | 3.8 | 100.0 | 4.6 |
| Manufacturing | 3,751 | 5,424 | 5,672 | 6,656 | 44.6 | 17.3 | 59.4 | 7.7 |
| Non-Manufacturing | 1,167 | 1,651 | 5,129 | 4,554 | 41.5 | -11.2 | 40.6 | 2.9 |
| By sub-sector | | | | | | | | |
| Materials | 958 | 1,352 | 1,496 | 1,544 | 41.2 | 3.2 | 13.8 | 6.1 |
| Processing and Assembly | 2,550 | 3,908 | 3,912 | 4,614 | 53.2 | 17.9 | 41.2 | 7.8 |
| Energy | 243 | 165 | 264 | 498 | -32.1 | 88.4 | 4.4 | 1.2 |
| Non-Manufacturing excluding Energy | 1,167 | 1,651 | 5,129 | 4,554 | 41.5 | -11.2 | 40.6 | 4.0 |

Note: foreign-affiliated firms are firms with over one-third foreign ownership

## 6. Information Technology Investment (Classified According to Principal Business Sector)

Following the previous survey (August 2000), a second questionnaire survey was conducted on investment in information technology, with effective responses from 1,525 firms (effective response rate: 49.8%). For the purpose of this survey, IT investment refers to the capital spending deemed as such by the respondent firms. In concrete terms, the questions are related to four investment items aimed at improving the business efficiency and productivity of the firms: “tangible fixed assets,” “intangible fixed assets and investments” (software development and other costs credited to assets rather than accounted for as costs), “leasing contracts” (the amount of newly concluded leasing contracts and not that of leasing charges for the fiscal year) and “other expenses” (PCs and other office equipment accounted for as costs).

IT investment in FY 2000 (as regards common firms for FY 1999 and FY 2000) increased 14.7% for all industries (from ¥783.9 billion in FY 1999 to ¥899.2 billion in FY 2000), with double-digit growth recorded in both the manufacturing (up 22.7%) and non-manufacturing (up 10.6%) sectors. Thus, growth in IT investment is estimated to have far exceeded the growth in total capital spending (7.4%). By industry, major contribution in the manufacturing sector comes from four-wheeled vehicles, as the sophistication of design functions has been in progress. Major contributors in the non-manufacturing sector include the heavy-spending electric power industry as well as the retail industry, with increased investment, such as in multimedia terminals and items related to POS at convenience stores.

As compared with the previous survey, IT investment for FY 2000 was revised downward in non-manufacturing (down 2.4%), especially in energy, but it was revised upward in manufacturing (up 4.8%). On balance, the level of overall IT investment stays almost unchanged from the previous survey (up 0.1%). By component, intangible fixed assets has the largest share in IT investment (31.4%), followed by tangible fixed assets (28.3%), leasing (26.4%) and others (13.9%). Among intangible fixed assets, investment is concentrated on software development for system construction related to accounting and other business management and, to a lesser degree, on system development for production management, physical distribution, etc. As regards tangible fixed assets and leasing, the introduction of LAN and the replacement of host computers are actively sought in a wide range of industries, while the retail industry invests actively in e-commerce including multi-media terminals.

IT investment for FY 2001 (as regards common firms for FY 2000 and FY 2001) is expected slow but will maintain double-digit growth (up 12.2%) with increase planned in both manufacturing (up 16.4%) and non-manufacturing (up 10.5%), whereas overall capital spending is expected to turn downward (down 8.9%). By industry, electric power will continue its substantial contribution. Other major contributors include petroleum (system integration as part of business restructuring) and airlines (investment in system updating). As a result, IT investment is expected to increase its share in total capital spending.

## Overview of IT Investment (Estimate for FY 2000)

(Units: 100 million yen, %)

