# Development Bank of Japan Research Report No. 47

Survey on Planned Capital Spending for Fiscal Years 2003, 2004 and 2005 (Conducted in June 2004)

September 2004

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

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# Second Consecutive Year of Double-Digit Increase in the Manufacturing Sector: The First in the Post-Bubble Period

Positive investment for product development and upgrading, Slight Increase in the non-manufacturing sector

### I Summary

- 1. Planned domestic capital spending for FY2004 showed a second consecutive year of double-digit increase in the manufacturing sector (the first in the post-bubble period) and a slight increase in the non-manufacturing sector, leading to an overall increase (up 6.9%) from the previous fiscal year.
- 2. In the manufacturing sector, planned capital spending increased substantially in most industries (up 18.8% overall), including electric machinery and automobiles, which occupy large parts. In electric machinery, positive investments are scheduled for devices such as semiconductors and flat panel displays, reflecting an expansion in their application, mainly in digital home electronics and automobiles. In automobiles, investments will show an increase at a double-digit pace in investment for the production of new models and for new environment- and safety-related technologies and products. These investments will have ripple effects on their related sectors, and substantial increases are planned in precision machinery, non-ferrous metals, ceramics & glass, cement, and chemicals. Spending will turn up also in petroleum, pulp & paper, and food & beverages, mainly due to implementation of environmental measures.

In the non-manufacturing sector, planned capital spending turned up (slightly, up 1.3%) for the first time in four years. It decreased in electric power, where investments for projects by independent power producers passed their peaks, and in telecommunications & information, where large investments in information services and broadcasting abated, but increased in retail, due to accelerated establishment of new outlets, and in leasing, which benefited from positive investments in manufacturing.

- 3. Planned capital spending was at a level well below projected cash flow in both the manufacturing sector and the non-manufacturing sector at a time of expected increases in both sales and profits. However, the ratio of capital spending to depreciation expense hit bottom in FY2002 and showed signs of an upturn. More than half of the firms surveyed have indicated plans for capital spending well in excess of their projected depreciation expense. More and more of them have turned from an asset-reduction strategy to one of aggressive investment, mainly in the manufacturing sector, while continuing to invest selectively with an emphasis on investment efficiency.
- 4. Research & development expenditure will increase in both the manufacturing sector (up 5.5%) and the non-manufacturing sector (up 5.5%). Most industries in the manufacturing sector, including electric machinery and transportation machinery, which occupy large parts, will expand both capital spending and research & development expenditure. In the manufacturing sector, capital spending abroad by both Japan based companies and their overseas subsidiaries and affiliates will rise 7.8%, expanding in most industries.
- 5. One of the features of the current recovery phase of investment is that capital spending in electric machinery will be supported not by a specific field but by a variety of original technologies and products that are applied in areas ranging widely from end products to devices. Along with these investments, automobile-related investments will also be a major contributor to capital investment increases overall.

In other industries, many firms, benefiting from growth in foreign demand, mainly that of China, will invest to strengthen their competitiveness, mainly in new technologies and products and for environmental measures.

Looking at the motives for planned investment, three stand out: product development and upgrading, research and development, and expansion of production capacity (together accounting for about 70% of the overall planned increase in the manufacturing sector's capital spending). Investment for product development and upgrading is particularly significant; it will be its largest since 1986.

Planned capital spending in the non-manufacturing sector showed only a slight increase and no strength, in contrast to that in the manufacturing sector; however, whether the overall investment expansion will impact it in the future might become clear.

### **II** Outline

### **Objectives**

This survey has been conducted since FY1956 by the Development Bank of Japan to assess major trends in the domestic 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). Capital spending has been calculated based on construction and it is calculated, in general, as the sum total of tangible fixed assets, including the construction in progress account (without subtracting resale value, depreciation and loss). Accordingly, intangible fixed assets are excluded, as are capital spending abroad and investment in subsidiaries/affiliated firms.

However, ancillary surveys on "capital spending abroad," "information technology investment" and "research & development expenditure" cover a wider range of investment (see next page).

### **Survey Methods**

The survey was conducted by means of questionnaire (sent to individual firms and followed up by telephone interviews when necessary).

### **Target Firms**

This survey covers all private firms in Japan's

major industries capitalized at ¥1 billion or more, excluding agriculture, forestry, finance and insurance and medicine.

### **Date of Survey**

June 25, 2004. Most of the responses to the questionnaire were obtained in June.

### **Contents of the Survey**

- (i) Actual capital spending in FY2003 and planned capital spending for FY2004 and FY2005
- (ii) Details of individual construction projects for each of the above years
- (iii) Actual revenue and expenditure in FY2003 and estimated revenue and expenditure for FY2004
- (iv) Investment motives in FY2003 and FY2004
- (v) Land investment in FY2003, FY2004 and FY2005
- (vi) Capital spending abroad for FY2003 and FY2004
- (vii) Information technology investment in FY2003 and FY2004
- (viii) Research & development expenditure in FY2003 and FY2004

### 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	3,663	2,840	77.5%
Investment-specific Classification	4,352	3,407	78.3%

### 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 the investment-specific classification is used in principle for the analysis of the amount and motives of capital spending, the principal business classification is adopted in other cases.

### Timing of the survey and years covered

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

Targeted FY Timing of survey	2001	2002	2003	2004	2005
August 2001	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	
June 2004			Actual	Plan for current FY	Plan for next FY

Note: From 2004, the survey is conducted in June and in November, and thereby, FY 2003 and 2004 are surveyed four times

### **About the Ancillary Surveys**

A description follows of the ancillary surveys carried out as part of the DBJ Capital Spending Survey. The companies surveyed and survey date are the same as for the survey on planned capital spending.

### (1) Capital Spending Abroad

- Survey content: Actual capital spending abroad in FY2003 and planned capital spending abroad in FY2004 as given in consolidated accounts (or, in the case of companies that do not produce consolidated accounts, capital spending by the company itself plus those overseas subsidiaries of which it owns at least 50% [including indirectly]).
- Definition of capital spending: In principle, the listed value of tangible fixed assets including construction in progress (before deducting sales, losses, and depreciation).

Note: Starting this year the survey content has been changed (previously it asked about capital spending by the company in question and its

overseas subsidiaries [i.e., any subsidiary of which it owns at least 10% of the shares]). The geographical classification has also been partially altered ("US" has been replaced by "North America" and "EU" by "Europe").

### (2) Information Technology Investment

- Survey content: Actual IT investment in FY2003 and planned IT investment in FY2004 as given in non-consolidated accounts.
- Definition of IT investment: Investment designed to streamline the company's own operations and boost its productivity (computers and peripherals, installation of communication networks, software development, etc.; the exact definition follows that used by the individual company in-house and in the materials it releases).
- Survey items: There are four survey items:
   "tangible fixed assets," "intangible fixed assets and investments" (software development expenditures and the like that are listed as assets rather than expensed), "lease contracts" (the value of new leases signed, rather than

lease charges for the current fiscal year), and "other expensed items" (i.e., expensed software acquisition costs [including development costs], plus PCs and office equipment treated as equipment expenses, but excluding expendable supplies such as floppy disks).

### (3) Research & Development Expenditure

- Survey content: Actual R&D expenditure in FY2003 and planned R&D expenditure in FY2004 as given in non-consolidated accounts.
- Definition of R&D expenditure: All costs related to research and development including personnel costs, cost of raw materials, depreciation expenses for fixed assets, and allocated overhead (the exact definition follows that used by the individual company in-house and in the materials it releases).

### III Survey Results

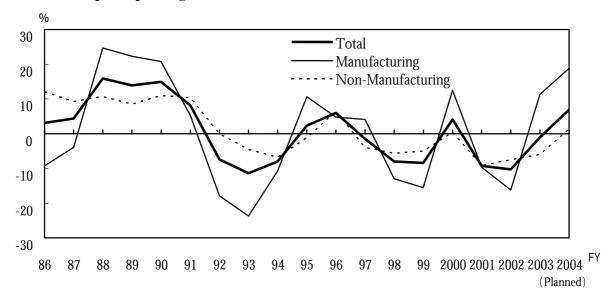
### 1. Overall Condition

### **Capital Spending**

		Y2003 (Actu (2,605 firms	<i>'</i>		FY2004 (Planned ) (2,840 firms)			FY2005 (Planned ) (1,430 firms)		
	Growth					Growth		Grow		
	FY2002	FY2003	Rate (%)	FY2003	FY2004	Rate (%)	FY2004	FY2005	Rate (%)	
	Actual	Actual	2003/2002	Actual	Planned	2004/2003	Planned	Planned	2005/2004	
Total	18,829.0	18,624.7	-1.1	19,367.4	20,704.0	6.9	8,001.4	7,393.7	-7.6	
Manufacturing	5,359.8	5,967.6	11.3	6,223.5	7,394.5	18.8	1,485.7	1,368.5	-7.9	
Non-Manufacturing	13,469.2	12,657.1	-6.0	13,143.9	13,309.4	1.3	6,515.8	6,025.2	-7.5	

Note: Monetary amounts are in billion yen.

### **Growth in Capital Spending**



Note: Actual data for August until FY2002.

