Development Bank of Japan Research Report No. 7

Survey on Planned Capital Spending for Fiscal Years 1999 and 2000 (Conducted in February 2000)

June 2000

Economic and Industrial Research Department
Development Bank of Japan

Contents

I Outline

Objectives

This survey has been conducted annually since FY 1956 by the Development Bank of Japan to assess major trends in the capital spending of Japanese industry.

Target Firms and Survey Methods

This survey covers private firms in Japan's major industries capitalized at ¥1 billion or more (excluding agriculture, forestry, finance and insurance, medicine, etc. In addition, the Teito Rapid Transit Authority has been included in the survey despite the fact that it is classified as a (non-financial) public corporation under the new System of National Accounts (SNA).

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

Contents of the Survey

The main issues addressed by the survey were as follows: (i) Anticipated actual capital spending in FY 1999 and planned capital spending in FY 2000, (ii) Details of individual construction projects in each of the above years, (iii) Anticipated revenues and expenditures in FY 1999 and FY 2000, (iv) Investment motives in FY 1999 and FY 2000, and (v) Trends in land investment in FY 1999 and FY 2000.

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

The Scope of Capital Spending

In this survey, capital spending refers to the domestic investment in the tangible fixed assets of one's own corporation. This includes buildings, structures and equipment (including ships, aircraft, rolling stock, tools and instruments, and parts), as well as the purchase and development of land (excluding the purchase of land for subdivision in the real estate industry). Accordingly, this excludes intangible fixed assets, capital spending abroad, and investment in subsidiaries or affiliated firms.

Date of Survey

February 10, 2000

Responses

The response to the survey is shown below:

	No. of Firms Targeted	No. of Firms Giving Valid Responses	Proportion of Valid Responses
Principle Business Classification	3,439	2,965	86.2%
Investment Specific Classification	4,177	3,646	87.3%

Industrial Classification for the Totals

As a rule, the totals for the various industrial sectors have been formed by classifying the amount of investment for each business department in a company's response according to industrial sector and then totaling (**Investment Specific Classification**). In some parts of the analysis, however, classification and totaling of the companies' responses has been carried out based on the main business sector of each company (**Principle Business Classification**).

Capital Spending Bottoms Out: Driven by Electric Machinery

II Summary

1. Overall Condition

Anticipated overall actual capital spending in FY 1999 (all figures are on a construction basis; the growth rate is compared with the previous year.) was down 3.4%, the third consecutive year in which spending declined. Looking at plans for FY 2000, both the manufacturing sector (up 0.3%) and the non-manufacturing sector (up 0.2%) are planning increases in capital spending, leading to an increase (up 0.2%) for the entire industrial sector for the first time in four years.

2. Anticipated Actual Capital Spending for FY 1999

Looking at estimated actual capital spending in FY 1999, in spite of the first increase in spending in three years in the non-manufacturing sector (up 0.8%), manufacturing sector spending will decline (down 11.8%) for the second consecutive year. As a result, spending will decline for the entire industrial sector (down 3.4%) for the third consecutive year.

3. Planned Capital Spending for FY 2000

Because planned capital spending in FY 2000 will increase for both the manufacturing sector (up 0.3%) and the non-manufacturing sector (up 0.2%), capital spending for the entire industrial sector will rise (up 0.2%) for the first time in four years.

In the manufacturing sector (up 0.3%), large capital spending reductions are anticipated in food and beverages or iron and steel, which plan sharp declines from the large-scale investment in the prior year. Spending will also be tightly controlled in automobiles and general machinery. Broad increases in spending for electric machinery (electronic parts such as semiconductors and liquid crystals) because of the vigorous world-wide market for semiconductors and expanding demand for liquid crystal display panels, however, and spending increases in precision machinery (semiconductor manufacturing devices) and cement, ceramics and glass (for liquid crystal displays) will result in the first spending increase in the manufacturing sector as a whole in three years.

In the non-manufacturing sector (up 0.2%), spending for information services in telecommunications and information sector will decline for the second straight year, and the real estate and construction industries plan further cutbacks. Decreases are also planned in railways and services as spending falls from peak levels in the Tokyo metropolitan area for new transit lines and the construction of large-scale theme parks. For the sector as a whole spending will rise for the second consecutive year, however, based upon higher spending in the wholesale and retail sector to accelerate new store openings before the Large-Scale Retail Store Siting Law is implemented, and spending increases planned in electric power and leasing.

A comparison of each half of FY 2000 with the corresponding period in the previous year shows an increase of 10.0% for the entire manufacturing sector in the first half of FY 2000, while spending in the second half will be 7.8% below the prior year level.

In comparison to the previous survey (August 1999), both the manufacturing sector (up 2.8%) and the non-manufacturing sector (up 7.5%) have been revised upward, and capital spending as a whole has been revised upward by 6.9%.

Looking at the respective shares of different investment motives within the manufacturing sector, there is an increase in ‘expansion of production capacity’, ‘product development and upgrading’ and ‘research and development’ for both materials industries and processing and assembly industries. In particular, capital spending for ‘expansion of production capacity’ will increase in many industries such as electric machinery or food and beverages but will decline in industries such as chemicals or automobiles, and such spending will remain at low level for the manufacturing sector as a whole. On the other hand, the motive ‘new products and product upgrades’ is receiving greater emphasis from processing and assembly industries such as automobiles, but ‘research and development’ has weakened as an investment motive in industries such as general machinery or automobiles. No distinct trend at the level of individual firms can be seen. Capital spending for both ‘rationalization and labor saving’ and ‘maintenance and repairs’ will decline.

In the non-manufacturing sector, the importance of ‘expansion of production capacity’, which accounts for more than 60% of investment, will decline slightly.

Planned land investment will drop in both the manufacturing and non-manufacturing sectors, declining by an impressive 53.6% from the previous year for all industries. As a result the share of land investment in total capital spending will drop to 2.6%.

The ratio of capital spending to cash flow (net profit/loss plus depreciation expenses) will fall in both the manufacturing sector and the non-manufacturing sector because of an increase in the number of firms projecting profit improvements.

