

**Development Bank of Japan
Research Report
No. 40**

**Survey on Planned Capital Spending
for Fiscal Years 2002 and 2003
(Conducted in February 2003)**

May 2003

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

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I Outline

Objectives

This survey has been conducted biannually (in February and August) since FY1956 by the 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 tangible fixed assets of one’s own corporation, such as 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 the “information technology investment” account includes intangible fixed assets, as indicated later).

Survey Methods

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

Capital spending has been calculated based on construction. In general, it is calculated as the sum total of tangible fixed assets, including the construction in progress account (without subtracting resale value, depreciation and loss).

Target Firms

This survey covers all private firms in Japan’s major industries capitalized at ¥1 billion or more, excluding agriculture, forestry, finance and in-

urance and medicine. 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, 2003

Contents of the Survey

- (i) Estimated actual capital spending in FY2002 and planned capital spending for FY2003
- (ii) Details of individual construction projects in FY2002 and FY2003
- (iii) Estimated revenue and expenditure in FY2002 and FY2003
- (iv) Investment motives in FY2002 and FY2003
- (v) Trends in land investment in FY2002 and FY2003
- (vi) Capital spending abroad in FY2002 and FY2003
- (vii) Information technology investment in FY2002 and FY2003

Responses

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

	No. of Firms Targeted	No. of Firms Giving Valid Responses	Proportion of Valid Responses
Principal Business Classification	3,618	2,915	80.6%
Investment Specific Classification	4,350	3,563	81.9%

On the Totals

Industrial classification

There are two types of industrial classifications: principal business classification and investment-specific classification. The former classifies and totals the companies' responses based on the main business interest of each company, whereas the latter classifies and totals the amount of investment for each business sector in a company's response according to industrial sector.

Although mainly the investment-specific classification is used for the analysis, the princi-

pal business classification is adopted in some cases.

Timing of survey and years covered

The survey is conducted twice a year, in February and in August. Since each fiscal year is surveyed five times until planned investments are materialized, the results reveal business sentiments in detail, for example, through the extent to which planned investments have been modified.

Timing of survey	FY2000	FY2001	FY2002	FY2003	FY2004
August 2001	Actual	Modified plan	Plan for next FY		
February 2002		Estimate	Initial plan		
August 2002		Actual	Modified plan	Plan for next FY	
February 2003			Estimate	Initial plan	
August 2003			Actual	Modified plan	Plan for next FY

Capital Spending is in Weak Recovery: Slight upturn in manufacturing, but downturn in urban infrastructure

II Summary

1. Overall Condition

Estimated actual capital spending for all industries in FY2002 is down 3.8% overall, a second consecutive year of decline. (All figures are based on construction; the rate of growth or decline is based on a comparison with the previous year's figures.)

Planned capital spending for FY2003 indicates a third straight year of decline, down 3.0%.

2. Estimated Actual Capital Spending for FY2002

Looking at estimated actual capital spending for FY2002, the overall figure is down 3.8% as a double-digit decrease is expected in manufacturing (down 11.4%) as well as a slight decline in non-manufacturing (down 0.2%).

3. Planned Capital Spending for FY2003

Planned capital spending of all industries for FY2003 will decrease for the third consecutive year (down 3.0%), as the expected upturn in manufacturing (up 1.1%) will be more than offset by the continuing decline in non-manufacturing (down 4.8%).

In the manufacturing sector (up 1.1%), capital spending is expected to decrease in the paper & pulp industry, as investment in waste-paper processing passed a peak, as well as in the food & beverage industry largely due to the reactionary decline in spending on soft drinks. However, upturns are expected in other industries, including electric machinery, mainly due to investment related to flat panel displays, iron & steel; led by large-scale blast furnace refreshment; and chemicals, thanks largely to investments in high-value added products. Overall, some slight growth in capital spending is expected in this sector, the first increase in three

years.

In the non-manufacturing sector (down 4.8%), some upward movements are expected, including projections for such in investments in wholesale, electric power and new supermarket outlets in retail. However, after peaking the building and extension of railway lines, airport construction and large-scale redevelopment projects in real estate are expected to see substantial decreases. The nine major electric power companies plan to curtail investment, mainly in nuclear fuel and power source development projects. Capital spending will continue to decline in telecommunications with restraints on investment in wired phones. These developments will result in a third consecutive year of decline in capital spending for non-manufacturing as a whole.

In comparison with the previous survey (August 2002), investment for FY2002 was revised downwards in both the manufacturing sector (down 4.7%) and the non-manufacturing sector (down 2.2%). Capital spending for FY2003 was revised upwards in many manufacturing industries (up 7.6%) but was revised downwards in non-manufacturing (down 1.3%), resulting in almost no change overall.

Looking at the respective shares of different motives for investing in the manufacturing sector in FY2003, the share of "maintenance and repair" is continuing to rise in the materials sub-sector, mainly in iron & steel and chemicals. In the processing & assembly sub-sector, the shares of "expansion of production capacity" and "rationalization and labor saving" are growing, mainly in electric machinery.

Planned land investment for FY2003 is considerably lower in both the manufacturing and non-manufacturing sectors, down a massive 61.4% overall from the previous year. However, land investment tends to be subject to substantial upward revision after the planning stage.

Revenue in FY2003 will rise only slightly (up 1.7%) for all industries, but double-digit

growth is expected in ordinary profit (up 21.6%). The ratio of capital spending to cash flow (net income plus depreciation expenses) will fall from the previous year to very low levels in both manufacturing and non-manufacturing (down from 111.1% in FY2002 to 90.5% in FY2003 for all industries).

Domestic capital spending by foreign-affiliated firms (119 firms with more than one-third foreign ownership) is slated to increase for the first time in three years, up 10.3% overall to ¥1,074 billion, as double-digit growth is expected in manufacturing, led by transport equipment, chemicals, petroleum and electric machinery. Non-manufacturing spending will also start to rise, as increases are expected in telecommunications & information and wholesale & retail. Foreign-affiliated firms now account for 5.6% of total capital spending in Japan.

Information technology investment, primarily for the improvement of operating efficiency, is expected to increase almost across the board in non-manufacturing (up 13.4%). In addition, investment is expected to continue to increase in the manufacturing sector (up 2.7%), led by investment in software for production and inventory control and for the consolidation of corporate core businesses. Accordingly, the total for all industries will rise 9.5%, showing continued growth, which is in contrast to the decline in total capital spending.

4. Features of Planned Capital Spending for FY2003

A slight increase in revenue and a double-digit growth in ordinary profit are expected in both the manufacturing and non-manufacturing sectors. However, conservative capital spending plans still prevail, and investment will not exceed cash flow.

Capital spending is expected to accelerate in manufacturing, as upward revisions are being considered in the processing & assembly sub-sector as well as in firms that are restructuring. Meanwhile, the restrained mood will continue in non-manufacturing, particularly in infrastructure-related industries where price competition is intense.