Note: Comparison with the previous survey (revision rate) had been analyzed so far, but it is not included this time, due to the change in date of survey.

### (1) Actual Capital Spending for FY2003

Actual capital spending for FY2003 recovered to draw almost even with that of the previous fiscal year (down 1.1%, all figures are based on construction). It decreased for the third consecutive year in the non-manufacturing sector (down 6.0%) but increased for the first time in three years in the manufacturing sector (up 11.3%). Actual capital spending grew in many manufacturing industries, led by that for electric machinery, but decreased in all non-manufacturing industries other than services, wholesale & retail, and gas.

### (2) Planned Capital Spending for FY2004

Planned domestic capital spending for FY2004 showed a second consecutive year of double-digit increase in the manufacturing sector for the first time in the post-bubble period and a slight increase in the non-manufacturing sector, leading to an overall increase (up 6.9%).

### **Manufacturing Sector**

In the manufacturing sector, planned capital spending increased substantially in most industries (up 18.8% overall), including electric machinery and automobiles, which occupy large parts. In electric machinery, positive investments are scheduled for devices such as semiconductors and flat panel displays, reflecting an expansion in their application, mainly in digital home electronics and automobiles. In automobiles, investments for the production of new models and for new environment- and safety-related technologies and products will show an increase at a double-digit pace. These investments will have ripple effects on their related sectors, and substantial increases in investments are planned in precision machinery, non-ferrous metals, ceramics & glass, cement, and chemicals. Increases in each industry will be contributed to also by recycling-related investment in ceramics & glass, cement, and non-ferrous metals; by targeting construction of product chains in petrochemicals (investment for diversification of raw materials and strengthening of intermediate material businesses); and by investment for production increases in general machinery. Spending will turn up also in pulp & paper, petroleum, and food & beverages, mainly due to

implementation of environmental measures.

### **Non-Manufacturing Sector**

In the non-manufacturing sector, planned capital spending turned up (slightly, up 1.3%) for the first time in four years. It decreased in electric power, where investments for projects by independent power producers passed their peaks, in telecommunications & information, where large investments in information services and broadcasting abated, and in real estate, which saw the completion of large-scale urban development projects, but increased in retail, due to accelerated establishment of new outlets, in leasing, which benefited from positive investments in manufacturing, and in transportation, which was led by an expansion in logistics- and airport-related investment.

# **Profits and Ratio of Capital Spending to Cash Flow**

Projected revenues for FY2004 indicated a rise of 2.0%, which means a slight recovery from the previous year, when revenue stood almost unchanged from a year earlier. Profits are slated to increase in both manufacturing and non-manufacturing. Profits for all industries will record a healthy increase of 8.6%, although this represents a slowdown from the 15.2% rise in the previous year.

The ratio of capital spending to cash flow (net income plus depreciation expense) will be substantially lower than 100%—according to planned investment for FY2004, 61.8% in the manufacturing sector and 81.4% in the non-manufacturing sector. However, the ratio of capital spending to depreciation expense in the manufacturing sector hit bottom in FY2002 and showed signs of an upturn, and that for FY2004 will record the third highest level (116.5%) in the last ten years. In non-manufacturing sector, the size of negative growth in the ratio will narrow. The ratio of firms that plan capital spending at a level well above projected depreciation expense will rise. More and more firms began turning from an asset-reduction strategy to one of aggressive investment, mainly in the manufacturing sector, while continuing to invest selectively with an emphasis on investment efficiency.

### **Investment Motives**

Looking at planned investment for FY2004 in the manufacturing sector, three motives stand out. Product development and upgrading and research and development will be the reasons for increases in many industries, including the electric machinery and transportation machinery industries, with the former reaching its highest level since the investment motive categories were revised in 1986. The third, expansion of production capacity, although decreasing in overall share, will increase in absolute amount. These three combined will account for about 70% of the capital spending increase in the manufacturing sector.

### **Land Investment**

Planned land investment for FY2004 was substantially lower in both the manufacturing and non-manufacturing sectors, down a massive 52.2% from the previous year. The ratio of land investment to capital spending will be at a low level (2.1%). However, land investment tends to be subject to upward revision after the planning stage.

### (3) Ancillary Surveys for FY2004 Capital Spending Abroad

Capital spending abroad (on a consolidated-basis) in FY2004 is slated to increase 7.3% overall. In the manufacturing sector, which accounts for more than 80% of the total capital spending abroad, such investment will rise 7.8%—in most industries, both domestic and overseas capital spending will expand.

As for the manufacturing sector's investment by region, in North America and Europe it will decrease, but in Asia and other areas there will be double-digit increases. Growth in investment will be particularly high in China. The overseas capital spending ratio (capital spending abroad divided by domestic capital spending) will decline from 52.3% in FY2003 to 48.3% in FY2004, because growth in domestic capital spending will be higher.

### **Information Technology Investment**

Looking at planned information technology in-

vestment for FY2004 (on the user side), an overall increase (up 15.2%) is expected for the first time in three years—up 11.2% in manufacturing and up 18.2% in non-manufacturing. Planned information technology investment showed steady growth for the second consecutive year in the manufacturing sector, and in the non-manufacturing sector, where a broad range of industries showed increases, it rose at a double-digit (percent) pace.

### Research & Development Expenditure

Planned research & development expenditure for FY2004 was up from a year earlier in both the manufacturing sector (up 5.5%) and the non-manufacturing sector (up 5.5%). In the manufacturing sector, most industries, including electric machinery (digital equipment and electronic-devices) and transportation machinery (environment- and safety-related technologies), which occupy large parts, will expand both capital spending and research & development expenditure.

### (4) Highlights of This Survey (as regards Planned Capital Spending for FY2004)

One of the features of the current recovery phase of investment is that capital spending in electric machinery will be supported not by a specific field but by original technologies and products that are applied in areas ranging widely from end products to devices. Along with these investments, automobile-related investments will also be a major contributor to recovery in overall capital investment.

In other industries many firms will benefit from growth in foreign demand, mainly that of China, and invest to strengthen their business foundations, mainly in new technologies and products and for environmental measures.

Looking at the motives for planned investment, three stand out: product development and upgrading, research and development, and expansion of production capacity (together accounting for about 70% of the planned increase in the manufacturing sector's capital spending). Investment for product development and upgrading is particularly significant; it will be its largest since 1986.

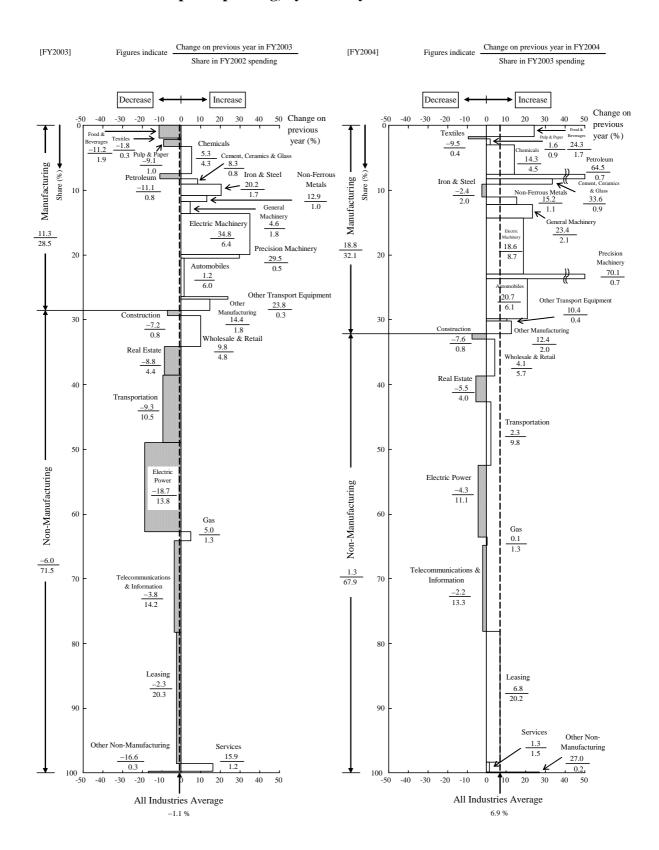
Planned capital spending in the

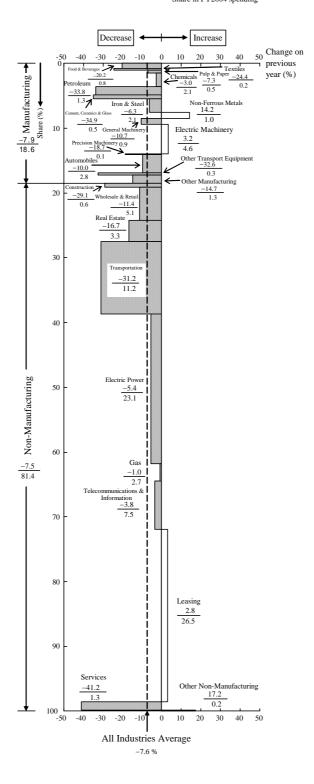
non-manufacturing sector showed only a slight increase and no strength, in contrast to that in the manufacturing sector; however, whether the overall investment expansion will impact it in the future might become clear.