Domestic capital spending by foreign-affiliated firms (firms with over one-third foreign ownership; 141 respondents) will increase by 13.9% to ¥684.4 billion, based upon increased investments in manufacturing industries such as electrical machinery, transportation machinery and chemicals. Foreign-affiliated firms now account for 2.8% of total capital spending in Japan.

4. Features of Planned Capital Spending for FY 2000

Planned capital spending has been revised upward slightly in both the manufacturing and non-manufacturing sectors, finally halting the decline in capital spending that continued over the past three consecutive years. The spending increases pulling spending upward, however, are confined to only certain industries of the manufacturing sector.

Looking at the characteristics in the manufacturing sector, spurred by increases in demand within Japan and abroad the electric machinery sector plans broad spending increases in semiconductors and liquid crystal displays, which will also result in large increases in related sectors such as precision machinery or cement, ceramics and glass. On the other hand, a restrained spending stance will continue in automobiles, which will have a large ripple effect on other industries, and in the large chemicals industry. Combined with large-scale investment cutbacks in food and beverages or iron and steel compared to the prior year, the result will be that driving forces are confined to only selected industries. Given that companies planning to invest in reorganization to improve manufacturing efficiency can be found even in industries that are controlling or reducing capital spending, however, a change in the investment posture compared to the prior year when every sector was restricting spending can be detected.

In non-manufacturing industries the posture for sustaining current spending levels is weak. In addition to a reduction from causes such as reduced investment in fixed-line or PHS telephones by the telecommunication and information industries, which played such an important role in propelling the economy in the previous investment boom, even industries such as electric power that plan spending increases may face further demands to improvement operating efficiency and revise downward.

The mobile telephone industry, however, will continue to increase spending to meet the growing demand that will accompany the upgrade of services. The leasing sector is planning increases as it anticipates growing demand for information-related equipment, and the wholesale and retail industries as well will invest in systems as they introduce new services using information technology. Though their shares in the non-manufacturing sector as a whole are small, total information-related investment will remain steady.

Trends in Capital Spending in FY 1999 and 2000

(Units: 100 Million Yen, %)

	FY 1999 Survey (2,748 firms)			FY 2000 Survey (2,965 firms)		
	FY 1998 (Actual)	FY 1999 (Est.)	Growth Rate 99/98	FY 1999 (Est.)	FY 2000 (Planned)	Growth Rate 00/99
Total	247,764	239,401	-3.4	243,961	244,471	0.2
(except Electric Power)	*(206,661)*	*(196,469)*	*(-4.9)*	*(201,027)*	*(199,667)*	*(-0.7)*
Manufacturing	82,137	72,431	-11.8	73,762	73,969	0.3
Non-Manufacturing	165,627	166,970	0.8	170,199	170,503	0.2
(except Electric Power)	*(124,524)*	*(124,038)*	*(-0.4)*	*(127,266)*	*(125,698)*	*(-1.2)*
(Electric Power)	*(41,104)*	*(42,932)*	*(4.4)*	*(42,934)*	*(44,804)*	*(4.4)*

Comparison with the August 1999 Survey (Revision Rates for Companies in Both Surveys)

(Units: %)

	FY 1999 (Estimated)	FY 2000 (Planned)
Total	-0.4	6.9
(except Electric Power)	*(0.0)*	*(11.1)*
Manufacturing	-1.8	2.8
Non-Manufacturing	0.2	7.5
(except Electric Power)	*(1.1)*	*(13.4)*
(Electric Power)	*(-2.4)*	*(0.2)*

Note: Revision rate = {this survey (Feb. 2000)/Previous survey (Aug. 1999)-1}×100

Capital Spending by Industry for Fiscal Year 1999-2000

(Units: 100 Million Yen, %)

	Capital Spending (100 Million Yen)				Growth Rate (%)		Component Rate (%)	
	FY1998 (Actual)	FY1999 (Est.)	FY1999 (Est.)	FY2000 (Planned)	99/98	00/99	FY1999 (Est.)	FY2000 (Planned)
	(2,748 firms)		(2,965 firms)				(2,965 firms)	
Total	247,764	239,401	243,961	244,471	-3.4	0.2	100.0	100.0
except Electric Power	*206,661*	*196,469*	*201,027*	*199,667*	*-4.9*	*-0.7*	*82.4*	*81.7*
Manufacturing	82,137	72,431	73,762	73,969	-11.8	0.3	30.2	30.3
Food and Beverages	5,638	5,668	5,873	5,296	0.5	-9.8	2.4	2.2
Textiles	960	769	791	772	-19.9	-2.4	0.3	0.3
Paper and Pulp	2,300	1,616	1,637	1,849	-29.8	12.9	0.7	0.8
Chemicals	11,458	9,546	9,903	10,030	-16.7	1.3	4.1	4.1
Organic Chemicals	*5,237*	*4,425*	*4,667*	*4,808*	*-15.5*	*3.0*	*1.9*	*2.0*
Pharmaceuticals	*2,516*	*2,073*	*2,102*	*2,071*	*-17.6*	*-1.5*	*0.9*	*0.8*
Petroleum	2,105	1,463	1,465	1,432	-30.5	-2.3	0.6	0.6
Cement, Ceramics and Glass	2,379	1,838	1,854	2,036	-22.8	9.8	0.8	0.8
Iron and Steel	5,737	5,189	5,193	3,647	-9.5	-29.8	2.1	1.5
Ordinary Steel	*4,645*	*4,410*	*4,414*	*2,949*	*-5.1*	*-33.2*	*1.8*	*1.2*
Non-Ferrous Metals	2,587	1,942	2,042	2,020	-24.9	-1.1	0.8	0.8
General Machinery	6,356	4,813	4,841	4,718	-24.3	-2.5	2.0	1.9
Electric Machinery	18,166	18,339	18,697	21,065	1.0	12.7	7.7	8.6
Electric Devices, etc.	*11,478*	*11,267*	*11,538*	*14,022*	*-1.8*	*21.5*	*4.7*	*5.7*
Precision Machinery	1,426	1,231	1,246	1,479	-13.7	18.7	0.5	0.6
Transportation	16,711	14,798	14,905	14,596	-11.4	-2.1	6.1	6.0
Automobiles	*15,595*	*13,977*	*14,081*	*13,980*	*-10.4*	*-0.7*	*5.8*	*5.7*
Other Manufacturing	6,316	5,218	5,314	5,031	-17.4	-5.3	2.2	2.1
Non-Manufacturing	165,627	166,970	170,199	170,503	0.8	0.2	69.8	69.7
except Electric Power	*124,524*	*124,038*	*127,266*	*125,698*	*-0.4*	*-1.2*	*52.2*	*51.4*
Construction	2,886	1,908	1,934	1,687	-33.9	-12.8	0.8	0.7
Wholesale and Retail	12,617	11,004	11,982	12,146	-12.8	1.4	4.9	5.0
Retail	*9,505*	*8,741*	*9,673*	*10,004*	*-8.0*	*3.4*	*4.0*	*4.1*
Real Estate	11,483	8,742	9,022	7,470	-23.9	-17.2	3.7	3.1
Transportation	18,713	20,693	20,861	19,146	10.6	-8.2	8.6	7.8
Railways	*12,415*	*14,281*	*14,283*	*13,623*	*15.0*	*-4.6*	*5.9*	*5.6*
Marine Transport	*1,042*	*586*	*631*	*319*	*-43.8*	*-49.4*	*0.3*	*0.1*
Airlines	*1,922*	*2,415*	*2,415*	*1,796*	*25.6*	*-25.6*	*1.0*	*0.7*
Warehousing, etc.	*1,450*	*2,216*	*2,249*	*2,039*	*52.8*	*-9.3*	*0.9*	*0.8*
Electric Power and City Gas	44,843	46,439	46,441	48,653	3.6	4.8	19.0	19.9
Electric Power	*41,104*	*42,932*	*42,934*	*44,804*	*4.4*	*4.4*	*17.6*	*18.3*
City Gas	*3,740*	*3,507*	*3,507*	*3,848*	*-6.2*	*9.7*	*1.4*	*1.6*
Telecom. and Information	28,348	26,779	26,876	26,832	-5.5	-0.2	11.0	11.0
Leasing	42,953	46,324	47,898	49,972	7.8	4.3	19.6	20.4
Services	3,376	4,681	4,784	4,264	38.7	-10.9	2.0	1.7
Other Non-Manufacturing	409	401	401	335	-2.2	-16.3	0.2	0.1