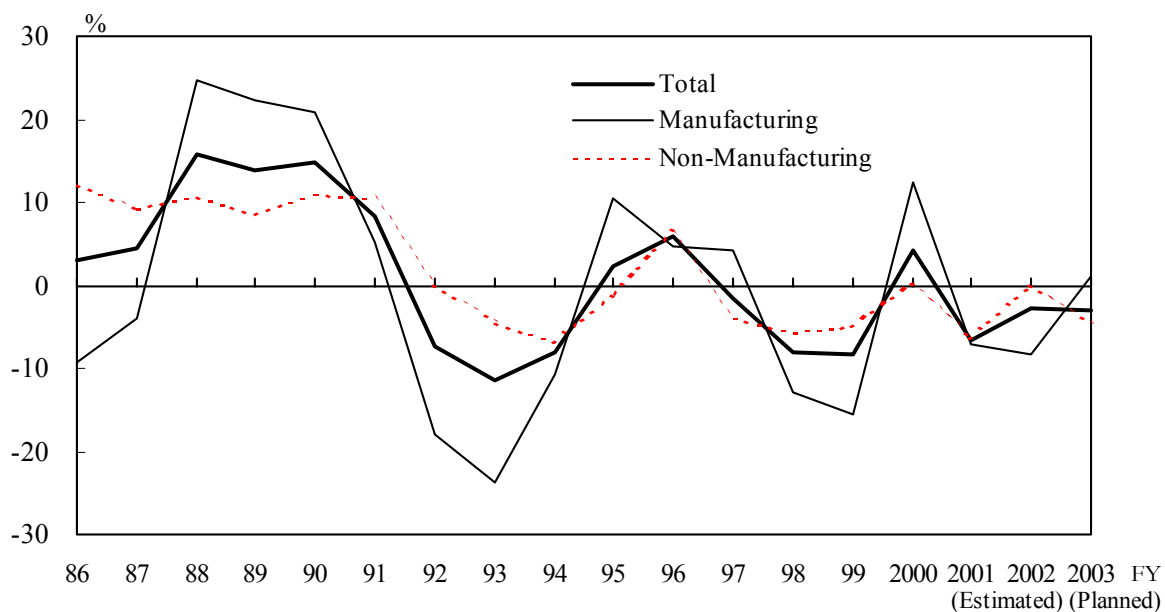
Investment related to flat panel displays, which leads the recovery in electric machinery, apparently has a positive impact on related film-manufacturing facilities in chemicals as well as on ceramics & glass. Likewise, the recovery in investment in memory devices, etc. has a positive impact on semiconductor-related industries, stimulating spending on 300mm silicon wafer-manufacturing facilities in non-ferrous metals and on semiconductor production equipment in precision machinery. There seems to be signs of a capital spending chain reaction, beginning with electronic machinery, although at a slower pace than in the past recovery phase.

Capital Spending

	FY2002 Estimated (2,801 firms)			FY2003 Planned (2,915 firms)		
	FY2001 Actual	FY2002 Estimated	Growth Rate (%) 2002/2001	FY2002 Estimated	FY2003 Planned	Growth Rate (%) 2003/2002
Total	20,148.3	19,377.7	-3.8	19,869.7	19,271.0	-3.0
<i>Excluding Electric Power</i>	16,883.9	16,404.1	-2.8	16,896.0	16,387.5	-3.0
Manufacturing	6,520.2	5,778.0	-11.4	5,874.2	5,941.2	1.1
Non-Manufacturing	13,628.1	13,599.8	-0.2	13,995.5	13,329.7	-4.8
<i>Excluding Electric Power</i>	10,363.8	10,626.1	2.5	11,021.8	10,446.3	-5.2
<i>Electric Power</i>	3,264.4	2,973.7	-8.9	2,973.7	2,883.4	-3.0

Note: Monetary amounts are in billion yen.

Growth in Capital Spending



Capital Spending by Industry

	Capital Spending				Growth Rate (%)		Component Rate (%)	
	FY2001	FY2002	FY2002	FY2003	2002/2001	2003/2002	FY2002	FY2003
	Actual	Estimated	Estimated	Planned			Estimated	Planned
	(2,801 firms)	(2,915 firms)		(2,915 firms)				
Total	20,148.3	19,377.7	19,869.7	19,271.0	-3.8	-3.0	100.0	100.0
<i>Excluding Electric Power</i>	16,883.9	16,404.1	16,896.0	16,387.5	-2.8	-3.0	85.0	85.0
Manufacturing	6,520.2	5,778.0	5,874.2	5,941.2	-11.4	1.1	29.6	30.8
Food and Beverages	440.6	421.0	438.5	410.3	-4.5	-6.4	2.2	2.1
Textiles	72.2	70.4	70.9	66.7	-2.5	-5.9	0.4	0.3
Paper and Pulp	254.5	203.5	209.8	178.8	-20.1	-14.7	1.1	0.9
Chemicals	876.0	734.2	752.7	767.5	-16.2	2.0	3.8	4.0
<i>Organic Chemicals</i>	421.3	322.4	333.4	345.9	-23.5	3.8	1.7	1.8
<i>Pharmaceuticals</i>	169.8	160.2	161.7	139.2	-5.7	-13.9	0.8	0.7
Petroleum	116.0	165.5	165.5	155.0	42.6	-6.3	0.8	0.8
Cement, Ceramics and Glass	171.3	133.5	141.6	138.6	-22.1	-2.1	0.7	0.7
Iron and Steel	419.9	347.4	349.7	386.9	-17.3	10.6	1.8	2.0
<i>Ordinary Steel</i>	346.2	271.0	272.7	311.2	-21.7	14.1	1.4	1.6
Non-Ferrous Metals	345.1	195.5	195.5	197.3	-43.3	0.9	1.0	1.0
General Machinery	410.3	370.8	370.8	370.1	-9.6	-0.2	1.9	1.9
Electric Machinery	1,599.7	1,316.3	1,332.6	1,404.9	-17.7	5.4	6.7	7.3
<i>Electric Devices, etc.</i>	1,081.8	869.1	873.5	939.8	-19.7	7.6	4.4	4.9
Precision Machinery	137.6	103.1	106.6	108.7	-25.1	1.9	0.5	0.6
Transportation	1,257.6	1,334.8	1,349.2	1,350.6	6.1	0.1	6.8	7.0
<i>Automobiles</i>	1,207.9	1,278.4	1,283.2	1,289.8	5.8	0.5	6.5	6.7
Other Manufacturing	419.3	382.1	390.9	405.9	-8.9	3.8	2.0	2.1
Non-Manufacturing	13,628.1	13,599.8	13,995.5	13,329.7	-0.2	-4.8	70.4	69.2
<i>Excluding Electric Power</i>	10,363.8	10,626.1	11,021.8	10,446.3	2.5	-5.2	55.5	54.2
Construction	145.3	158.4	166.1	119.8	9.0	-27.8	0.8	0.6
Wholesale and Retail	1,097.8	1,139.6	1,159.0	1,155.9	3.8	-0.3	5.8	6.0
<i>Retail</i>	848.2	937.4	955.0	993.0	10.5	4.0	4.8	5.2
Real Estate	875.2	986.8	990.8	855.4	12.8	-13.7	5.0	4.4
Transportation	1,599.9	2,022.3	2,022.8	1,638.4	26.4	-19.0	10.2	8.5
<i>Railways</i>	1,011.9	1,370.5	1,370.5	1,070.7	35.4	-21.9	6.9	5.6
<i>Marine Transport</i>	45.5	32.0	32.0	19.3	-29.7	-39.9	0.2	0.1
<i>Airlines</i>	193.3	160.9	161.4	191.8	-16.7	18.8	0.8	1.0
<i>Warehousing, etc.</i>	242.4	343.8	343.8	237.7	41.8	-30.9	1.7	1.2
Electric Power and City Gas	3,531.4	3,245.5	3,249.4	3,155.5	-8.1	-2.9	16.4	16.4
<i>Electric Power</i>	3,264.4	2,973.7	2,973.7	2,883.4	-8.9	-3.0	15.0	15.0
<i>City Gas</i>	267.0	271.9	275.7	272.0	1.8	-1.3	1.4	1.4
Telecom. and Information	2,773.9	2,596.1	2,615.1	2,496.2	-6.4	-4.5	13.2	13.0
Leasing	3,214.5	3,165.0	3,505.4	3,641.8	-1.5	3.9	17.6	18.9
Services	349.8	238.5	239.5	225.6	-31.8	-5.8	1.2	1.2
Other Non-Manufacturing	40.5	47.5	47.5	41.2	17.2	-13.3	0.2	0.2

Notes: Other Manufacturing includes publishing and printing, rubber, metal products and others.