### (5) Planned Capital Spending for FY2005

Planned capital spending for FY2005 shows an overall decline of 7.6%, although uncertainty surrounding many investment projects remains in both the manufacturing (down 7.9%) and non-manufacturing sectors (down 7.5%) as fewer firms responded to the questions regarding their plans for the year.

### 2. Characteristics of Capital Spending, by Industry





# Trends in Capital Spending for FY2004, by Industry

Trends in capital spending in main industries are described below. The figures in parentheses ( ) indicate changes in the rate of growth in capital spending for each industry between FY2003 and FY2004. The figures to the right show the percentage of total planned spending for FY2004 accounted for by the industry in question.

### Manufacturing

Food & Beverages

(-11.2% 24.3%) 2.0%

The beverages sector, which accounts for a large share of spending, will invest in new and expanded production lines as well as in streamlining efficiency. There will also be a major increase in spending on distribution. Spending on BSE measures will take off in the fodder sector, with many companies in other fields also boosting investment. The upshot: a substantial upturn in spending in the industry as a whole.

### Pulp & Paper

(-9.1% 1.6%) 0.8%

There will be continued investment in power-generating boilers fueled by biomass and used plastic, along with increased spending on other environmental measures and on rationalizing operations. This will result in a slight upturn in spending.

### **Chemicals**

(5.3% 14.3%) 4.8%

Pharmaceuticals will experience a downturn with the abatement of investment in overhauling production systems and constructing facilities for producing new drugs. Conversely, the petrochemicals sector will boost spending on construction of product chains (e.g., diversifying raw materials, enhancing facilities for monomer products and other intermediate materials); investment in electronic materials, including components for mobile phones and flat panel displays, will likewise gather further steam. The industry as a whole will thus see a double-digit increase.

### Petroleum

(-11.1% 64.5%) 1.1%

There will be a substantial upswing as spending on desulfurization (sulfur content of below 10 ppm) at refineries rises ahead of further tightening of environmental regulations.

### Cement, Ceramics & Glass

(8.3% 33.6%) 1.1%

In cement, investment will rise due to increased spending on recycling and the like. There will also be a wave of investment in substrate glass for flat panel displays, for which there is brisk demand in the digital home electronics market, in ceramic components for automobiles, and in residential appliances and fixtures for rebuilding. The cement, ceramics & glass sector will thus experience a substantial overall increase.

### Iron & Steel

(20.2% -2.4%) 1.8%

Despite some spending on expanding production capacity, investment will drop slightly now that major overhauls of blast furnaces are past their peak.

### Non-Ferrous Metals

(12.9% 15.2%) 1.2%

Although the industry continues to rein in spending on optical parts and fiber, there will be an ongoing surge in investment in boosting production of 300 mm silicon wafers. There will also be spending on electronic materials and automobile components, as well as on recycling. The upshot will be an overall increase for the second year in a row.

### **General Machinery**

(4.6% 23.4%) 2.4%

Spending on office equipment will rise thanks to expansion of research facilities and production plants. There will also be increased investment in electrical machinery, in machine tools and roller bearings, for which demand is brisk in the automobile sector, and construction equipment, for which there is heavy demand overseas. Investment will thus rise substantially overall.

### Electric Machinery

(34.8% 18.6%) 9.6%

The electronic devices sector remains the driving force behind spending. For example, in the semiconductor field, investment will continue on 300 mm water fabs as their applications expand in such areas as mobile phones, digital home electronics, and automobiles. Likewise, there will be brisk spending on flat panel displays. What with investment in developing R&D hubs and overhauling operations as well, the industry as a whole will experience a double-digit increase for the second year in a row.

### **Precision Machinery**

(29.5% 70.1%) 1.1%

Spending on new products and research and development facilities will rise in the semiconductor manufacturing equipment field. Investment in bolstering digital camera production will also remain brisk. There will thus be a substantial rise for the second year in a row.

### Automobiles

(1.2% 20.7%) 6.9%

Buoy along by high profits, car manufacturers will expand investment in new models and in overhauling their production lines. Parts manufacturers likewise have far more ambitious spending plans than last year's, especially in the areas of work on new products and streamlining production efficiency. Overall, efforts to commercialize new technologies in the environmental and safety fields are picking up steam, which will result in the fourth consecutive year of increased spending.

### Non-Manufacturing

### Construction

(-7.2% -7.6%) 0.7%

The industry will experience a decline as general contractors continue to curb capital spending, which can also be expected to dip in reaction to the acquisition of assets last year.

### Wholesale & Retail

(9.8% 4.1%) 5.5%

Despite investment in distribution centers and

other commercial facilities, the wholesale sector will experience a downturn in reaction to the building of new company headquarters and so forth last year. The retail sector will experience the third year of increases in a row as supermarkets continue to boost spending on new stores; certain department stores and home centers are also planning to invest in opening or remodeling locations. The wholesale & retail sector as a whole will likewise experience its third year of increases in a row.

### Real Estate

(-8.8% -5.5%) 3.6%

The decline will continue as major spending abates, despite construction of new commercial facilities and projected redevelopment projects in the Tokyo metropolitan area.

### **Transportation**

(-9.3% 2.3%) 9.3%

Railways will experience an ongoing decline as construction work on new train lines in the To-kyo metropolitan area eases up. Conversely, there will be a substantial rise in spending on airport facilities; spending will also increase in the distribution field. The transportation sector as a whole will therefore see an upswing in capital spending.

### Electric Power

(-18.7% 4.3%) 9.9%

The industry will experience its eleventh straight year of decline as major spending by IPPs (Independent Power Producers) eases up and work abates on expanding thermal power sources by general electricity utilities.

### Gas

(5.0% 0.1%) 1.3%

The heat supply sector will experience a steep decline in reaction to last year's investment in overhauling operations, but this will be offset by an increase in spending on commercial facilities in the city gas sector. Capital spending will thus remain level overall.

### Telecommunications & Information

(-3.8% -2.2%) 12.2%

Telecommunications will witness an upswing with continued brisk spending on the third-generation mobile phone and on expanding the optical fiber network, despite a decline in investment in the second-generation mobile phone and fixed-line phone operations. Information services and broadcasting will experience a decline now that spending on terrestrial digital broadcasting in the three big broadcast markets is past its peak. On balance, telecommunications & information as a whole will experience its fourth consecutive year of decline.

### Leasing

(-2.3% 6.8%) 20.2%

Capital spending will recover to increase for the first time in three years.

### Services

(15.9% 1.3%) 1.4%

There will be a slight upswing fueled by spending on recycling waste, despite a dip in reaction to last year's wave of investment in the amusement sector.

# 3. Ratio of Capital Spending to Cash Flow, by Principal Business Sector

Projected FY2004 revenues for all industries are up 2.0%, which represents a slight recovery from last year, when revenue stood almost unchanged. Both the manufacturing and non-manufacturing

sectors are forecasting increased sales and profits. Profits for all industries will record a healthy increase of 8.6%, although this represents a slowdown from the 15.4% rise of last year. Return on Sales stand at 4.9% for all industries (5.4% for manufacturing and 4.3% for non-manufacturing), a rise of 0.3 percentage point.

The ratio of capital spending to cash flow (net income plus depreciation expense) will, according to planned investment for FY2004, stand at 61.8% in the manufacturing sector and 81.4% in the non-manufacturing sector, both substantially lower than 100%. On the other hand, the ratio of capital spending to depreciation expense as projected for the manufacturing sector stands at 116.5%, its third highest level in the last ten years; the figure has been climbing since hitting bottom in FY2002 both in the projected and finalized numbers. In the non-manufacturing sector, too, the ratio displays a less sizable decline than before. In actual fact, the percentage of companies stating that their capital spending will exceed their depreciation expense rose in both FY2003 and FY2004; in the manufacturing sector in particular, over 50% of companies plan to engage in capital spending at a level above their depreciation expense in FY2004.

Thus more and more firms, particularly in the manufacturing sector, are turning from an asset-reduction strategy to one of aggressive investment, even as they maintain their basic stance of cutting back on interest-bearing debt and investing selectively with an emphasis on investment efficiency.

**Ratio of Capital Spending to Cash Flow** 

	Revenue Growth (1,857 (2,140 firms) firms)			ordinary) owth		Spending/ Flow	Capital Spending/ Depreciation Expenses	
	FY2003 Actual	FY2004 Planned	FY2003 Actual	FY2004 Planned	FY2003 Actual	FY2004 Planned	FY2003 Actual	FY2004 Planned
Total	0.3	2.0	15.4	8.6	74.4	72.9	105.3	111.1
Manufacturing	1.8	2.2	20.2	8.1	55.7	61.8	98.9	116.5
Non-Manufacturing	-1.1	1.8	10.4	9.2	88.6	81.4	108.6	108.1

*Notes*: 1. Figures are given as percentages.