Note: Other Manufacturing Industries includes publishing and printing, rubber, metal products and other.
Other Non-Manufacturing Industries includes fishing, mining and other.

Ⅲ Survey Results

1. Anticipated Actual Capital Spending for FY 1999

Outline

Anticipated total actual capital spending for FY 1999 is expected to fall 3.4% from the previous year, the third year in a row that spending will decline. Spending in the manufacturing sector will decline 11.8%. Despite higher spending in food and beverages for construction of new factories or large-scale capital improvements and an increase in research and development spending in electric machinery, spending cutbacks in all other sectors will result in a decline for manufacturing as a whole for the second year running. In the non-manufacturing sector (up 0.8%), telecommunications and information sector spending will decline due to restrictions on investment in fixed-line telephones and a broad-based drop in spending on information services. The wholesale and retail sector will also maintain its underlying tone of restricted investment, especially increasing the size of spending cuts because of lower head office-related investment. Because of higher railway sector spending as construction proceeds on new lines in the Tokyo metropolitan area, however, plus spending by the service sector for large-scale theme parks and spending increases anticipated by the electric power and leasing industries, spending will increase for the non-manufacturing sector as a whole for the first time in three years.

Trends by Industrial Sector

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

Materials (down 17.8%) {8.8%}

Spending will decrease in all industries in the materials sector. Because of large-scale reductions in chemicals, which accounts for a large portion of the sector, and in many other industries, spending will decline for the second year running and the size of the decline will also increase.

In chemicals, tight controls on spending can be seen in the organic chemicals segment, while spending for factory construction in the pharmaceuticals industry will drop, and spending in the inorganic chemicals and other chemicals industries will also decline. Controls on spending in iron and steel and textiles will be tightened, and in paper and pulp spending will decline sharply following completion in the prior year of increased investments in production capacity for continuous papermaking machinery for coated papers and newsprint. The non-ferrous metals industry will also see substantial reductions because spending for cable-related investment will decline and preparations for mass production of 300mm wafers have peaked. The size of the decline for the cement, ceramics and glass industry will be larger, due to cutbacks in large-scale investment in cement.

Processing and Assembly (down 8.3%) {20.9%}

Spending in the processing and assembly industry will decline for the second year running. A return to increased spending for electric machinery, which makes up a large portion of the industry, and a small spending increase in food and beverages, will be offset by increases in the size of continuing cutbacks in automobiles, general machinery and precision machinery.

For electric machinery, an increase in spending in the electronic devices industry for research and development will compensate for declines in spending for electronic parts and electric devices, resulting in the first spending increase in three years. In food and beverages, overall spending will increase slightly because of spending in the other food products segment for new factory construction or large-scale investments in facility improvements.

The automobile industry, on the other hand, will implement a double-digit cutback by restricting or squeezing capital equipment spending and lowering investment in new vehicle development. Spending in the general machinery industry will also be curtailed substantially because of the underlying tone of spending restraint and reactionary cuts following wide-scale investments in the prior fiscal year. In precision machinery, there will be lower investment for semiconductor wafer manufacturing equipment and in watches and measuring devices, resulting in a double-digit drop.

Energy (up 2.1%) {19.7%}

The energy sector is anticipating an increase in capital spending for the first time in six years.

In the electric power industry, the underlying tone is one of control on investment, but the industry plans to increase spending for ongoing construction of power source development projects such as nuclear power generation. Spending will decline in the city gas industry for the fourth year running following reductions for large-scale LNG facility construction and fuel supplies. In petroleum as well attitudes toward investment have become more conservative and spending will be reduced across a broad scale.

Non-Manufacturing, excluding Energy (down 0.2%) {50.6%}

For the non-manufacturing sector excluding energy, spending will increase in leasing, transportation and services. Despite these spending increases, overall spending will decline for the third year in a row because spending will be reduced in the real estate, construction, wholesale and retail, and telecommunications and information industries.