Other Non-Manufacturing includes fishing, mining and others.

Monetary amounts are in billion yen.

III Survey Results

1. Estimated Actual Capital Spending for FY2002

Outline

Overall actual capital spending for FY2002 is estimated to have declined (down 3.8%) for the second consecutive year with a double-digit drop in manufacturing (down 11.4%) and a slight reduction in non-manufacturing (down 0.2%).

In the manufacturing sector (down 11.4%), spending is estimated to have increased in automobiles, driven by investment in new models and business consolidation, as well as in petroleum, thanks largely to spending on environmental protection and the expansion of self-service filling stations. Cutbacks are expected to be seen, however, in many other industries including electric machinery, particularly in investment related to semiconductors, as well as non-ferrous metals, chemicals, iron & steel, paper & pulp, and cement, ceramics & glass, largely due to the completion of projects in the previous year.

In the non-manufacturing sector (down 0.2%), spending is estimated to have increased in transportation, due to the building of new railway lines and extensions and continued airport construction; in real estate, as large-scale redevelopment projects accelerated in the Tokyo metropolitan area, as well as in retail largely due to new supermarket outlets. Meanwhile, decreases are expected in electric power largely due to the reduction of investment in thermal, power plants; in telecommunications and information, due to restraints on investment in the existing businesses of mobile and wired phones; as well as in services, following the completion of a large amusement park.

Trends, by Industrial Sub-sector

The trends in estimated actual capital spending for FY2002, classified by industrial sub-sector, are as follows. (Numbers in curly brackets { } show the percentage of total capital spending accounted for by each sub-sector.)

Materials (down 21.3%) {8.7%}

Total capital spending in the materials industries as a whole is estimated to have declined by more than 20% from the previous year due to a respite in large-scale projects, including refurbishment, and reduced spending on information technology.

Non-ferrous metals is expected to have experienced a spending decline of over 40% due to substantial reduction in optical parts and fiber. Spending in chemicals is expected to have declined for the first time in three years, as substantial cuts are expected in the heavily-weighted organic chemicals following a lull in large-scale investment projects. Spending has turned to a double-digit decline in iron & steel as well as in paper & pulp, due respectively to a respite in large-scale refurbishment projects mainly in blast furnaces, and to the reaction to investment in special paper and projects, related to the rebuilding of production systems in the previous year. Spending is expected to have declined for the second straight year in cement, ceramics & glass, as controls on investment in cement continue and as IT-related projects are being withheld. Spending is also expected to have begun falling in textiles.

Processing & Assembly (down 7.9%) {20.1%}

In spite of an increase for the second consecutive year in automobiles, capital spending in the processing & assembly sub-sector is expected to record a second consecutive year of decline, as spending in electric machinery and precision machinery will decline due to controls on investment related to information equipment, including semiconductors. Investment is also expected to decline from the previous year in other industries such as general machinery and food & beverages.

The automobile industry is estimated to have experienced a second consecutive year of increase in spending, with contributions from investment in new models of four-wheeled vehicles and in business consolidation, among others. Spending in electric machinery is expected to have recorded a double-digit decline for two years in a row despite increased spending on flat panel displays, as controls are still in effect particularly on investment related to semiconductors.

Capital spending in precision machinery is also expected to have decreased, by more than 20%, largely due to reduced investment in semiconductor equipment. In the general machinery industry, the continued slump in spending in industrial machinery is resulting in a decline for the second consecutive year. Active investment in soft drinks notwithstanding, the food & beverage industry is expected to have seen a continued decline in capital spending due to cutbacks on investment in beer & other alcoholic beverages and processed meat & dairy products.

Energy (down 6.3%) {17.4%}

The energy sub-sector is expected to have recorded a decrease in capital spending for the ninth consecutive year.

Spending in electric power is expected to have decreased for the ninth year running as the nine major electric power companies scaled down their investment amidst the decline in power demand and as investment in wholesale power supply has slackened. In the gas industry, spending is expected to have risen for the first time in seven years, led by investment in LNG bases in city gas as well as in new facilities for heat supply. Meanwhile, spending in petroleum is expected to have risen for the second consecutive year thanks to investment in environmental protection including the desulfurization of light oil, and an increase in self-service filling stations.

Non-Manufacturing, excluding Energy (up 2.5%) {53.9%}

Despite decreases in telecommunications & information, services and leasing, total capital spending in non-manufacturing excluding energy is slated to have risen due to increases in transportation (railways in particular), real estate, wholesale & retail and construction.

Capital spending in telecommunications & information is expected to have declined for the second year running despite investment in new premises and digitalization in broadcasting, as spending was controlled on existing businesses of mobile and fixed communications. Services is expected to have seen a second consecutive year of substantial decline as a large amusement park in the Tokyo metropolitan area has been completed. Spending in leasing is expected to have fallen for the first time in four years as decreases are expected almost across the board including in information equipment.

Meanwhile, spending is expected to have increased substantially in transportation thanks to the construction of new railway lines and extensions and investment related to the *Shinkansen* bullet trains, as well as airport construction. Real estate is expected to have experienced a double-digit increase as large redevelopment projects got into full swing in the Tokyo metropolitan area. In wholesale & retail, the fourth consecutive decline in wholesale is expected to have been more than offset by investment in new supermarket outlets and DIY stores, resulting in an upturn in capital spending. Spending in construction is estimated to have risen due to acquisitions of assets, including business offices.