2. Capital Spending/Cash Flow=[capital spending/(net income+depreciation expenses)]\*100.

### Trend of Ratio of Capital Spending to Cash Flow in June (August) Survey

	Proj	jected ratio for	r current fiscal	year	Actual ratio in previous fiscal year						
FY	G 14 4	m . 1			0 M d	m . 1					
	Survey Month	Total	Manu- facturing	Non- Manufacturing	Survey Month	Total	Manu- facturing	Non- Manufacturing			
1991	Aug. 1991	129.0	102.5	151.6	Aug. 1992	131.9	112.8	150.3			
1992	Aug. 1992	128.1	101.3	152.4	Aug. 1993	130.9	105.7	148.5			
1993	Aug. 1993	115.6	90.5	131.4	Aug. 1994	128.5	90.4	155.1			
1994	Aug. 1994	118.0	80.8	144.2	Aug. 1995	120.7	79.9	147.7			
1995	Aug. 1995	114.1	78.7	138.3	Aug. 1996	111.1	77.8	138.8			
1996	Aug. 1996	112.4	79.1	139.4	Aug. 1997	114.4	80.4	139.7			
1997	Aug. 1997	107.9	78.6	130.1	Aug. 1998	114.7	84.4	145.3			
1998	Aug. 1998	104.0	76.8	129.8	Aug. 1999	123.9	95.3	145.0			
1999	Aug. 1999	91.6	60.6	116.6	Aug. 2000	111.1	77.1	138.1			
2000	Aug. 2000	96.4	67.3	120.7	Aug. 2001	111.5	84.0	128.6			
2001	Aug. 2001	90.8	75.3	100.2	Aug. 2002	116.6	126.7	112.3			
2002	Aug. 2002	83.6	61.6	99.1	Aug. 2003	90.5	68.8	104.0			
2003	Aug. 2003	75.8	60.2	86.4	Jun. 2004	74.4	55.7	88.6			
2004	Jun. 2004	72.9	61.8	81.4							

### Trend of Ratio of Capital Spending to Depreciation Expense in June (August) Survey

	Pro	jected ratio for	r current fiscal	year	Actual ratio in previous fiscal year						
FY	Survey Month	Total			Survey Month	Total					
	Survey Monui	Total	Manu-	Non-	Survey Month	Total	Manu-	Non-			
			facturing	Manufacturing			facturing	Manufacturing			
1991	Aug. 1991	178.7	158.7	192.7	Aug. 1992	184.1	170.9	191.0			
1992	Aug. 1992	168.9	144.6	188.1	Aug. 1993	164.3	140.1	179.7			
1993	Aug. 1993	142.2	120.7	154.1	Aug. 1994	149.2	110.7	173.9			
1994	Aug. 1994	143.4	106.9	165.8	Aug. 1995	138.9	100.1	161.2			
1995	Aug. 1995	141.3	109.3	159.5	Aug. 1996	139.0	113.7	155.1			
1996	Aug. 1996	145.2	119.0	161.6	Aug. 1997	141.3	116.1	155.9			
1997	Aug. 1997	140.2	120.5	151.5	Aug. 1998	137.4	118.9	151.3			
1998	Aug. 1998	132.2	109.9	149.1	Aug. 1999	125.8	105.0	139.1			
1999	Aug. 1999	113.6	80.8	136.9	Aug. 2000	117.5	85.7	140.6			
2000	Aug. 2000	124.0	94.6	144.8	Aug. 2001	124.6	101.3	137.5			
2001	Aug. 2001	118.6	107.3	124.6	Aug. 2002	109.0	96.8	116.1			
2002	Aug. 2002	113.3	94.7	123.9	Aug. 2003	101.1	86.9	108.4			
2003	Aug. 2003	109.0	102.4	112.4	Jun. 2004	105.3	98.9	108.6			
2004	Jun. 2004	111.1	116.5	108.1							

### Percentage of Companies with Capital Spending Exceeding Depreciation Expense

	Project	Projected percentage for current fiscal year					Actual ratio in previous fiscal year					
FY	C Maril	T 1				S M	T 1					
	Survey Month	Total	Manu	Non-	Survey Month		Total	Manu-	Non-			
			facturing	Manufacturing				facturing	Manufacturing			
2002						Aug.2003	34.1	28.5	38.0			
2003	Aug. 2003	38.2	39.3	37.4		Jun. 2004	36.8	35.7	37.7			
2004	Jun. 2004	44.3	52.1	38.4								

*Notes*: 1. Figures are given as percentages.

2. Shaded figures represent results of the present survey.

### 4. Investment Motives

### (1) Investment Motives in FY2004

We turn now to investment motives in FY2004 (based on figures for the 2,382 firms that replied for both FY2003 and FY2004). In all industries, level of spending will rise in all categories; "product development and upgrading," "research and development," and "maintenance and repair" will display particularly dramatic increases and thereby claim a larger percentage share. In the manufacturing sector, "product development and upgrading" and "research and development" show the largest increase in share; in the non-manufacturing sector, "maintenance and repair" do so.

In the manufacturing sector, investment will rise in all categories, but only "product development and upgrading" and "research and development" will gain share; all other categories will experience a decline. "Product development and upgrading" will reach its highest percentage level since the list of choices was revised in FY1986.

In the non-manufacturing sector, investment will decline in the categories of "expansion of production capacity," "others," and "rationalization and labor saving." "Expansion of production capacity" and "rationalization and labor saving" will also decline in their percentage share; conversely, "maintenance and repair" will rise. In all other categories, level of spending will rise, but

their share will remain roughly unchanged.

### (2) Investment Motives in the Manufacturing Sector: Materials versus Processing & Assembly

Consider the respective shares of different investment motives in the manufacturing sector in FY2004. Investment designed to directly boost sales account for a roughly 50% share -- "expansion of production capacity" (28.3%) and "product development and upgrading" (19.3%). Plans earmark a further 10.5% for "research and development," which is designed to boost future profitability; that figure is up 45.2% over last year, the largest increase recorded. Although "expansion of production capacity" will have a lower share than in FY2003, the level of spending in that category will rise. Together, these three categories will account for some 70% of the increase in spending in the manufacturing sector.

Next we examine investment motives in the manufacturing sector as subdivided into materials versus processing & assembly. In the materials subsector, "maintenance and repair" and "expansion of production capacity" rank top in terms of share; in the processing & assembly sector, "expansion of production capacity" and "product development and upgrading" rank top.

### **Investment Motives**

	To	otal			Manı	ufacturing			Non-Man	Non-Manufacturing	
	(2,382	firms)			Materials			sing & mbly			
	FY2003 Actual	FY2004 Planned									
Expansion of Production Capacity	38.4	36.5	29.3	28.3	25.6	27.8	30.8	28.7	42.7	41.1	
Product Development and Upgrading	8.1	9.3	17.8	19.3	9.0	8.6	22.4	24.3	3.5	3.6	
Rationalization and Labor Saving	6.9	7.1	12.7	12.1	15.3	16.0	11.6	10.8	4.2	4.2	
Research and Development	3.5	4.6	8.7	10.5	6.8	7.4	9.9	12.4	1.1	1.2	
Maintenance and Repairs	18.0	18.7	18.1	17.3	30.8	28.5	12.1	12.1	17.9	19.6	
Others	25.1	23.9	13.4	12.5	12.6	11.8	13.2	11.8	30.6	30.3	
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.

### **Materials**

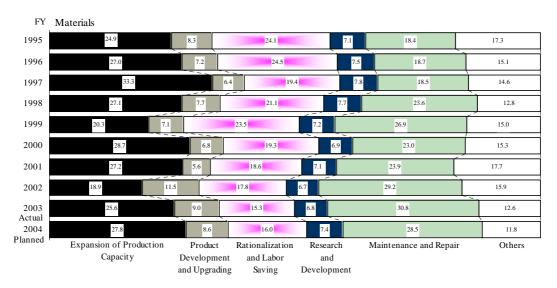
In FY2004 "expansion of production capacity" will gain share compared to FY2003, a rise primarily due to chemicals, cement, ceramics & glass, and iron & steel; conversely, "maintenance and repair" will decline. In the case of chemicals and iron & steel, it seems that firms are installing production capacity in order to cater to strong demand as overseas demand surges, most notably in China.

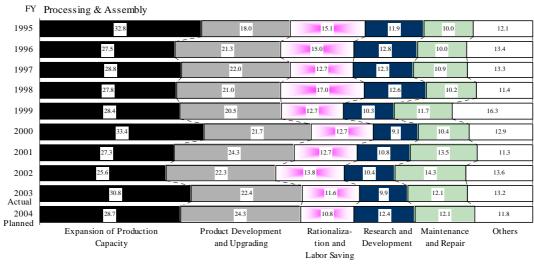
### **Processing & Assembly**

In the processing & assembly subsector, "product development and upgrading" and "research and development" will both see an increase in share from FY2003 to 2004 in virtually all industries, including transportation machinery and electric machinery.

"Expansion of production capacity," which made a large gain in share between FY2002 and 2003, is expected to lose share in FY2004, since spending will rise in monetary terms, but the increase is slight in relative terms.

### **Long-term Trend of Investment Motives**





Notes: 1. Figures are given as percentages.

- 2. Materials: Textiles, Pulp & Paper, Chemicals, Cement, Ceramics & Glass, Iron & Steel, Non-Ferrous metals.
- 3. Processing & Assembly: Food & Beverages, General Machinery, Electric Machinery, Precision Machinery, Other Transport Equipment, Other Manufacturing.