The leasing industry anticipates a return to higher spending, following improvement in the fund procurement climate and planned acquisition of leasing assets following the industry restructuring. In transportation, spending will increase as railway companies proceed with spending to build new tracks in the Tokyo metropolitan area and extend existing lines. Spending in the services industry will expand broadly, spurred by construction of a large-scale oceanfront theme park.

On the other hand, spending will be squeezed in real estate in spite of office building projects in the Tokyo metropolitan area, and spending in construction will continue to decline. In the wholesale and retail industry, spending will decline for the third consecutive year. Wholesale segment spending will fall in reaction to earlier spending to acquire land for offices and as investment in distribution centers is curtailed, while controls on supermarket spending and a more cautious spending stance by convenience store chains will reduce retail industry spending despite investment for the purchase of department stores and shops. The telecommunications and information industry will maintain an expansive investment posture for cellular telephones to meet increased demand, but spending for information services will decline in reaction to increased systems or headquarters-related investment in the prior year.

Trends in Capital Spending by Industry Sector

	Growth Rate (%)					Share (%)				
	FY1996	FY1997	FY1998	FY1999	FY2000	FY1996	FY1997	FY1998	FY1999	FY2000
Materials Processing	1.0	3.6	-12.8	-17.8	-5.0	9.4	10.0	9.7	8.8	8.3
Paper and Pulp	*36.1*	*4.8*	*-33.8*	*-29.8*	*12.9*	*1.2*	*1.3*	*1.0*	*0.7*	*0.8*
Chemicals	*8.9*	*14.5*	*-10.2*	*-16.7*	*1.3*	*3.7*	*4.3*	*4.3*	*4.1*	*4.1*
Iron and Steel	*-19.1*	*-12.0*	*0.3*	*-9.5*	*-29.8*	*2.2*	*2.0*	*2.2*	*2.1*	*1.5*
Processing and Assembly	10.0	7.3	-12.1	-8.3	2.6	20.3	21.7	21.0	20.9	21.3
Food and Beverages	*-1.1*	*13.5*	*-12.1*	*0.5*	*-9.8*	*2.0*	*2.2*	*2.2*	*2.4*	*2.2*
Electric Machinery	*2.0*	*-1.1*	*-21.9*	*1.0*	*12.7*	*8.2*	*8.0*	*7.2*	*7.7*	*8.6*
Automobiles	*22.4*	*17.0*	*-4.2*	*-10.4*	*-0.7*	*4.8*	*5.6*	*5.9*	*5.8*	*5.7*
Energy Related	-5.4	-9.4	-9.2	2.1	4.5	19.8	17.8	17.6	19.7	20.6
Petroleum	*-22.0*	*-32.2*	*-32.5*	*-30.5*	*-2.3*	*1.7*	*1.1*	*0.8*	*0.6*	*0.6*
Electric Power	*-2.2*	*-7.9*	*-8.0*	*4.4*	*4.4*	*16.7*	*15.3*	*15.4*	*17.6*	*18.3*
Non-Manufacturing excluding Energy	10.7	-2.8	-4.8	-0.2	-1.5	50.4	50.5	51.6	50.6	49.8
Construction	*-8.8*	*-10.5*	*-16.6*	*-33.9*	*-12.8*	*1.4*	*1.3*	*1.2*	*0.8*	*0.7*
Wholesale and Retail	*10.5*	*-7.0*	*-1.7*	*-12.8*	*1.4*	*4.9*	*4.4*	*4.8*	*4.9*	*5.0*
Real Estate	*-18.3*	*2.0*	*-19.2*	*-23.9*	*-17.2*	*3.2*	*4.6*	*4.3*	*3.7*	*3.1*
Transportation	*12.4*	*-10.2*	*-8.8*	*10.6*	*-8.2*	*8.5*	*7.2*	*7.0*	*8.6*	*7.8*
Telecom. and Information	*28.0*	*-6.1*	*3.7*	*-5.5*	*-0.2*	*15.2*	*14.5*	*16.4*	*11.0*	*11.0*
Leasing	*7.8*	*5.1*	*-6.5*	*7.8*	*4.3*	*16.0*	*17.3*	*16.5*	*19.6*	*20.4*
Services	*-17.8*	*-5.3*	*-7.1*	*38.7*	*-10.9*	*1.1*	*1.2*	*1.3*	*2.0*	*1.7*
All Industries	6.0	-1.5	-8.0	-3.4	0.2	100.0	100.0	100.0	100.0	100.0
excluding Electric Power	*7.8*	*-0.2*	*-8.0*	*-4.9*	*-0.7*	*83.3*	*84.7*	*84.6*	*82.4*	*81.7*
Manufacturing	4.8	4.1	-13.0	-11.8	0.3	31.4	32.8	31.6	30.2	30.3
Non-Manufacturing	6.5	-4.0	-5.6	0.8	0.2	68.6	67.2	68.4	69.8	69.7
excluding Electric Power	*9.7*	*-2.8*	*-4.9*	*-0.4*	*-1.2*	*51.9*	*51.9*	*53.0*	*52.2*	*51.4*

Notes
1. Materials: textiles; paper and pulp; chemicals; cement, ceramics and glass; iron and steel; non-ferrous metals
   Processing and assembly: food and beverages; general machinery; electric machinery; precision machinery; transportation; other manufacturing
   Energy: petroleum; electric power; city gas and coal, crude oil and natural gas
   Non-manufacturing, excluding energy: Non-manufacturing industries excluding electric power; city gas and coal, crude oil and natural gas
2. Share % figures for FY 1999 and FY 2000 are based on 2,965 companies that were included in the survey in both years.

2. Planned Capital Spending for FY 2000

Outline

Taking a look at planned capital spending in FY 2000, both the manufacturing sector (up 0.3%) and the non-manufacturing sector (up 0.2%) will return to spending increases, resulting in the first increase (up 0.2%) as a whole for the first time in four years.