Capital Spending, by Industry

	Growth Rate (%)					Share (%)				
	FY1999	FY2000	FY2001	FY2002	FY2003	FY1999	FY2000	FY2001	FY2002	FY2003
Materials ^a	-21.5	10.0	7.1	-21.3	0.9	8.5	9.1	10.7	8.7	9.0
<i>Paper & Pulp</i>	-29.4	24.2	15.1	-20.1	-14.7	0.7	0.9	1.2	1.1	0.9
<i>Chemicals</i>	-22.4	10.1	8.1	-16.2	2.0	3.9	4.1	4.8	3.8	4.0
<i>Iron & Steel</i>	-14.0	-21.1	7.5	-17.3	10.6	2.0	1.6	1.9	1.8	2.0
Processing & Assembly ^b	-12.2	15.1	-17.5	-7.9	1.5	20.8	23.0	20.3	20.1	21.0
<i>Food & Beverages</i>	-2.7	-3.2	-6.5	-4.5	-6.4	2.4	2.2	2.1	2.2	2.1
<i>Electric Machinery</i>	-0.0	38.7	-34.4	-17.7	5.4	8.2	10.8	7.8	6.7	7.3
<i>Automobiles</i>	-18.6	-3.2	1.1	5.8	0.5	5.3	5.0	5.5	6.5	6.7
Energy ^c	-7.4	-9.9	-8.9	-6.3	-3.3	18.0	15.7	16.6	17.4	17.3
<i>Petroleum</i>	-32.3	-36.8	34.7	42.6	-6.3	0.6	0.4	0.5	0.8	0.8
<i>Electric Power</i>	-5.6	-9.5	-9.8	-8.9	-3.0	16.0	14.0	14.7	15.0	15.0
Non-Manufacturing excluding Energy ^d	-4.5	3.7	-8.9	2.5	-5.2	52.7	52.2	52.4	53.9	52.7
<i>Construction</i>	-35.0	-5.4	-0.1	9.0	-27.8	0.8	0.7	0.7	0.8	0.6
<i>Wholesale & Retail</i>	-8.5	6.6	-19.6	3.8	-0.3	5.2	5.6	5.1	5.8	6.0
<i>Real Estate</i>	-19.2	17.7	-20.5	12.8	-13.7	4.0	4.8	4.0	5.0	4.4
<i>Transportation</i>	-2.7	-5.0	-7.1	26.4	-19.0	7.6	7.0	7.4	10.2	8.5
<i>Telecom. & Information</i>	-12.5	2.1	-10.8	-6.4	-4.5	15.4	15.7	15.8	13.2	13.0
<i>Leasing</i>	7.6	5.4	2.8	-1.5	3.9	17.6	16.2	17.7	17.6	18.9
<i>Services</i>	38.9	3.7	-35.5	-31.8	-5.8	2.1	2.1	1.6	1.2	1.2
All Industries	-8.4	4.1	-9.3	-3.8	-3.0	100.0	100.0	100.0	100.0	100.0
<i>Excluding Electric Power</i>	-8.9	6.8	-9.3	-2.8	-3.0	84.0	86.0	85.3	85.0	85.0
Manufacturing	-15.5	12.5	-9.7	-11.4	1.1	29.9	32.5	31.6	29.6	30.8
Non-Manufacturing	-5.0	0.4	-9.2	-0.2	-4.8	70.1	67.5	68.4	70.4	69.2
<i>Excluding Electric Power</i>	-4.8	3.5	-9.0	2.5	-5.2	54.1	53.6	53.7	55.5	54.2

Note: FY2002 and FY2003 share (%) figures are based on 2,915 companies that responded to the survey in both years.

^a Materials: textiles; paper & pulp; chemicals; cement, ceramics & glass; iron & steel; non-ferrous metals

^b Processing & assembly: food & beverages; general machinery; electric machinery; precision machinery; transportation; other manufacturing

^c Energy: petroleum; electric power; city gas and coal; crude oil & natural gas

^d Non-Manufacturing, excluding energy: non-manufacturing industries excluding those industries mentioned in 'Energy' above

2. Planned Capital Spending for FY2003

Outline

Planned capital spending for all industries in FY2003 will decrease for the third consecutive year (down 3.0%), turning to a slight increase in the manufacturing sector (up 1.1%) but continuing to decline in the non-manufacturing sector (down 4.8%).

In the manufacturing sector (up 1.1%), capital spending is expected to decrease in paper & pulp as capacity investment in waste paper processing passed a peak. Spending cuts are also

planned in food & beverages due to a decline in soft drinks in reaction to the substantial investment in the previous year. However, total capital spending in the sector will rise slightly for the first time in three years as increases are expected in other industries. Spending in electric machinery will turn up thanks largely to investment related to flat panel displays. An increase is expected in iron & steel, as large replacement projects will make strong headway. Spending will also rise in chemicals, mainly on flat panel displays related materials.

In the non-manufacturing sector (down

4.8%), the effects of some favorable factors such as projected investment in wholesale electric power supply and new supermarket outlets in retail will be overwhelmed by decreases in other areas. Substantial cutbacks are planned in transportation and real estate, as large-scale projects for railway construction and extension, airport construction and redevelopment all passed a peak. The nine major power companies plan to cut spending on nuclear fuel and power source development. Spending in telecommunications will continue to decline mainly due to controls on investment in wired phones. Overall, capital spending in the non-manufacturing sector will decline for the third straight year.

Trends by Industrial Sub-sector

The trends in planned capital spending for FY2003, classified by 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 0.9%) {9.0%}

Planned capital spending in the materials sub-sector will begin to increase slightly despite continued declines expected in paper & pulp and cement, ceramics & glass, as investment will begin to increase in the heavily-weighted chemical industry. Spending in iron & steel and non-ferrous metals is also planned to increase from the previous year.

Capital spending will start to rise in chemicals thanks to investment in high-value added products including materials for flat panel displays, as well as in non-ferrous metals, driven by investment related to 300mm wafers, despite restrained spending in optical parts and fiber.

On the other hand, spending will decline from the previous year in paper & pulp despite increased investment in power generation facilities using waste as fuel, as capacity investment in waste paper processing passed a peak. Controls on investment will also continue in cement, ceramics & glass, leading to reduced capital spending.

Processing & Assembly (up 1.5%) {21.0%}

Setting aside the continued decrease expected in food & beverages, capital spending in the processing & assembly sub-sector will begin to increase as a whole, led by the third consecutive increase in automobiles and the first increase in three years in the heavily-weighted electric machinery.

The food & beverage industry will post a sixth consecutive decline in spending despite an upturn in beer & other alcoholic beverages, as investment will be cut in soft drinks in reaction to the substantial spending in the previous year. Spending in general machinery will decline slightly, as checks on investment will continue mainly in industrial machinery.

Spending in electric machinery will increase after two consecutive years of decline with contributions from investments related to flat panel displays and semiconductors. Spending will also turn up in precision machinery, led by semiconductor equipment. Despite reduced spending in parts & bodies, the automobile industry plans to increase capital spending, mainly in new models of four-wheeled vehicles.

Energy (down 3.3%) {17.3%}

Capital spending in energy is expected to decline for the tenth straight year.

In the electric power industry, spending is slated to decline for the tenth consecutive year despite increased spending in wholesale electric power supply, due to restraints on power source development and substantial reductions in investment for nuclear fuel by the nine major electric power companies. Despite planned increases in spending in heat supply facilities and specialized LNG producers, capital spending in the gas industry will experience a downturn as major city gas projects passed a peak and as controls on investment will become tighter. A substantial decline is planned in petroleum in reaction to the substantial increases in the previous two years driven by environmental protection projects.

Non-Manufacturing, excluding Energy (down 5.2%) {52.7%}

Looking at the non-manufacturing sector, excluding energy, an upturn is planned in leasing, but spending is set to decline in many industries

including transportation, real estate, telecommunications & information, services and wholesale & retail.

In leasing, capital spending will grow again as increased demand is expected through the enhancement of corporate groups and tax measures to promote IT investment.