### Land Investment, by Principal **Business Sector**

### (1) Actual Land Investment for FY2003

Actual land investment for FY2003 (based on figures for the 1,766 firms that replied for both FY2002 and FY2003) was down 13.2% compared with the previous year, the seventh consecutive annual decline. The manufacturing sector recorded a substantial decline of 20.6%, most notably in transportation machinery and food & beverages. The non-manufacturing sector recorded a drop of 11.4% as the transport industry completed investment in land for airport construction, while telecommunications & information also experienced a considerable decline; there were however increases in electric power and services. Land investment's percentage of total capital spending has been in steady decline and now stands at 4.6% (2.9% in manufacturing, 5.3% in non-manufacturing).

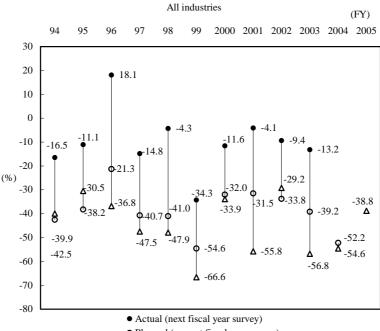
### (2) Planned Land Investment for FY2004

Planned land investment for FY2004 (based on figures for the 2,275 firms that replied for both FY2003 and FY2004) is down 52.2%, since investment by the real estate industry in the Tokyo metropolitan area is now past its peak, plus the transportation industry is cutting back investment for railways. Land investment accounts for 2.1% of total planned capital spending for FY2004. Note however that figures on land investment tend to be revised upward as spending moves from the planning stage to implementation (previous year's survey [planned] -- survey for the current year [planned] -- next year's survey [actual]).

### (3) Planned Land Investment for FY2005

Planned land investment for FY2005 (based on figures for the 1,271 firms that replied for both FY2004 and FY2005) is down 38.8%, though there are even more uncertainties than in the case of planned investment for FY2004. Land investment accounts for 1.4% of total planned capital spending for FY2005.

### **Long-term Trend of Land Investment by Timing of Survey**



- O Planned (current fiscal year survey)
- △ Planned (previous fiscal year survey)

Trends in Land Investment, by Principal Business Sector

	Investmen	nt Amount	Growth	Investmen	nt Amount	Growth	Investmen	nt Amount	Growth
_			Rate (%)			Rate (%)			Rate (%)
	FY2002	FY2003	2003/2002	FY2003	FY2004	2004/2003	FY2004	FY2005	2005/2004
•	(1,766	firms)	-	(2,275	firms)		(1,271	firms)	_
Total Investment	11,699.9	11,389.4	-2.7	13,508.1	14,282.4	5.7	6,515.1	6,013.1	-7.7
Investment excluding Land	11,095.7	10,865.2	-2.1	12,883.2	13,983.9	8.5	6,372.8	5,925.9	-7.0
Investment in Land	604.1	524.2	-13.2	624.9	298.6	-52.2	142.4	87.2	-38.8
Share of Land (%)	5.2	4.6		4.6	2.1		2.2	1.4	
Manufacturing	3,159.1	3,350.0	6.0	4,161.9	4,991.8	19.9	1,375.6	1,272.5	-7.5
Investment excluding Land	3,038.3	3,254.1	7.1	4,030.6	4,923.7	22.2	1,350.8	1,253.9	-7.2
Investment in Land	120.8	95.9	-20.6	131.4	68.1	-48.2	24.9	18.7	-25.0
Share of Land (%)	3.8	2.9		3.2	1.4		1.8	1.5	
Non-Manufacturing	8,540.8	8,039.3	-5.9	9,346.1	9,290.6	-0.6	5,139.5	4,740.5	-7.8
Investment excluding Land	8,057.4	7,611.1	-5.5	8,852.7	9,060.2	2.3	5,022.0	4,672.0	-7.0
Investment in Land	483.3	428.3	-11.4	493.5	230.5	-53.3	117.5	68.5	-41.7
Share of Land (%)	5.7	5.3		5.3	2.5		2.3	1.4	

Note: Monetary amounts are in billion yen.

**Long-term Trend in Ratio of Land Investment to Total Capital Spending** 

FY	Timing of Survey	Total			
1.1	Tilling of Survey	Total	Manufacturing	Non-Manufacturing	
1994	Aug. 1995	6.4	6.0	6.6	
1995	Aug. 1996	5.5	4.6	6.0	
1996	Aug. 1997	5.9	4.4	6.7	
1997	Aug. 1998	5.8	5.4	6.0	
1998	Aug. 1999	8.5	5.3	9.9	
1999	Aug. 2000	6.3	5.9	6.5	
2000	Aug. 2001	5.8	3.5	6.9	
2001	Aug. 2002	6.4	4.7	7.0	
2002	Aug. 2003	5.9	4.1	6.6	
2003 ( Actual )	Jun. 2004	4.6	2.9	5.3	
2004 ( Planned )	Jun. 2004	2.1	1.4	2.5	
2005 ( Planned )	Jun. 2004	1.4	1.5	1.4	

Notes: 1. Figures are given as percentages.

- 2. Figures for FY2003 are for those firms that replied for both FY2002 and FY2003 (actual).
- 3. Figures for FY2004 are for those firms that replied for both FY2003 and FY2004 (planned).
- 4. Figures for FY2005 are for those firms that replied for both FY2004 and FY2005 (planned).

# 6. Capital Spending Abroad, by Principal Business Sector

Capital spending abroad by all industries will rise 7.3% from ¥1,823.4 billion in FY2003 to ¥1,956.6 billion in FY2004 (based on figures for the 1,559 firms that replied for both FY2003 and FY2004).

The manufacturing sector accounts for 86.5% of planned capital spending abroad in FY2004. Its spending will increase 7.8%, fueled by investment in expanding production capacity and constructing new plants; that includes in Asia (by other manufacturing industries and the transportation machinery industry) and in North America (by other manufacturing industries and the electric machinery industry). Capital spending abroad in the non-manufacturing sector will rise 4.3% due to aggressive investment by the transportation industry in shipbuilding; this is despite declines in the electric power industry, whose series of large-scale development projects in Asia has run its course, and the real estate industry,

whose investment in North American real estate has eased off.

In regional terms, a decline of 4.5% is projected for North America, where local plants in the transportation machinery industry are coming on line; likewise, a decline of 2.4% is projected for Europe, where the chemical industry's investment in expansion of production capacity is easing off. Conversely, investment is slated to rise by 11.5% in Asia, where the transportation machinery industry is investing in expansion of production capacity, and by 47.4% in other regions, where the transportation industry is investing in shipbuilding.

The overseas capital spending ratio (capital spending abroad / domestic capital spending) for manufacturing firms that invest overseas will decline from 52.3% in FY2003 to 48.3% in FY2004, since the increase in domestic capital spending (16.8%) will be greater than that in capital spending abroad (7.8%).

### **Capital Spending Abroad**

	Region —		Amo	unt		Change (%)
	Region	FY2003	Share (%)	FY2004	Share (%)	2004/2003
Capital Spend	l- Manufacturing	1,570.2	86.1	1,692.6	86.5	7.8
ing Abroad	Non-Manufacturing	253.3	13.9	264.0	13.5	4.3
	North America	671.5	36.8	641.2	32.8	-4.5
	Europe	227.9	12.5	222.5	11.4	-2.4
	Asia	749.2	41.1	835.3	42.7	11.5
	China	154.7	8.5	212.3	10.9	37.2
	Others	174.8	9.6	257.6	13.2	47.4
(1,559 firms)	Total	1,823.4	100.0	1,956.6	100.0	7.3

Notes: 1. Monetary amounts are in billion yen.

- 2. In the case of companies that produce consolidated financial statements, capital spending abroad is as given on their consolidated basis; in the case of companies that do not produce consolidated financial statements, capital spending abroad represents capital spending by the company itself plus those overseas subsidiaries of which it owns at least 50% (including indirectly).
- 3. The figure for capital spending in China represents the total amount of investment by those companies that stated that they would invest in Asia, plus provided a breakdown of that investment by country (into China and the rest of Asia).

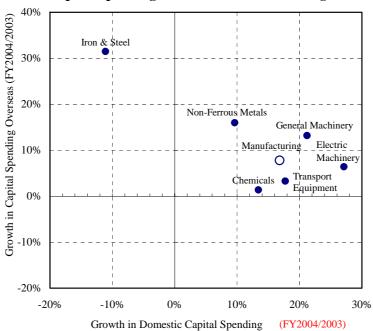
### Overseas Capital Spending Ratio in the Manufacturing Sector, by Sub-sector

_	FY2003 (Actual)	FY2004 (Planned)	Difference				
Overseas Capital Spending Ratio (%)	52.3	48.3	-4.0				
Materials	27.6	27.7	0.1				
Processing & Assembly	64.3	58.1	-6.2				
_	Amount	Amount	Change (%)				
Capital Spending Abroad	1,570.2	1,692.6	7.8				
Materials	232.4	248.5	6.9				
Processing & Assembly	1,307.2	1,418.4	8.5				
Domestic Capital Spending	3,002.9	3,506.1	16.8				
Materials	841.6	896.8	6.6				
Processing & Assembly	2,034.5	2,439.4	19.9				
Number of Manufacturers Responding	643 firms						
Timing of Survey		Jun. 2004					

Notes: 1. Monetary amounts are in billion yen.