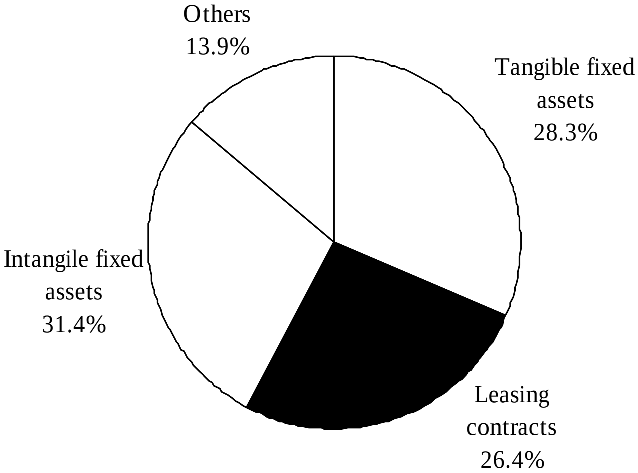
| Industrial sector | | Amount of IT investment (1,500 firms) | | Change in IT investment 2000/99 (1,500 firms) | Change in capital spending 2000/99 (1,500 firms) | Share of IT investment | | IT investment/ capital spending | |
|---|---|---|---|---|---|---|---|---|---|
| | | FY 99 actual | FY 2000 estimated | | | FY 99 actual | FY 2000 estimate | FY 99 estimated | FY 2000 estimate |
| All industries | | 7,839 | 8,992 | 14.7 | 7.4 | 100.0 | 100.0 | 7.3 | 7.8 |
| Manufacturing | | 2,675 | 3,281 | 22.7 | 20.2 | 34.1 | 36.5 | 11.6 | 11.8 |
| Non-manufacturing | | 5,164 | 5,711 | 10.6 | 3.8 | 65.9 | 63.5 | 6.1 | 6.5 |
| Sub-sector | Materials | 755 | 876 | 16.1 | 20.3 | 9.6 | 9.7 | 8.7 | 8.4 |
| | Processing and assembly | 1,816 | 2,225 | 22.5 | 22.9 | 23.2 | 24.7 | 13.6 | 13.5 |
| | Energy | 1,641 | 2,011 | 22.6 | 1.4 | 20.9 | 22.4 | 4.7 | 5.7 |
| | Other non-manufacturing | 3,627 | 3,880 | 7.0 | 5.1 | 46.3 | 43.2 | 7.2 | 7.4 |

## Revision and Composition of IT Investment (FY 2000)

(Unit: %)

| Industrial sector | | IT investment (1,456 firms) | | Revision of IT investment (1,456 firms) | Composition of IT investment (current survey) | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Previous survey | Current survey | | Tangible fixed assets | Intangible fixed assets | Leasing | Others | Total |
| All industries | | 8,857 | 8,863 | 0.1 | 28.3 | 31.4 | 26.4 | 13.9 | 100.0 |
| Manufacturing | | 3,065 | 3,211 | 4.8 | 16.9 | 35.9 | 30.7 | 16.5 | 100.0 |
| Non-manufacturing | | 5,792 | 5,651 | -2.4 | 34.8 | 28.8 | 23.9 | 12.5 | 100.0 |
| Sub-sector | Materials | 832 | 845 | 1.6 | 19.6 | 38.2 | 27.0 | 15.2 | 100.0 |
| | Processing and assembly | 2,134 | 2,187 | 2.5 | 16.6 | 32.8 | 33.7 | 16.9 | 100.0 |
| | Energy | 2,079 | 2,010 | -3.3 | 28.6 | 18.8 | 29.7 | 22.9 | 100.0 |
| | Other non-manufacturing | 3,811 | 3,820 | 0.2 | 36.8 | 35.6 | 20.3 | 7.2 | 100.0 |

## IT Investment by Component (Estimated FY 2000 Figures)




## Definition of IT Investment

For the purpose of this survey, IT investment refers to the capital spending deemed as such by the respondent firms, and covers the following four items:

(i) Tangible fixed assets,
(ii) Intangible fixed assets and investments (software development and other costs credited to assets rather than accounted for as costs)
(iii) Leasing contracts (the amount of newly concluded leasing contracts and not that of leasing charges for the fiscal year), and
(iv) Other expenses (PCs and other office equipment accounted for as costs).

## Overview of IT Investment (Plan for FY 2001)

(Units: 100 million yen, %)

| Industrial sector | | Amount of IT investment (1,525 firms) | | Change in IT investment 2001/00 (1,525 firms) | Change in capital spending 2001/00 (1,525 firms) | Share of IT investment | | IT investment/capital spending | |
|---|---|---|---|---|---|---|---|---|---|
| | | FY 2000 estimate | FY 2001 planned | | | FY 2000 estimate | FY 2001 planned | FY 2000 estimate | FY 2001 planned |
| All industries | | 6,427 | 7,213 | 12.2 | -8.9 | 100.0 | 100.0 | 7.6 | 9.3 |
| Manufacturing | | 1,877 | 2,186 | 16.4 | -0.1 | 29.2 | 30.3 | 10.0 | 11.7 |
| Non-manufacturing | | 4,550 | 5,027 | 10.5 | -11.4 | 70.8 | 69.7 | 6.9 | 8.6 |
| Sub-sector | Materials | 525 | 612 | 16.5 | 2.8 | 8.2 | 8.5 | 7.7 | 8.8 |
| Sub-sector | Processing and assembly | 1,170 | 1,329 | 13.6 | -5.6 | 18.2 | 18.4 | 10.7 | 12.8 |
| Sub-sector | Energy | 1,578 | 1,857 | 17.7 | -1.3 | 24.6 | 25.7 | 6.5 | 7.7 |
| Sub-sector | Other non-manufacturing | 3,154 | 3,415 | 8.3 | -16.0 | 49.1 | 47.3 | 7.4 | 9.6 |