In contrast, spending in transportation will fall substantially despite an upturn in airlines, as projects for new railway lines and extensions in the Tokyo metropolitan area passed a peak, along with airport construction. Spending in real estate is also slated to fall following the peak of large redevelopment projects in the capital. Spending will decline for the third straight year in telecommunications and information, as controls on investment in wired phones will be accompanied by reduced spending in broadcasting in reaction to the construction of new premises in the previous year. Spending in construction will decline following the purchase of business offices in the previous year. Spending will also decline in services following the completion of new hotels and amusement facilities. In wholesale & retail, the continued establishment of new supermarket outlets will be more than offset by reduced spending in wholesale and department stores, resulting in a small decline as a whole.

Trends and Features of Capital Spending for FY2003, by Industry

The trends and features of capital spending in the main industries are shown below. The figures in parentheses () indicate changes in the rate of growth in capital spending for the industry in question between FY2002 and FY2003. The figures in curly brackets { } show the percentage of each industry in total planned spending for FY2003.

Materials

Chemicals (-16.2% → 2.0%) {4.0%}

Spending will fall by double figures in pharmaceuticals, as new investment will be focused on plant consolidation and on a few new large-scale projects. It will begin rising in organic chemicals and other chemicals due to active investment in high-value added products including materials for flat panel displays. Spending will also increase in inorganic chemicals. Overall, capital

spending in the industry is expected to turn upwards.

Iron & Steel (-17.3% → 10.6%) {2.0%}

The second consecutive decrease is planned in special steel, as investment for rationalization passed a peak, whereas a double-digit increase is expected in ordinary steel, as large replacement projects will get into full swing including blast furnace refurbishment. Overall, capital spending in the industry will begin to rise.

Non-ferrous Metals (-43.3% → 0.9%) {1.0%}

Continued controls in optical parts and fiber will be more than offset by capacity investment in 300mm silicon wafer production equipment, resulting in an upturn overall.

Paper & Pulp (-20.1% → -14.7%) {0.9%}

Despite the introduction of boilers for power generation using waste as fuel, the industry will see the second consecutive year of decline in capital spending as capacity investment in waste paper processing passed a peak.

Cement, Ceramics & Glass (-22.1% → -2.1%) {0.7%}

Spending will increase in glass, as some projects will be carried over from the previous year. Ceramics will maintain the spending level of the previous year. Spending in cement will record a double-digit decline, as controls on investment will remain. On balance, the industry will experience the third consecutive year of decline in capital spending.

Textiles (-2.5% → -5.9%) {0.3%}

The decline in capital spending will accelerate overall due to the continued decline in synthetic fiber and a reactionary drop in cotton spinning.

Processing & Assembly

Electric Machinery (-17.7% → 5.4%) {7.3%}

While heavy electric machinery will see the seventh consecutive year of decline, spending in electronic equipment (home electric appliances and IT equipment) will increase for the first time in six years, led chiefly by visual equipment. It will rise for the first time in three years in elec-

tronic component and devices due to continued active investment in flat panel displays and an upturn in investment related to semiconductors, particularly for memories and visual devices. Overall, capital spending in the entire industry will increase for the first time in three years.

Automobiles (5.8% → 0.5%) {6.7%}

Although spending in parts & bodies will continue to fall as large investment projects completed previous year, spending in four-wheeled vehicles will remain firm, backed by investment in new models and for enhancing domestic sales networks. Overall, capital spending in the automobile industry is expected to increase for the third consecutive year.

Food & Beverages (-4.5% → -6.4%) {2.1%}

Spending will continue to decline in processed meat & dairy products, flour milling & sugar manufacture and edible oils. Although spending will turn up in beer & other alcoholic beverages, a reactionary drop in soft drinks will result in a decline in capital spending for the industry as a whole.

General Machinery (-9.6% → -0.2%) {1.9%}

Spending will continue to increase in boilers & motors, mainly for rationalization, as well as in office and household equipment, driven by active investment in new products. Industrial machinery and general machinery parts will experience continued controls on investment, and spending in metal processing machinery will see a double-digit decline due to the termination of investment projects related to head offices. Capital spending in the whole industry is expected to decline slightly.

Precision Machinery (-25.1% → 1.9%) {0.6%}

Spending will continue to decrease in medical instruments, but will begin to increase in other parts of the industry including semiconductor equipment and measuring instruments. On balance, the industry is expected to see a slight recovery in capital spending.

Energy

Electric Power (-8.9% → -3.0%) {15.0%}

Although projected investment in wholesale power supply will increase, the nine major electric power companies plan substantial cuts in investment for nuclear fuel. Power source development projects will also be reduced in wide areas, especially in thermal power. Thus, capital spending will decline for the tenth consecutive year in the industry as a whole.

Gas (1.8% → -1.3%) {1.4%}

Spending in heat supply will accelerate due to the construction and expansion of some large plants, and spending by specialized LNG producers will turn upwards. However, spending in city gas will decline, as large projects passed a peak amidst an increasingly restrictive mood. Capital spending will resume its decline in the industry as a whole.

Petroleum (42.6% → -6.3%) {0.8%}

Despite continued investment related to self-service filling stations, capital spending in the industry will decline for the first time in three years, as investment for light oil desulfurization in refineries passed a peak.

Non-Manufacturing Industries, excluding Energy

Leasing (-1.5% → 3.9%) {18.9%}

In the leasing industry, capital spending will resume its growth, as demand is expected to increase thanks to the enhancement of corporate groups and tax measures to promote IT investment.

Telecommunications & Information

(-6.4% → -4.5%) {13.0%}

Despite a slight increase in spending in mobile communications thanks to investment in next-generation portable phones, capital spending will decline in telecommunications due to continued controls on investment in fixed communications. Spending will decline in information services and broadcasting in reaction to the construction of new premises in the previous year. All in all, the industry will see the third straight year of decline in capital spending.

Wholesale & Retail (3.8% → -0.3%) {6.0%}

In wholesale, spending will be cut for the fifth straight year, as investment related to head offices will continue to decline. In retail, spending will decline in department stores due to a temporary pause in investment from the previous year for new outlets and expansion, but will increase on the previous year in supermarkets and DIY stores, resulting in the second consecutive year of increase. On balance, capital spending in the industry as a whole is expected to decline slightly.

Railways (35.4% → -21.9%) {5.6%}

Although investment will continue to increase for new line construction mainly in the Tokai area, major projects for new line construction and extension passed a peak in the Tokyo metropolitan area. Overall, capital spending will start to fall in the industry.

Real Estate (12.8% → -13.7%) {4.4%}

Although investment in shopping malls will continue to increase, large-scale redevelopment projects in the Tokyo metropolitan area passed a peak, resulting in a downturn in capital spending for the entire industry.

Services (-31.8% → -5.8%) {1.2%}

Despite investment related to waste disposal and parking lots, capital spending in services will decline for the third consecutive year, largely in reaction to the completion of new hotels and amusement facilities.

Warehousing & Transportation (41.8% → -30.9%) {1.2%}

Although investment will increase in logistic centers, capital spending in the industry will plunge, as airport construction projects will have peaked.

Airlines (-16.7% → 18.8%) {1.0%}

Total capital spending will start to grow thanks to the introduction of new airplanes and an increase in system-related investment.