In the manufacturing sector (up 0.3%), large capital spending reductions are planned in food and beverages and iron and steel, which will fall sharply from the large-scale investment levels of the prior year. Spending will also be tightly controlled in automobiles and general machinery. Broad spending increases for electric machinery (electronic parts such as semiconductors and liquid crystals) because of the vigorous world-wide market for semiconductors and expanded demand for liquid crystal display panels, however, plus higher spending in precision machinery (semiconductor manufacturing devices) and cement, ceramics and glass (glass for liquid crystal displays), will result in the first spending increase in the manufacturing sector in three years.

In the non-manufacturing sector (up 0.2%), spending for information services in the telecommunications and information sector will decline for the second straight year, and the real estate and construction industries are planning further cutbacks. Decreases are also planned in railways and services as spending drops from peak levels for new transit lines in the Tokyo metropolitan area and the construction of large-scale theme parks. For the sector as a whole spending will rise for the second consecutive year, however, based upon planned spending increases in the wholesale and retail sector to accelerate new store openings before the Large-Scale Retail Store Siting Law becomes effective, and spending increases planned in electric power and leasing.

Trends by Industrial Sector

The trends in planned capital spending for FY 2000, classified according to industrial sector, are as follows. Numbers in curly brackets { } show the percentage of total planned capital spending accounted for by each sector.

Materials (down 5.0%) {8.3%}

Materials sector capital spending will drop despite increases in some industries such as chemicals, a large industry in this sector, reflecting the large-scale decreases in industries such as iron and steel. The result will be lower capital spending for the sector as a whole for the third year running.

In chemicals, investment will increase for the first time in three years because of increases in capital spending for manufacturing efficiency improvements in organic chemicals as well as higher spending in other chemicals. In addition, spending will turn upward in the paper and pulp industry for investment to add new continuous papermaking equipment for paper manufactured from cardboard stock, and cement, ceramics and glass investment will grow for the first time in five years because of higher investment in glass for liquid crystal displays.

On the other hand, an underlying tone of investment restraint will continue in the iron and steel industry, which together with a drop from the large-scale investments of the prior year will result in a large spending decline. In non-ferrous metals spending will continue to fall despite a decrease in the size of the decline, reflecting the tone of underlying investment restraint in areas such as smelting. In addition to the ongoing underlying tone of restrained investment in textiles, the completion of headquarters-related investments in part of the industry will also contribute to a spending decline.

Processing and Assembly (up 2.6%) {21.3%}

Planned capital spending in the processing and assembly sector will increase for the first time in three years, reflecting an increase in the size of spending increases in electric machinery, which accounts for a large share of the segment, as well as a return to healthy increases in precision machinery.

In the electric machinery industry, spending will take a large upward swing for investment in capacity expansion for semiconductors or liquid crystals following the worldwide activity in the semiconductor market and the growth in demand for liquid crystal display panels, compensating for spending declines in electronic devices and leading to double-digit growth. Spending for precision machinery will also increase, as a result of the strong increase in semiconductor manufacturing devices.

On the other hand, food and beverage industry spending will decline, as investment is curtailed in response to spending for new factories in the prior year for beer and alcoholic beverages or other foods. In the automobile industry, spending restraints will remain in place and spending will decline slightly as spending for parts and auto bodies continues to decline, despite a return to investment in some companies for four-wheel vehicles. Moreover, investment will fall in the general machinery industry despite increases in office and household machinery for new product development, as cuts made in response to prior year spending for general equipment parts result in another year of spending declines, although smaller than in the previous year.

Energy (up 4.5%) {20.6%}

The energy sector is expected to show a small amount of growth, producing two consecutive years of positive growth.

The electric power industry is planning to increase spending as the nine major power companies move ahead with construction related to development of power sources such as thermal energy, despite a decrease in the wholesale electric power supply business. In the gas industry, construction of LNG bases and spending for fuel supplies will result in higher spending for the industry as a whole for the first time in five years. The petroleum industry, on the other hand, plans small overall cuts for the eighth consecutive year, despite some investment related to industry concentration, as the underlying tone of investment restraint for facilities such as refineries continues.

Non-Manufacturing, excluding Energy (down 1.5%) {49.8%}

Looking at non-manufacturing industries excluding energy, the leasing industry will continue to expand investment and the wholesale and retail industry is planning to increase capital investment. But cuts in transportation, real estate, services, construction, and telecommunications and information spending will result in the fourth straight year of falling capital spending in non-manufacturing industries excluding energy.

The leasing industry expects to continue expanding equipment investment because of the increase in demand to replace capital investment with leased equipment and/or the increase in demand for information-related equipment. In the wholesale and retail industries, the wholesale segment is looking at the second consecutive year of spending declines. The industry as a whole, however, will see its first spending increase in four years as part of the retail sector accelerates store investment before implementation of the Large-Scale Retail Store Siting Law.

In transportation, the railway segment will have passed the peak of construction for new railway lines and extension of existing lines in the Tokyo metropolitan area and will reduce spending, while the airlines industry is also planning to sharply reduce spending as it restrains equipment introductions following efficiency improvements. Moving on to real estate, the industry plans double-digit cutbacks for the third year running due to the end of a cycle of regional projects, despite progress in building redevelopment projects in the Tokyo metropolitan area. The services industry capital spending will decline, as construction of large-scale theme park projects winds down and construction of some hotels and inns is completed. The construction industry will continue spending restraints due to the uncertain outlook of business conditions. Looking at the telecommunications and information technology industry, overall spending will decrease slightly due to ongoing cutbacks in spending for information services systems, although the telecommunication sector that accounts for the majority of the industry will maintain its stance of expansion to meet growing demand for cellular telephones.

Trends and Features of Capital Spending by Industry

Trends and features of capital spending for main industries are shown below. The figures in round parentheses ( ) indicate the rate of growth in capital spending for the industry in question (FY 1999 → FY 2000). The figures in curly brackets { } show the industry's share of planned spending for FY 2000 as a percentage of the total value for all industries.

Materials

Chemicals: (-16.7% → 1.3%) {4.1%}
For organic chemicals, which accounts for the majority of the chemical industry, investment to increase production efficiency is expected to increase, and spending in other chemicals will also grow. For pharmaceuticals and inorganic chemicals, spending will continue to drop, but the size of the decline will be smaller because of spending to increase production capacity, resulting in the first capital spending increase in chemicals as a whole in three years.