- 2. Overseas Capital Spending Ratio = (capital spending overseas / domestic capital spending) \* 100.
- 3. Materials: Textiles, Pulp & Paper, Chemicals, Cement, Ceramics & Glass, Iron & Steel, Non-Ferrous Metals.
- 4. Processing & Assembly: Food & Beverages, General Machinery, Electric Machinery, Precision Machinery, Transport Equipment, Other Manufacturing.

# **Growth Rate of Domestic Capital Spending and Capital Spending Overseas in Manufacturing Industry**



*Note*: For the purpose of this graph, the three industries with the highest overseas capital spending ratio in FY2004 have been chosen from both the materials subsector and the processing & assembly subsector.

# 7. Information Technology Investment, by Principal Business Sector

### (1) Actual IT Investment in FY2003

Investment in information technology in FY2003 (based on figures for the 1,523 firms that replied for both FY2002 and FY2003) declined 5.7% in all industries. Although in the manufacturing sector it increased 8.5% over the previous year, a rate higher than that for capital spending as a whole, it experienced a downturn of 15.4% in the non-manufacturing sector. In the manufacturing sector, investment in information technology declined in chemicals and textiles but increased in electric machinery, iron & steel, and general machinery. In the non-manufacturing sector, investment declined in such industries as wholesale & retail and transportation.

replied for both FY2003 and FY2004) will take an upturn in the non-manufacturing sector, with a rise of 18.6%, and continue to climb in the manufacturing sector as well, with a rise of 11.2%. That translates into an overall increase of 15.2%, which is higher than the increase in total capital spending, as well as being the first rise in three years. In the manufacturing sector, investment will rise in such industries as electric machinery and transport equipment as systems are brought in to manage supply chains and bolster development capacity. product non-manufacturing sector, investment will rise in such industries as electric power & gas, wholesale & retail, and transportation as existing systems are integrated and new in-store information systems are installed with the goal of cutting operating costs and boosting sales.

### (2) Planned IT investment for FY2004

In FY2004, investment in information technology (based on figures for the 1,816 firms that

### Overview of IT Investment (FY2003, Actual)

	Amount of I	Γ Investment	Change in IT Investment	Change in Capital Spending		Investment (6)	IT Investment/ Capital Spending (%)		
(1,523 firms)	FY2002 Actual	FY2003 Actual	(%) 2003/2002	(%) 2003/2002	FY2002 Actual	FY2003 Actual	FY2002 Actual	FY2003 Actual	
Total	969.0	913.5	-5.7	-2.3	100.0	100.0	10.6	10.2	
Manufacturing	392.5	425.8	8.5	7.5	40.5	46.6	17.9	18.1	
Non-manufacturing	576.5	487.7	-15.4	-5.4	59.5	53.4	8.3	7.4	

### Overview of IT Investment (FY2004, Planned)

	Amount of IT Investment		Change in IT Change in Investment Capital Spending			Investment (6)	IT Investment/ Capital Spending (%)		
(1,816 firms)	FY2003 Actual	FY2004 Planned	(%) 2004/2003	(%) 2004/2003	FY2003 Actual	FY2004 Planned	FY2003 Actual	FY2004 Planned	
Total	996.3	1147.5	15.2	4.2	100.0	100.0	9.3	10.2	
Manufacturing	459.6	511.1	11.2	17.2	46.1	44.5	16.8	15.9	
Non-manufacturing	536.7	636.4	18.6	-0.2	53.9	55.5	6.7	8.0	

Notes: 1. Monetary amounts are in billion yen.

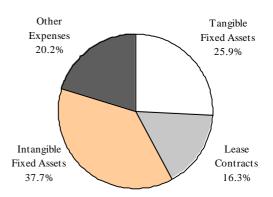
- 2. IT investment represents spending recognized as such by the responding firms.
- 3. Change in capital spending in this chart only covers those firms that gave responses regarding IT investment.

### **Breakdown of IT Investment**

# Breakdown of IT Investment (FY2003, Actual)

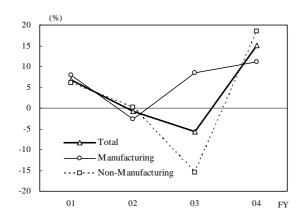
# Other Expenses 22.2% Intangible Fixed Lease Contracts 18.7%

# Breakdown of IT Investment (FY2004, Planned)

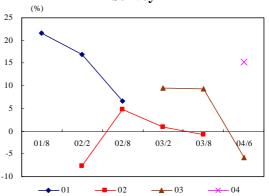


- Notes: 1. This breakdown is based on figures for the 1,816 firms that replied for both FY2003 and FY2004.
  - 2. Lease contracts: Value of new contracts for the relevant fiscal year.
  - 3. Other expenses: Software acquisition expenses, etc., to be charged off.

### **Growth Rate of IT Investment**



# Trend of IT Investment by the Timing of Survey



# 8. Research & Development Expenditure, by Principal Business Sector

### (1) Actual R&D Expenditure in FY2003

Expenditures on research & development (based on figures for the 1,571 firms that replied for both FY2002 and FY2003) rose 3.3% over the previous year. The manufacturing sector, which accounted for over 90% of the total, chalked up an increase of 4.4%, with electric machinery (up 5.8%), transport equipment (up 6.4%), and general machinery (up 3.4%) leading the way. Conversely, R&D spending remained virtually unchanged (up 0.2%) in the chemicals industry, which includes pharmaceuticals with its many

R&D-oriented firms. Spending in the non-manufacturing sector, which accounted for less than 10% of the total, declined 7.7%; indeed, it fell across the board, most notably in telecommunications & information, where it was down 11.2%.

### (2) Planned R&D expenditure for FY2004

In FY2004, expenditures on research & development (based on figures for the 1,911 firms that replied for both FY2003 and FY2004) will continue to climb with an increase of 5.5%. In the manufacturing sector, spending will rise in virtually all industries for an overall increase of 5.5%. This increase will to a large extent be fueled by

electric machinery (up 6.4%) as development work accelerates on flat panel display devices and digital equipment; general machinery (up 10.1%); precision machinery (up 12.4%) as that industry develops more advanced semiconductor manufacturing equipment; and transport equipment (up 2.6%), which industry continues to spend on safety measures and development of environmentally sound technology. Large spending increases are also slated in chemicals

(up 5.2%), where the pharmaceuticals sector is strengthening the new drug development pipeline and advanced technology is being harnessed to develop high-function materials; and in food & beverages (up 7.0%), where industry plans R&D on biotechnology-derived pharmaceuticals. In the non-manufacturing sector, expenditures on R&D will take a 5.5% upturn, led by electric power and gas (up 7.5%).

Overview of R&D Expenditure (FY2003, Actual)

	R&D Expenditure		Change in Change diture R&D Capita Expenditure Spendir		Share of Expend (%	iture	R&D/Capital Spending (%)		
(1,571 firms)	FY2002 Actual	FY2003 Actual	(%) 2003/2002	(%) 2003/2002	FY2002 Actual	FY2003 Actual	FY2002 Actual	FY20003 Actual	
Total	5,991.0	6,187.1	3.3	-0.7	100.0	100.0	53.5	55.6	
Manufacturing	5,443.6	5,681.6	4.4	10.1	90.9	91.8	150.2	142.3	
Non-Manufacturing	547.5	505.5	-7.7	-5.9	9.1	8.2	7.2	7.1	

Notes: 1. Monetary amounts are in billion yen.

Overview of R&D Expenditure (FY2004, Planned)

	R&D Ex	penditure	Change in R&D Expenditure	Change in Capital Spending	Share of R&D Expenditure (%)		R&D/Capital Spending (%)	
(1,911 firms)	FY2003 Actual	FY2004 Planned	(%) 2004/2003	(%) 2004/2003	FY2003 Actual	FY2004 Planned	FY2003 Actual	FY20004 Planned
Total	5,611.8	5,919.1	5.5	6.8	100.0	100.0	51.4	50.8
Manufacturing	5,321.3	5,612.7	5.5	20.5	94.8	94.8	134.3	117.6
Non-manufacturing	290.5	306.4	5.5	-1.0	5.2	5.2	4.2	4.4

Notes: 1. Monetary amounts are in billion yen.

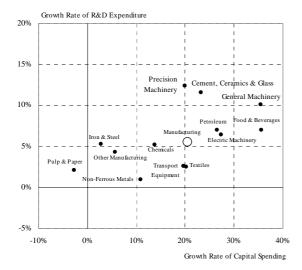
# Ratio of R&D Expenditure to Sales, for Firms Responding for Both FY2003 and FY2004

	Number of Firms	R&D Expenditure/Sales (%					
		FY2003 Actual	FY2004 Planned				
Manufacturing	780	5.1	5.2				

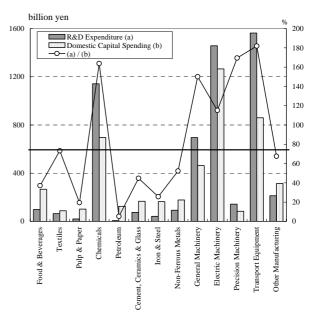
<sup>2.</sup> A total of 652 firms indicated R&D spending of zero for both FY2002 and 2003.