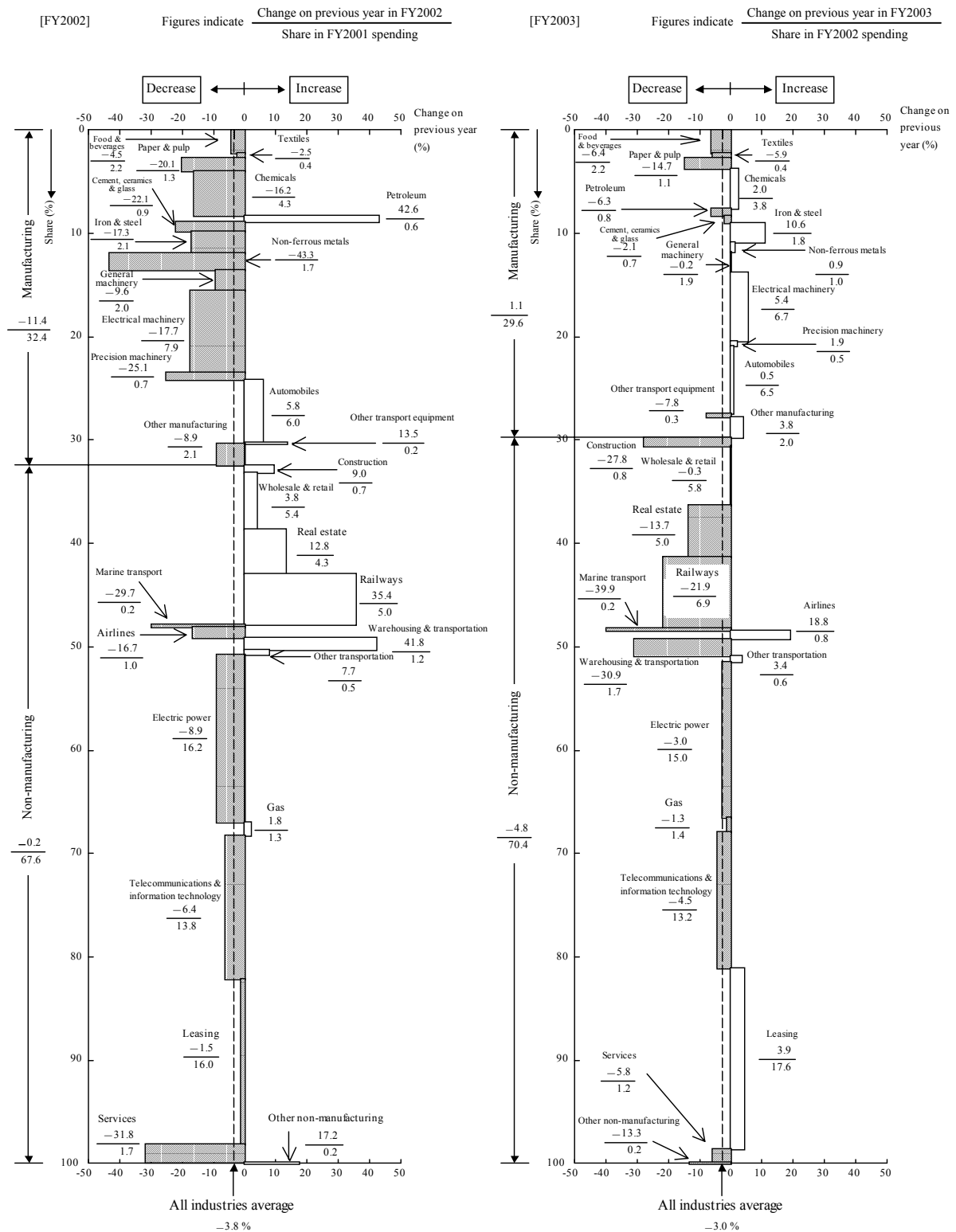
Construction (9.0% → -27.8%) {0.6%}

As curbs on investment will continue particularly among general contractors, capital spending in the industry will fall substantially in reaction to the purchase of business offices in the previous year.

Marine Transport (-29.7% → -39.9%) {0.1%}

Capital spending will decline for the second straight year, as investment will continue to slump in ship construction.

Characteristics of Capital Spending by Industry



3. Investment Motives

Investment Motives in the Manufacturing and Non-Manufacturing Sectors for FY2003

Looking at the share of each category of investment motive for the manufacturing sector, compared with FY2002 decreases are expected in “expansion of production capacity” and “others,” as well as increases in the shares of “maintenance and repair” and “rationalization and labor saving.”

In the manufacturing sector, the share of “expansion of production capacity” is expected to increase substantially with the contribution from electric machinery, to the detriment of “product development and upgrading.” In the non-manufacturing sector, the share of “expansion of production capacity” is expected to decline, as capacity investment related to transportation including railways passed a peak, while that of “maintenance and repair” is expected to increase.

Investment Motives in the Manufacturing Sector’s “Materials” and “Processing & Assembly” Industries

This section examines the share of each category of investment motive within the manufacturing sector, comparing the materials sub-sector with the processing & assembly sub-sector. For the materials sub-sector, the motives “maintenance and repair” and “rationalization and labor saving” are relatively high, whereas for the processing & assembly sub-sector, “product development and upgrading” is more important.

The characteristics of investment motives for the materials industries in FY2003 are as follows:

- i. A further increase in the traditionally large share of “maintenance and repair” in many of the industries (32.5% → 34.5%);
- ii. A rising share of “rationalization and labor saving” (13.1% → 14.3%), with contribution from chemicals and paper & pulp;
- iii. An increase in the share of “expansion of production capacity” (25.5% → 26.4%), with contributions from non-ferrous metals and chemicals; and

iv. A decline in the share of “product development and upgrading” (10.8% → 9.0%), especially in chemicals, iron & steel and non-ferrous metals.

The expected significant trends for the processing & assembly sub-sector are as follows:

- i. An increased share of “expansion of production capacity” (25.6% → 30.4%), due to a substantial increase in electric machinery, particularly in electronic components and devices;
- ii. An increase in the share of “rationalization and labor saving” (12.7% → 13.5%), with contributions from electric machinery and automobiles; and
- iii. A decrease in the share of “product development and upgrading” (26.9% → 22.5%), especially in electric machinery.

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” has increased substantially (25.4% → 29.1%), with the contribution from electric machinery including the heavy-spending businesses related to electronic component and devices.

The share of “product development and upgrading” has increased in the heavily-weighted transport equipment industry, but has declined for the sector as a whole (21.5% → 18.0%) due to a substantial drop in electric machinery.

For “rationalization and labor saving,” the share has increased (13.1% → 13.9%) in most of the industries in both the materials and processing & assembly sub-sectors.

The share of “research & development” has increased slightly (6.7% → 7.0%), with contributions from the processing & assembly industries including electric machinery and transport equipment.

For “maintenance and repair,” the share has increased (22.1% → 22.8%), with contributions from iron & steel and chemicals.