## Comparison between IT Investment and Capital Spending (Common firms for FY 1999 and FY 2000)

(Units: 100 million yen, %)

| Industrial sector (1,500 firms) | | Tangible fixed assets in IT investment | | (Tangible fixed assets + leasing) in IT investment | | Capital spending | | Tangible fixed assets/capital spending | | (Tangible fixed assets + leasing)/capital spending | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | FY99 actual | FY2000 estimate | FY99 actual | FY2000 estimate | FY99 actual | FY2000 estimate | FY99 actual | FY2000 estimate | FY99 actual | FY2000 estimate |
| All industries (99/2000 growth) | | 1,913 | 2,504 (30.9%) | 4,060 | 4,892 (20.5%) | 107,185 | 115,077 (7.4%) | 1.8 | 2.2 | 3.8 | 4.3 |
| Excl. leasing | | 1,909 | 2,498 | 4,052 | 4,880 | 95,111 | 101,779 | 2.0 | 2.5 | 4.3 | 4.8 |
| Manufacturing | | 373 | 533 | 1,215 | 1,564 | 23,054 | 27,722 | 1.6 | 1.9 | 5.3 | 5.6 |
| Non-manufacturing | | 1,541 | 1,972 | 2,845 | 3,329 | 84,131 | 87,356 | 1.8 | 2.3 | 3.4 | 3.8 |
| Sub-sector | Materials | 111 | 166 | 327 | 415 | 8,671 | 10,430 | 1.3 | 1.6 | 3.8 | 4.0 |
| Sub-sector | Processing and assembly | 240 | 352 | 861 | 1,111 | 13,385 | 16,457 | 1.8 | 2.1 | 6.4 | 6.8 |
| Sub-sector | Energy | 335 | 575 | 871 | 1,173 | 34,975 | 35,461 | 1.0 | 1.6 | 2.5 | 3.3 |
| Sub-sector | Other non-manufacturing | 1,228 | 1,412 | 2,001 | 2,194 | 50,154 | 52,729 | 2.4 | 2.7 | 4.0 | 4.2 |

## Comparison between IT Investment and Capital Spending (Common firms for FY 2000 and FY 2001)

(Units: 100 million yen, %)

| Industrial sector (1,525 firms) | | Tangible fixed assets in IT investment | | (Tangible fixed assets + leasing) in IT investment | | Capital spending | | Tangible fixed assets/capital spending | | (Tangible fixed assets + leasing)/capital spending | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | FY2000 estimate | FY2001 planned | FY2000 estimate | FY2001 planned | FY2000 estimate | FY2001 planned | FY2000 estimate | FY2001 planned | FY2000 estimate | FY2001 planned |
| All industries (2000/01 growth) | | 1,969 | 2,467 (25.3%) | 4,178 | 4,750 (13.7%) | 84,754 | 77,204 (-8.9%) | 2.3 | 3.2 | 4.9 | 6.2 |
| Excl. leasing | | 1,965 | 2,454 | 4,170 | 4,712 | 72,760 | 64,654 | 2.7 | 3.8 | 5.7 | 7.3 |
| Manufacturing | | 302 | 386 | 986 | 1,108 | 18,716 | 18,690 | 1.6 | 2.1 | 5.3 | 5.9 |
| Non-manufacturing | | 1,667 | 2,082 | 3,192 | 3,642 | 66,037 | 58,514 | 2.5 | 3.6 | 4.8 | 6.2 |
| Sub-sector | Materials | 82 | 114 | 242 | 299 | 6,778 | 6,968 | 1.2 | 1.6 | 3.6 | 4.3 |
| Sub-sector | Processing and assembly | 203 | 251 | 704 | 773 | 10,980 | 10,369 | 1.8 | 2.4 | 6.4 | 7.5 |
| Sub-sector | Energy | 506 | 733 | 1,042 | 1,277 | 24,458 | 24,142 | 2.1 | 3.0 | 4.3 | 5.3 |
| Sub-sector | Other non-manufacturing | 1,179 | 1,369 | 2,190 | 2,401 | 42,538 | 35,725 | 2.8 | 3.8 | 5.1 | 6.7 |

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