Iron and Steel: (-9.5% → -29.8%) {1.5%}
Because the underlying tone of investment restraint will continue and capital spending for large-scale projects of the previous fiscal year will also be sharply curtailed, total industry spending will fall significantly.

Non-Ferrous Metals: (-24.9% → -1.1%) {0.8%}
Despite an increase in spending for rolled steel or wire and cable, the industry as a whole will reduce capital spending for the third year in a row as it controls investment in areas such as smelting.

Paper and Pulp: (-29.8% → 12.9%) {0.8%}
Spending will increase for the first time in three years as the industry invests to increase continuous paper manufacturing machine capacity for paper made from recycled cardboard stock.

Cement, Ceramics and Glass: (-22.8% → 9.8%) {0.8%}
The cement industry will continue to keep controls on spending, but the glass industry plans a double-digit spending increase as it increases production of glass for liquid crystal displays. The ceramics industry will also add capacity related to electronic parts. As a result, the industry as a whole will increase spending for the first time in five years.

Textiles: (-19.9% → -2.4%) {0.3%}
As the underlying tone of investment restraint continues, and headquarters-related spending is completed, total spending will decline for the third year running.

Processing and Assembly
Electric Machinery: (1.0% → 12.7%) {8.6%}
In the electronic parts sector, which accounts for the majority of the electric machinery industry, there will be a return to increased spending as companies invest to improve the performance of semiconductors and liquid crystals. Despite a reactionary decline in spending in electronic instruments following investments in land in the prior year, spending for electric devices will increase for the first time in four years. Capital spending in the electric machinery industry as a whole will grow by double digits.

Automobiles: (-10.4% → -0.7%) {5.7%}
For four-wheel vehicles, investment restraints will continue. Nevertheless, total industry investment for vehicles will increase because of higher spending by selected firms as they move forward with their rebuilding business. Controls on spending for components and car bodies will continue and investment will continue to decline. For the automobile industry overall there will be a decline in capital spending for the third straight year, although the size of the decline will be smaller.

Food and Beverages: (0.5% → -9.8%) {2.2%}
Investments in processed meat and dairy products and for flour milling, sugar manufacture, and edible oils will continue to decline. Combined with a decrease in construction investment in beer and other alcoholic beverages and for other food products following new factory construction in the prior year, capital spending in the food and beverages industry as a whole will fall.

General Machinery: (-24.3% → -2.5%) {1.9%}
Although investment in general machinery parts will decline in reaction to prior year spending levels, spending for investment in new office and household machine products and investments focused on rationalization of boilers and motors will increase. The underlying tone of restraint on spending for metal processing machinery and industrial machinery will also continue, but because the size of spending decreases will be smaller, the size of the capital spending decline in the general machinery industry as a whole will be greatly reduced.

Precision Machinery: (-13.7% → 18.7%) {0.6%}
Capital spending for semiconductor manufacturing equipment will increase as the industry enjoys a bullish outlook for semiconductors and liquid crystals, and investment in clocks and measuring instruments will also rise. In spite of a decline in spending in medical instruments, capital spending for the precision machinery industry as a whole will enjoy double-digit growth.

Energy
Electric Power: (4.4% → 4.4%) {18.3%}
Investment in the wholesale electric power supply business will decrease. Although the basic underlying tone of restrictions on investment will continue at the nine major electric power companies, an increase in spending is planned as the result of progress in construction for development of power sources such as thermal energy, and the industry as a whole plans to

increase spending.

Gas: (-6.2% → 9.7%) {1.6%}
Spending will continue to increase in the city gas industry for construction of new LNG bases, and the LNG industry as well is planning large-scale increases. Spending for fuel supplies will also increase. As a result, capital spending in the gas industry as a whole will increase for the first time in five years.

Petroleum: (-30.5% → -2.3%) {0.6%}
Although there will be increased investment to concentrate distribution facilities as industry reorganization proceeds, the underlying tone of restrained investment in refineries will continue, meaning an overall decline in capital spending in the petroleum industry for the eighth consecutive year though the size of the decline is small.

Non-Manufacturing Industries, excluding Energy

Leasing: (7.8% → 4.3%) {20.4%}
Increased investment is again projected in the leasing industry as demands to replace capital investment with leased equipment increase and demand for information-related equipment is expected to grow.

Telecommunications and Information Services: (-5.5% → -0.2%) {11.0%}
For telecommunications, which is the mainstay of this sector, overall spending will increase despite a drop in large-scale capital spending for satellite telecommunications and a continuing decline in spending for fixed-line and PHS telephones, as an expansive tone continues for high levels of investment for cellular phones. As an expansive tone continues for high levels of investment for cellular phones. Capital spending in information services, on the other hand, will continue to fall. As a result, capital spending in the telecommunications and information industry as a whole will decline for the second year in a row.

Railways: (15.0% → -4.6%) {5.6%}
After reaching a peak in spending for construction of new lines and line extensions in the Tokyo metropolitan area, spending will decline.

Wholesale and Retail: (-12.8% → 1.4%) {5.0%}
In the wholesale sector, capital spending will drop for the second year in a row in spite of investment for office buildings and redevelopment. In the retail sector, some department stores, cooperatives and specialty stores are planning to accelerate store building in anticipation of the Large-Scale Retail Store Siting Law that will go into effect in June 2000. As a result, spending in the wholesale and retail industry as a whole will increase for the first time in four years.

Real estate: (-23.9% → -17.2%) {3.1%}
Although there will be renewed development of large-scale office buildings in the Tokyo metropolitan area, there will also be a pause in large-scale regional projects, and spending will fall by double digits for the industry as a whole.

Services: (38.7% → -10.9%) {1.7%}
Capital spending for the industry as a whole will decline as spending for the construction of a

large-scale oceanfront theme park project winds down and as the construction of some large hotels ended.

Warehousing and Transportation: (52.8% → -9.3%) {0.8%}
Capital spending will decline due to reduced spending for construction related to airports and lower investment in transportation facilities.