Investment Motives

	Total		Manufacturing						Non-Manufacturing	
	(2,029 firms)				Materials		Processing & Assembly			
	FY2002	FY2003	FY2002	FY2003	FY2002	FY2003	FY2002	FY2003	FY2002	FY2003
	Estimated	Planned	Estimated	Planned	Estimated	Planned	Estimated	Planned	Estimated	Planned
Expansion of Production Capacity	47.0	45.7	25.4	29.1	25.5	26.4	25.6	30.4	53.6	51.7
Product Development and Product Upgrading	7.0	7.6	21.5	18.0	10.8	9.0	26.9	22.5	2.6	3.9
Rationalization and Labor Saving	5.1	6.0	13.1	13.9	13.1	14.3	12.7	13.5	2.7	3.2
Research and Development	2.5	2.8	6.7	7.0	6.1	5.8	7.4	7.9	1.1	1.4
Maintenance and Repairs	18.1	19.2	22.1	22.8	32.5	34.5	16.4	16.7	16.8	18.0
Others	20.4	18.6	11.2	9.2	12.0	10.0	11.0	9.0	23.2	22.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: Figures are given as percentages.

4. Trends in Land Investment, by Principal Business Sector

Estimated Actual Land Investment for FY2002

Despite the peak of investment in transportation for new airport sites and the acquisition of land for business restructuring in industries such as construction and wholesale & retail, actual land investment for FY2002 (based on figures for the 1,558 firms that gave responses regarding both FY2001 and FY2002) is estimated to have declined 3.7% as a whole, due to declines in chemicals and telecommunications & broadcasting, respectively in reaction to the acquisition of plant sites and the construction of new premises in the previous year. (Land investment accounts for 7.6% of total estimated actual capital spending in FY2002.)

Planned Land Investment for FY2003

Planned land investment for FY2003 (based on figures for the 1,963 firms that gave responses regarding both FY2002 and FY2003) is down 61.4%, following the completion of investment in new airport sites in transportation and the peaking of large redevelopment projects in the Tokyo metropolitan area in real estate. (Land investment accounts for 2.5% of total capital spending planned for FY2003.)

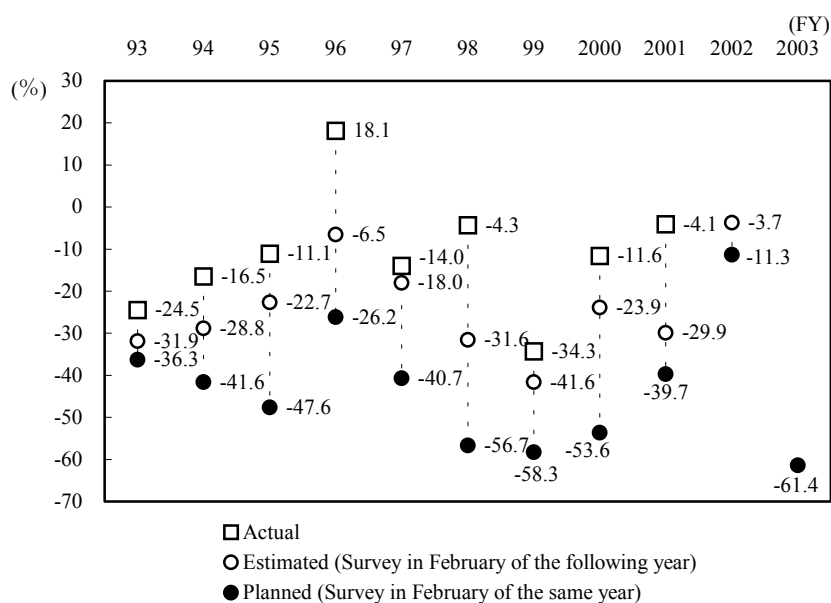
It should be noted that there is a tendency for large upward revisions in land investment between the planning stage and actual implementation.

Trends in Land Investment

	FY2001	FY2002	Growth Rate (%) 2002/2001	FY2002	FY2003	Growth Rate (%) 2003/2002
	Actual (1,558 firms)	Estimated		Estimated (1,963 firms)	Planned	
Total Investment	8,013.7	8,084.8	0.9	10,106.5	9,651.4	-4.5
Investment excluding Land	7,378.8	7,473.5	1.3	9,475.2	9,407.8	-0.7
Investment in Land	634.9	611.3	-3.7	631.3	243.7	-61.4
Share of Land (%)	7.9	7.6		6.2	2.5	
Manufacturing	2,409.9	2,110.1	-12.4	2,486.2	2,522.1	1.4
Investment excluding Land	2,290.6	2,037.1	-11.1	2,407.0	2,499.3	3.8
Investment in Land	119.2	730	-38.8	793	229	-71.1
Share of Land (%)	4.9	3.5		3.2	0.9	
Non-Manufacturing	5,603.8	5,974.7	6.6	7,620.2	7,129.3	-6.4
Investment excluding Land	5,088.2	5,436.4	6.8	7,068.2	6,908.5	-2.3
Investment in Land	515.7	538.3	4.4	552.0	220.8	-60.0
Share of Land (%)	9.2	9.0		7.2	3.1	

Note: Monetary amounts are in billion yen.

Growth Rate of Total Investment in Land by All Industries



5. Trends in Capital Spending by Foreign-affiliated Firms, by Principal Business Sector

Out of the 2,915 firms that responded to the survey for both FY2002 and FY2003, 119 are classified as foreign-affiliated firms (more than one-third foreign ownership). They account for 5.6% of total capital spending (FY2003).

Estimated actual capital spending by foreign-affiliated firms for FY2002 is 13.9% lower than in the previous year. As regards the manufacturing sector, spending will decline in electric machinery and chemicals, but will increase steadily in transport equipment and petroleum, resulting in a decline of 2.1% for the sector as a whole. The non-manufacturing sector will see a 23.1% drop in capital spending by foreign affiliates, with a substantial decline in telecommunications & information.

Planned capital spending by foreign-affiliated firms for FY2003 is up 10.3% from the previous year. The manufacturing sector will see an increase of 12.7% with steady growth in chemicals, petroleum, electric machinery and transport equipment. In the non-manufacturing sector, spending will rise in telecommunications & information from the substantial drop in the previous year. Substantial growth is also planned in wholesale and retail. As a result, capital spending by foreign affiliates will increase 8.0% in the sector as a whole.

Among the foreign-affiliated firms, those owned 100% by foreign capital (43 firms, accounting for 0.5% of total foreign affiliates) are estimated to reduce capital spending in Japan by 2.2% in FY2002. They plan to increase spending by 32.7% in FY2003.

Capital Spending by Foreign-Affiliated Firms, by Principal Business Sector

	Capital Spending				Growth Rate (%)		Composi-	Share of
	FY2001	FY2002	FY2002	FY2003	2002/2001	2003/2002	tion	All Firms
	Actual	Estimated	Estimated	Planned			(%)	(%)
	(110 firms)		(119 firms)				FY2003	
							(119 firms)	
Total	1,121.5	965.8	973.8	1,074.4	-13.9	10.3	100.0	5.6
<i>Wholly owned foreign firms</i>	<i>81.7</i>	<i>79.8</i>	<i>77.5</i>	<i>102.8</i>	<i>-2.2</i>	<i>32.7</i>	<i>9.6</i>	<i>0.5</i>
Manufacturing	491.6	481.5	483.5	544.8	-2.1	12.7	50.7	9.0
Non-Manufacturing	629.9	484.3	490.3	529.6	-23.1	8.0	49.3	4.0
By sector								
Materials	167.2	151.6	153.3	172.1	-9.4	12.3	16.0	9.7
Processing & Assembly	309.0	302.8	303.1	337.7	-2.0	11.4	31.4	8.3

Notes: Foreign-affiliated firms are firms with over one-third foreign ownership.
Monetary amounts are in billion yen.