<sup>2.</sup> A total of 898 firms indicated R&D spending of zero for both FY2003 and 2004.

# Growth in Capital Spending and R&D Expenditure (FY2003-2004, Manufacturing)



# **R&D** Expenditure / Domestic Capital Spending (FY2004, Manufacturing)



### **Appendix**

### **Actual Capital Spending in FY2003**

### (1) Overview

In FY2003, actual capital spending recovered to become almost level overall, with only a slight decline of 1.1%. While spending dropped for the third year in a row in the non-manufacturing sector, with a decline of 6.0%, it rose for the first time in three years in the manufacturing sector, jumping 11.3%.

In the manufacturing sector, capital spending by the electric machinery climbed considerably, driven by growing demand for digital home electronics; related industries (non-ferrous metals, cement, ceramics & glass, precision machinery) likewise recorded increases. Although many industries ratcheted up their capital spending, including automobiles (with investment in new models and restructuring of production and sales hubs) and iron & steel (with large-scale replacement to blast furnaces), electric machinery accounted for much of the rise.

In the non-manufacturing sector, capital spending fell in many industries with the exception of wholesale & retail, where an increase in spending was fueled by the opening of new service and supermarket outlets. Electric power and telecommunications & information recorded lower capital spending due to investment cutbacks; transportation and real estate did so as spending on large-scale projects eased off.

# (2) Trends in Capital Spending for FY2003, by Industry

Trends in capital spending in main industries are described below. The figures in parentheses () indicate the rate of growth in capital spending for the industry in question in FY2002 and FY2003. The figure to the right shows the percentage of total actual spending for FY2003 accounted for by that industry.

### Manufacturing

### Food & Beverages

(-14.6% -11.2%) 1.7%

Despite increased investment in BSE measures in the fodder sector, overall capital spending fell for the sixth year in a row. This was because investment in beverage production dropped in reaction to earlier major investments, and firms continued to curtail investment in manufacture of dairy products.

### Pulp & Paper

(-19.7% -9.1%) 0.9%

Investment increased in power-generating boilers fueled by biomass and used plastic. Nonetheless, capital spending declined for the second year in a row as investment in paper pulping facilities peaked.

### **Chemicals**

(-19.1 5.3%) 4.5%

In pharmaceuticals, investment took an upswing as the industry built new labs to boost drug development and overhauled its domestic production network. Despite a lull in major investments, in the petrochemical sector spending picked up on electronic materials for mobile phones and flat panel displays. Overall spending thus turned upward.

### Petroleum

(32.3% -11.1%) 0.7%

The industry experienced the first decline in three years as it eased off investment in desulfurizing diesel oil at refineries and curtailed spending on distribution facilities.

### Cement, Ceramics & Glass

(-31.7% 8.3%) 0.9%

Spending on developing larger glass substrates for liquid crystal displays, as well as on recycling in the cement sector, resulted in an upturn.

### Iron & Steel

(-20.9% 20.2%) 2.1%

Backed by rising demand from Asia, there was a substantial increase due to spending on boosting capacity as well as a series of major replacement to blast furnaces.

### Non-Ferrous Metals

(-44.6% 12.9%) 1.1%

Although spending on optical parts and fiber remained subdued, overall there was an upsurge thanks to investment in increased production of

300 mm silicon wafer fabs and a boost in smelting capacity.

### **General Machinery**

(-18.7% 4.6%) 2.0%

While curbs continued on spending on boilers, there was increased investment in office equipment, including photocopiers, as well as in roller bearings and other automobile components. Overall, therefore, the industry saw its first increase in two years.

### Electric Machinery

(-20.9% 34.8%) 8.7%

Growing demand for digital home electronics fueled spending on flat panel displays -- both LCDs and PDPs-- along with aggressive investment in the semiconductor field, including system LSI and flash memory. Spending thus rose for the first time in three years.

### **Precision Machinery**

(-20.2% 29.5%) 0.7%

Spending rose for the first time in three years, driven by an increase in digital camera production capacity and investment in semiconductor manufacturing equipment.

### Automobiles

(1.2% 1.2%) 6.1%

Spending on components fell due to a respite in major investment by certain manufacturers. Nonetheless, overall spending rose, albeit slightly, for three consecutive years as carmakers spent briskly on developing new environmentally sound models and overhauling their production lines; investment in bolstering the domestic sales network also helped.

### **Non-Manufacturing**

### Construction

(6.0% -7.2%) 0.8%

Capital spending dropped for the first time in two years as general contractors and the civil engineering sector curtailed investment.

### Wholesale & Retail

(2.8% 9.8%) 5.4%

The wholesale sector recorded its first increase in

five years as firms built new headquarters and distribution centers. In the retail sector, too, spending rose for the second year in a row as a growing number of new supermarkets and other retail outlets opened. This resulted in the second consecutive year of capital spending increases in the wholesale & retail industry overall.

### Real Estate

(-0.6% -8.8%) 4.0%

A lull in major redevelopment projects in the Tokyo metropolitan area resulted in decreased spending.

### **Transportation**

(15.8% -9.3%) 9.6%

Investment in the distribution business rose with construction of new distribution centers and upgrading of rolling stock, but work on new train lines eased up, and there was a steep decline in airport investment. On balance, therefore, spending went down.

### Electric Power

(-19.7% -18.7%) 11.4%

With the ongoing liberalization of the electricity market, the nine major electric power companies substantially cut spending on distribution facilities and upgrade projects. Investment in nuclear energy also dipped. This resulted in the second consecutive year of double-digit declines in the industry as a whole.

### Gas

(-9.6% 5.0%) 1.4%

While capital spending declined in the city gas sector as companies continued to tighten their belts, it rose considerably in the heat supply sector due to restructuring of operations and power plant construction. On balance, then, the industry recorded its first increase in eight years.

### Telecommunications & Information

(-14.2% -3.8%) 13.8%

In the telecommunications sector, companies spent briskly on third-generation (3G) mobile phones and expanding optical fiber networks, although they curtailed investment on fixed-line phone operations. In information services and broadcasting, investment declined in reaction to

the previous year's flurry of new headquarters construction, of despite increased spending on terrestrial digital broadcasting. The result was the third consecutive year of decline in the telecommunications & information industry as a whole.

### Leasing

(-4.4% -2.3%) 20.1%

Despite steady investment in industrial machin-

ery and transportation equipment, capital spending fell for the second year in a row because of a slump in spending on IT equipment.

### Services

(-31.6% 15.9%) 1.4%

Capital spending rose thanks to investment in waste recycling facilities and the amusement parks.

**Charts** 

### **Capital Spending by Industry**

		Capital S	pending		Gi	rowth Rate (	%)	Component Rate (%	
•	FY2003	FY2004	FY2004	FY2005				FY2003	FY2004
	Actual	ctual Planned Planned Planned 2003/2002		2004/2003	2005/2004	Actual	Planned		
	(2,840	firms)	(1,430	firms)				(2,840	firms)
Total	19367.4	20704.0	8001.4	7393.7	-1.1	6.9	-7.6	100.0	100.0
Manufacturing	6223.5	7394.5	1485.7	1368.5	11.3	18.8	-7.9	32.1	35.7
Food and Beverages	329.0	408.8	65.0	51.8	-11.2	24.3	-20.2	1.7	2.0
Textiles	68.6	62.0	14.3	10.8	-1.8	-9.5	-24.4	0.4	0.3
Pulp and Paper	170.8	173.6	43.0	39.9	-9.1	1.6	-7.3	0.9	0.8
Chemicals	869.1	993.3	164.4	159.4	5.3	14.3	-3.0	4.5	4.8
Petroleum	138.0	227.1	103.8	68.7	-11.1	64.5	-33.8	0.7	1.1
Cement, Ceramics and Glass	173.4	231.7	41.6	27.1	8.3	33.6	-34.9	0.9	1.1
Iron and Steel	389.6	380.3	166.6	156.1	20.2	-2.4	-6.3	2.0	1.8
Non-Ferrous Metals	209.4	241.2	81.2	92.7	12.9	15.2	14.2	1.1	1.2
General Machinery	404.1	498.6	69.5	62.0	4.6	23.4	-10.7	2.1	2.4
Electric Machinery	1683.4	1996.8	370.3	382.0	34.8	18.6	3.2	8.7	9.6
Electric Devices, etc.	1236.6	1467.7	258.3	269.8	45.9	18.7	4.5	6.4	7.1
Precision Machinery	128.1	217.8	11.8	9.6	29.5	70.1	-18.7	0.7	1.1
Transportation	1264.6	1518.7	249.9	219.3	2.5	20.1	-12.3	6.5	7.3
Automobiles	1184.6	1430.4	225.4	202.8	1.2	20.7	-10.0	6.1	6.9
Other Manufacturing	395.6	444.7	104.4	89.0	14.4	12.4	-14.7	2.0	2.1
Non-Manufacturing	13143.9	13309.4	6515.8	6025.2	-6.0	1.3	-7.5	67.9	64.3
Construction	151.2	139.7	49.3	35.0	-7.2	-7.6	-29.1	0.8	0.7
Wholesale and Retail	1095.6	1140.7	409.4	363.0	9.8	4.1	-11.4	5.7	5.5
Retail	907.3	964.6	307.6	281.0	9.7	6.3	-8.6	4.7	4.7
Real Estate	780.8	737.5	266.6	222.1	-8.8	-5.5	-16.7	4.0	3.6
Transportation	1889.0	1931.7	894.9	616.0	-9.3	2.3	-31.2	9.8	9.3
Electric Power and City Gas	2401.5	2309.6	2062.9	1960.4	-16.6	-3.8	-5.0	12.4	11.2
Electric Power	2142.3	2050.1	1845.2	1744.8	-18.7	-4.3	-5.4	11.1	9.9
City Gas	259.2	259.6	217.7	215.6	5.0	0.1	-1.0	1.3	1.3
Telecom. and Information	2578.4	2521.9	597.1	574.5	-3.8	-2.2	-3.8	13.3	12.2
Leasing	3918.1	4183.6	2120.3	2179.6	-2.3	6.8	2.8	20.2	20.2
Services	286.1	289.8	103.2	60.7	15.9	1.3	-41.2	1.5	1.4
Other Non-Manufacturing	43.2	54.9	12.0	14.1	-16.6	27.0	17.2	0.2	0.3

Notes: 1. Other Manufacturing includes publishing and printing, rubber, metal products and others.