Construction: (-33.9% → -12.8%) {0.7%}
The overall squeeze on investment by general construction contractors will continue as the business climate remains uncertain in this industry, resulting in the eighth straight year of cutbacks in spending.

Airlines: (25.6% → -25.6%) {0.7%}
Investment in new above-ground facilities and purchases of spare parts will result in higher capital spending, but the number of new aircraft introduced into service will decline as the largest carriers plan for operating efficiency improvements, which will result in a broad-based decline in spending.

Marine Transport: (-43.8% → -49.4%) {0.1%}
Because of spending cuts for LNG transport ship construction, investment will continue to decline sharply.

3. Investment Motives

Investment Motives in the Manufacturing and Non-Manufacturing Sectors in FY 2000

Looking at the respective shares of each category of investment motive for the manufacturing sector in FY 2000, in both materials industries and processing and assembly industries ‘expansion of production capacity’, ‘product development and upgrading’ and ‘research and development’ will increase. Turning to ‘expansion of production capacity’ specifically, this will increase in many industries such as electric machinery or foods and beverages, and the actual amounts spent as well will increase broadly in most industries such as electric machinery. In industries with a great deal of influence such as chemicals or automobiles, however, ‘expansion of production capacity’ will decline as an investment motive. The share of spending for ‘product development and upgrading’ will increase, spurred by processing and assembly industries such as automobiles. Despite greater emphasis on ‘research and development’ as a motive for capital investment for industries such as electric machinery, however, R&D is not very prominent as an investment motive when viewed at the level of individual firms. Spending for ‘rationalization and labor saving’ as well as for ‘maintenance and repairs’ will fall.

For the non-manufacturing sector, on the other hand, the motive ‘expansion of production capacity’ will decline slightly in importance from the prior year, when it accounted for about 64% of capital spending.

Investment Motives in the Manufacturing Sector for ‘Materials’ and ‘Processing and Assembly’ Industries

We now look at the respective shares of each category of investment motive within the manufacturing sector, comparing ‘materials’ industries with ‘processing and assembly’ industries. For materials industries, the motives ‘rationalization and labor saving’, and ‘maintenance and repairs' are at a high level, whereas for processing and assembly industries the levels are high for 'product development and upgrading' and 'research and development'.

The significant trends in investment motives for materials industries in FY 2000 are:

(i) Except in the chemicals sector where investment will continue to be restrained, there will be an increase in 'expansion of production capacity' (18.1% → 20.6%) in all industries such as textiles, paper and pulp, and cement, ceramics and glass.

(ii) An increase in 'research and development' (7.4% → 8.0%) in the chemicals industry.

(iii) A decline in 'rationalization and labor saving' (25.5% → 23.9%) in non-ferrous metals and textiles.

(iv) A decrease for many industry sectors, such as textiles or iron and steel, in 'maintenance and repairs' (28.7% → 28.1%).

The significant trends for processing and assembly industries are:

(i) A rise in 'expansion of production capacity' (25.0% → 26.7%) in the majority of industries such as electric machinery or food and beverages, with the exception of the automobile industry, where spending will continue to be restrained.

(ii) An increase in 'product development and upgrading' (23.4% → 23.9%) thanks to reactionary spending increases in part of the automobile industry as that industry's reorganization moves ahead.

(iii) An increase in 'research and development' (11.5% → 11.6%), thanks in part to contributions from electric machinery investment.

Moreover, the amount of investment for reasons such as 'product development and upgrading' will show healthy increases in industries such as the electric machinery industry and the cement, ceramics and glass industries because of expansion to meet the demand for semiconductors, liquid crystal displays and related products.

Shift in Investment Motives within the Manufacturing Sector

We now look at the change in the percentage share of each investment motive category for the manufacturing sector. For this sector as a whole, the percentage of investment for 'expansion of production capacity' will increase from 23.2% to 25.2% as a result of higher spending in this category by the majority of sectors including electric machinery, food and beverages, and textiles, despite lower spending by the chemicals, automobiles and petroleum industries, which play such a large role in manufacturing.

For 'product development and upgrading', the majority of the processing and assembly industries such as paper and pulp and chemicals as well as food and beverages will decrease, but thanks to higher spending by the automobile industry, which accounts for a large share of this sector, this category will show an overall increase from 17.7% to 18.5%.

'Rationalization and labor saving' will drop from 17.5% to 16.9% following reductions in sectors such as automobiles and non-ferrous metals, despite increases in industries such as chemicals and electric machinery.

An increase in the importance of 'research and development' in the highly influential electric machinery industry and in chemicals and other sectors will result in an overall increase from 9.9% to 10.2%.

'Maintenance and repairs' shows a decrease from 18.9% to 18.3%, due to declines for the majority of industries, including automobiles and textiles.

Investment Motives

(Unit: %)

	All industries (1,996 firms)		Manufacturing		Materials		Processing and Assembly		Non-Manufacturing	
	FY1999 Est.	FY2000 Planned	FY1999 Est.	FY2000 Planned	FY1999 Est.	FY2000 Planned	FY1999 Est.	FY2000 Planned	FY1999 Est.	FY2000 Planned
Expansion of Production Capacity	53.4	53.6	23.2	25.2	18.1	20.6	25.0	26.7	64.0	63.5
Product Development and Upgrading	7.6	7.7	17.7	18.5	7.9	7.9	23.4	23.9	4.1	4.0
Rationalization and Labor Saving	6.8	6.4	17.5	16.9	25.5	23.9	13.9	14.1	3.1	2.8
Research and Development	3.2	3.3	9.9	10.2	7.4	8.0	11.5	11.6	0.8	0.8
Maintenance and Repairs	14.4	15.0	18.9	18.3	28.7	28.1	13.6	13.4	12.8	13.9
Others	14.6	14.0	12.8	10.9	12.4	11.5	12.7	10.3	15.3	15.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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

Anticipated Actual Land Investment in FY 1999

Anticipated actual land investment in FY 1999 (based on figures for the 1,781 firms that gave responses regarding both FY 1998 and FY 1999) was down 41.6% compared with the previous fiscal year, the third straight year of decline. Despite investment in land for their own buildings by companies in the electric machinery sector and investments in the transportation section for land for facilities within airports, there is no other conspicuous investment and overall spending for land investment as a whole will drop sharply from the previous fiscal year. As a result, land investment will account for 5.7% of capital spending (4.7% in the manufacturing sector, 6.1% in the non-manufacturing sector).