6. Capital Spending Cash Flow Ratio, by Principal Business Sector

In FY2003, total revenue in all industries is expected to increase only slightly (up 1.7%), which, nonetheless, will result in a double-digit increase

in ordinary profit (up 21.6%). The ratio of capital spending to cash flow (net income plus depreciation expenses) will thus fall from the previous year to very low levels in both manufacturing and non-manufacturing (down from 111.1% in FY2002 to 90.5% in FY2003 for all industries).

Capital Spending Cash Flow Ratio

(Unit: %)

	Revenue Growth		Income (Ordinary)		Capital Spending/ Cash Flow Ratio		Capital Spending/ Depreciation Expenses Ratio	
	(1,819 firms)	(1,306 firms)	Growth					
	FY2002 Estimated	FY2003 Forecasted	FY2002 Estimated	FY2003 Forecasted	FY2002 Estimated	FY2003 Forecasted	FY2002 Estimated	FY2003 Forecasted
Total	-1.5	1.7	17.9	21.6	111.1	90.5	130.2	120.9
Manufacturing	0.2	1.6	37.5	27.3	82.9	60.4	89.6	96.0
Non-Manufacturing	-3.0	1.8	4.7	17.3	120.3	104.2	145.0	129.9
Sub- Materials	-1.9	2.6	25.6	30.6	73.0	60.6	81.3	90.9
sector Processing & Assembly	0.2	2.2	45.8	17.3	97.1	60.1	100.4	101.6

Note: Capital spending cash flow ratio = {capital spending ÷ (net income + depreciation expenses)} × 100.

7. Information Technology Investment, by Principal Business Sector

Contents

This part of the survey concerns the investments related to information aimed at improving the business efficiency and productivity of firms (corresponding to any of the following four factors: “tangible fixed assets,” “intangible fixed assets,” “leasing contracts,” or “other expenses”). This is the sixth survey on information technology investment since its inception in August 2000.

Estimated Actual IT Investment in FY2002

Investment in information technology in FY2002, based on the 1,451 firms that responded to the survey for both FY2001 and FY2002, is estimated to have decreased in the non-manufacturing sector (down 1.0%) but to have increased despite a decline in overall capital spending in the manufacturing sector (up 4.4%), resulting in a 0.9% increase for all industries. In the manufacturing sector, brisk investment is observed in production and inventory management systems, customer management and sales support. In the non-manufacturing sector, on the other hand, the continued increase in industries

such as retail and railways is estimated to have been more than offset by a decline in electric power in reaction to the intensive investment made in the previous year.

Planned IT Investment for FY2003

Planned investment in information technology for FY2003 based on the 1,394 firms that responded to the survey for both FY2002 and FY2003, is expected to begin to increase in the non-manufacturing sector (up 13.4%) and will continue to increase in the manufacturing sector (up 2.7%), leading to an overall increase of 9.5%. In manufacturing, the increase will be led by software investment for production and inventory management and the integration of core businesses. In non-manufacturing, investment in information technology will increase almost across the board, particularly in heavily-weighted industries such as retail and electric power.

Revisions to IT Investment

In comparison with the previous survey of August 2002, estimated actual investment in information technology for FY2002 was revised downwards in both the manufacturing sector (down 5.8%) and the non-manufacturing sector (down 4.8%), leading to an overall downward revision of 5.1%.

Overview of IT Investment (estimated figures for FY2002)

Industrial Sector (1,451 firms)	Amount of IT Investment (%)		Growth Rate (%)		Share of IT Investment (%)		IT Investment/ Capital Spending (%)	
			Change in IT Investment	Change in Capital Spending			FY2001 Actual	FY2002 Estimated
	FY2001 Actual	FY2002 Estimated	2002/2001	2002/2001	FY2001 Actual	FY2002 Estimated	FY2001 Actual	FY2002 Estimated
Total	859.0	866.7	0.9	-4.1	100.0	100.0	9.0	9.5
Manufacturing	300.0	313.2	4.4	-11.6	34.9	36.1	12.0	14.2
Non-Manufacturing	559.0	553.5	-1.0	-1.5	65.1	63.9	7.9	8.0

Note: Monetary amounts are in billion yen.

Overview of IT Investment (planned figures for FY2003)

Industrial Sector (1,394 firms)	Amount of IT Investment (%)		Growth Rate (%)		Share of IT Investment (%)		IT Investment/ Capital Spending (%)	
			Change in IT Investment	Change in Capital Spending			FY2002 Estimated	FY2003 Planned
	FY2002 Estimated	FY2003 Planned	2003/2002	2003/2002	FY2002 Estimated	FY2003 Planned	FY2002 Estimated	FY2003 Planned
Total	488.7	535.2	9.5	-5.9	100.0	100.0	7.4	8.6
Manufacturing	178.5	183.3	2.7	8.9	36.5	34.3	14.0	13.2
Non-Manufacturing	310.3	351.9	13.4	-9.4	63.5	65.7	5.8	7.3

Note: Monetary amounts are in billion yen.

Revision to IT Investment

Industrial Sector	FY2002, Estimated		Revision (%)
	IT Investment (1,371 firms)		
	Aug. 2002	Feb. 2003	
Total	875.2	830.3	-5.1
Manufacturing	314.3	296.1	-5.8
Non-Manufacturing	560.9	534.2	-4.8

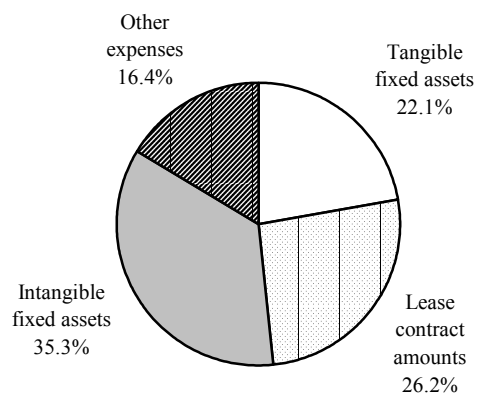
Note: Monetary amounts are in billion yen.

Definition of IT Investment

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

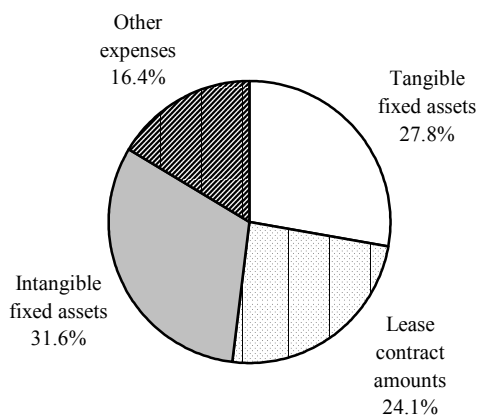
- (i) Tangible fixed assets,
- (ii) Intangible fixed assets (software development and other costs credited to assets rather than accounted for as costs),
- (iii) Leasing contracts (the amount of newly concluded leasing contracts and not that of leasing charges for the fiscal year), and
- (iv) Other expenses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

**Components of IT Investment
(actual FY2002)**



Note: The chart shows the distribution of the 1,451 firms that responded to the survey in both FY2001 and FY2002.

**Components of IT Investment
(planned FY2003)**



Note: The chart shows the distribution of the 1,394 firms that responded to the survey in both FY2002 and FY2003.

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