<sup>2.</sup> Other Non-Manufacturing includes fishing, mining and others.

<sup>3.</sup> Monetary amounts are in billion yen.

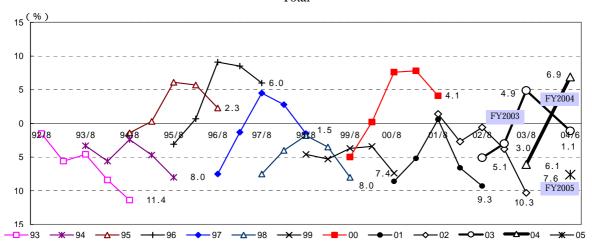
### Long-term Trend of Capital Spending, by Timing of Survey

			Total			Manufacturing					Non-Manufacturing				
Year Surveyed	August of Previous Yr.	February of Current Yr.	August of Current Yr.	Estimate for February	Actual for August	August of Previous Yr.	of	of	Estimate for February	for	August of Previous Yr.	February of Current Yr.	of	Estimate for February	Actual for August
1973	2.1	14.8	25.9	20.6	18.6	-6.8	14.7	33.4	26.2	25.7	8.9	14.9	18.3	15.0	11.5
1974	0.6	18.3	23.4	15.3	12.0	-6.9	27.4	35.1	26.6	22.9	7.0	9.7	10.3	2.7	-0.3
1975	21.6	9.7	5.5	-4.9	-10.3	12.9	3.8	0.3	-10.0	-16.1	30.4	17.5	12.9	2.2	-2.3
1976	14.0	9.9	16.3	12.2	5.9	8.5	-2.1	6.4	1.9	-3.5	19.1	24.5	27.7	24.0	16.4
1977	-1.5	2.1	5.7	0.8	-3.4	-11.1	-6.9	-3.1	-8.2	-11.2	7.0	10.7	14.1	9.5	4.0
1978	10.3	7.3	15.1	15.2	10.1	-0.9	-6.9	0.0	-2.2	-4.4	17.6	19.3	27.5	28.6	21.8
1979	-2.6	0.3	13.0	12.8	9.3	-6.1	4.5	19.1	21.9	18.9	-1.0	-2.2	9.1	7.0	3.3
1980	0.7	13.1	23.5	23.9	20.6	-16.0	5.2	23.3	25.8	24.8	7.8	18.8	23.7	22.6	17.5
1981	5.8	9.9	12.3	12.0	8.8	-8.2	6.7	14.5	13.0	10.4	13.2			11.1	7.5
1982	10.0	11.2	10.2	8.4	2.8	-1.8	7.2	10.3	6.6	3.8	16.3	14.5	10.1	9.9	2.0
1983	5.5	1.8	1.8	2.7	-2.1	-6.7	-5.3	-1.5	-2.6	-8.6	13.3	7.9	4.6	7.2	3.4
1984	0.7	2.6	10.5	11.3	7.6	-10.2	2.7	17.1	20.3	17.1	7.1	2.6	5.6	4.2	0.2
1985	-2.6	5.3	10.6	9.2	7.6	-9.6	5.1	12.6	9.7	8.6	0.9	5.6	9.1	8.8	6.9
1986	0.2	1.6	5.4	3.1	3.1	-9.1	-4.1	-3.6	-7.1	-9.3	5.0	5.7	12.0	10.3	12.1
1987	-0.7	0.1	3.5	6.0	4.4	-10.6	-5.6	-2.2	-0.2	-3.9	2.1	4.0	7.0	9.7	9.3
1988	-2.6	6.7	15.7	18.8	15.9	-7.1	9.3	25.3	27.5	24.7	-1.4	5.2	10.8	13.0	10.7
1989	-0.7	6.4	17.5	17.4	13.9	-4.0	9.4	26.3	26.7	22.3	0.9	4.4	11.8	11.5	8.5
1990	-1.8	8.6	17.0	16.2	14.9	-7.9	10.1	23.6	22.8	20.8	1.4	7.6	12.5	11.9	11.0
1991	0.6	4.4	10.7	8.9	8.2	-7.1	1.7	7.9	5.2	5.3	3.7	6.1	12.8	11.5	10.4
1992	0.3	-0.8	-0.9	-4.7	-7.4	-2.8	-6.4	-10.5	-15.5	-17.9	1.4	3.2	6.0	2.7	- 0.0
1993	-1.5	-5.6	-4.6	-8.4	-11.4	-11.9	-12.9	-13.1	-19.0	-23.7	2.0	-1.6	0.3	-2.3	-4.5
1994	-3.3	-5.6	-2.4	-4.7	-8.0	-14.7	-9.0	-4.0	-7.1	-10.7	-0.1	-4.0	-1.6	-3.7	-6.8
1995	-1.4	0.3	6.1	5.7	2.3	-4.3	3.8	13.5	13.9	10.6	-0.7	-1.3	3.0	2.4	-1.2
1996	-3.1	0.7	9.1	8.5	6.0	-13.6	-0.6	8.8	7.0	4.8	-1.2	1.3	9.2	9.2	6.5
1997	-7.5	-1.3	4.5	2.8	-1.5	-11.1	-1.0	8.9	7.5	4.1	-6.8	-1.5	2.5	0.7	-4.0
1998	-7.5	-4.0	-1.8	-3.5	-8.0	-11.7	-6.7	-4.7	-8.5	-13.0	-6.8	-2.7	-0.3	-1.1	-5.6
1999	-4.6	-5.3	-3.7	-3.4	-8.4	-13.6	-10.1	-10.1	-11.8	-15.5	-3.1	-3.2	-0.7	0.8	-5.0
2000	-5.0	0.2	7.6	7.8	4.1	-10.9	0.3	15.2	18.0	12.5	-4.0	0.2	4.4	3.2	0.4
2001	-8.6	-5.2	0.6	-6.6	-9.3	-3.5	-0.7	6.2	-7.0	-9.7	-9.6	-7.4	-2.0	-6.3	-9.2
2002	1.4	-2.7	-0.6	-3.8	-10.3	-9.2	-8.2	-5.6	-11.4	-16.2	3.4	0.0	1.7	-0.2	-7.5
2003	-5.1	-3.0	4.9	-	-1.1	-3.9	1.1	16.2	-	11.3	-5.3	-4.8	0.2	-	-6.0
2004	-6.1	-	6.9			-11.0	-	18.8			-5.1	-	1.3		
2005	-7.6					-7.9					-7.5				

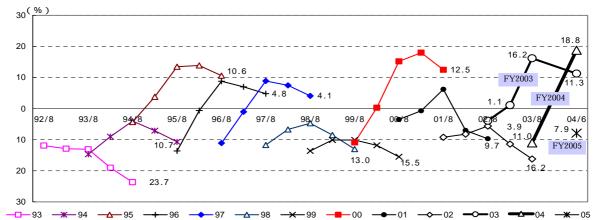
Notes: 1. Figures are given as percentages.

2. Shaded figures represent results of the present survey.

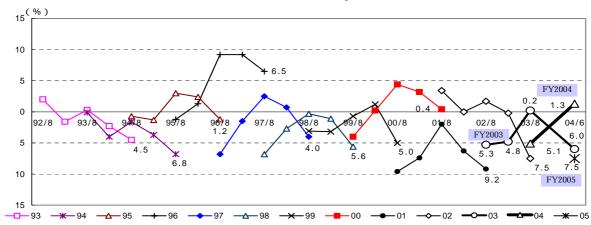




### Manufacturing



### Non-Manufacturing



Notes: 1. The charts are based on data in the left page.

2. Each fiscal year is surveyed five times until planned investments are materialized (see page 4 for details). Typically, planned capital spending is revised upwards from the initial survey (in August of the previous year) to the third survey (in August of the current year), followed by downward revisions toward the publication of actual figures (the fifth survey, in August of the following year). Thus, capital spending in most cases is represented by a reversed V-shaped line on the charts, peaking in August of the current year.

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