Planned Land Investment in FY 2000

Planned land investment in FY 2000 (based on figures for the 2,120 firms that gave responses regarding both FY 1999 and FY 2000) is down 53.6% on the previous year (land investment accounts for 2.6% of all investment planned for FY 2000), although it is far more unpredictable than FY 1999 plans.

For land investments, there is a tendency for amounts to be revised upward substantially as the investment process moves from the planning stage to the point of actual investment.

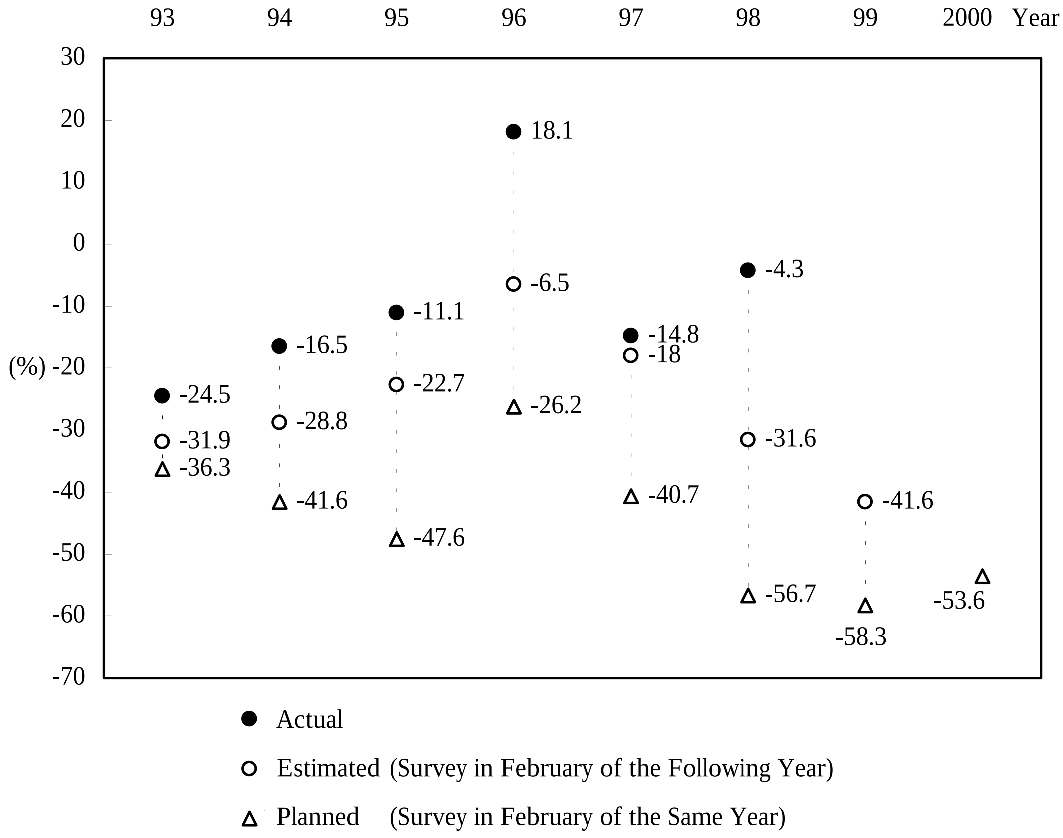
Trends in Land Investment (Classified according to principal business)

(Unit: 100 Million Yen)

	FY1998 (Actual)	FY1999 (Est.)	Growth Rate (%)	FY1999 (Est.)	FY2000 (Planned)	Growth Rate (%)
	(1,781 firms)		99/98	(2,120 firms)		00/99
Total						
Total Investment	138,956	133,384	-4.0	147,977	145,736	-1.5
Investment except Land	125,877	125,752	-0.1	139,698	141,891	1.6
Investment in Land	13,079	7,633	-41.6	8,279	3,844	-53.6
(Share of Land %)	(9.4)	(5.7)		(5.6)	(2.6)	
Manufacturing						
Total Investment	42,280	35,441	-16.2	43,412	41,462	-4.5
Investment except Land	39,476	33,787	-14.4	41,267	41,079	-0.5
Investment in Land	2,805	1,654	-41.0	2,145	383	-82.2
(Share of Land %)	(6.6)	(4.7)		(4.9)	(0.9)	
Non-Manufacturing						
Total Investment	96,676	97,944	1.3	104,566	104,274	-0.3
Investment except Land	86,402	91,965	6.4	98,432	100,812	2.4
Investment in Land	10,274	5,979	-41.8	6,134	3,462	-43.6
(Share of Land %)	(10.6)	(6.1)		(5.9)	(3.3)	

Growth Rate of Investment in Land

Total of All Industries



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

Of the total number of corporations who responded to both FY 1999 and FY 2000 surveys (2,965 firms), 141 were classified as foreign-affiliated firms (firms with over one-third foreign ownership). They account for 2.8% of total capital spending (FY 2000).

Anticipated actual capital spending for FY 1999 will increase slightly (up 2.4%) from the previous year. In the manufacturing sector, spending will decrease by double digits (down 11.1%) in spite of higher capital spending in the electric machinery sector, due to large spending drops in sectors such as chemicals and general machinery. Spending in the non-manufacturing industry sector will increase sharply (up 62.7%), reflecting large-scale investment in the services industry.

Planned capital spending for FY 2000 will increase overall by 13.9%. Spending by the manufacturing industry sector will turn upward (up 19.4%) because of higher spending in sectors such as electric machinery and transportation. The non-manufacturing industry sector, on the other hand, plans to slightly reduce spending (down 0.4%).

Capital Spending by Foreign Affiliated Firms

	Capital Spending (100 Million Yen)				Growth Rate (%)		Share (%)	
	FY98 (Actual)	FY99 (Est.)	FY99 (Est.)	FY2000 (Planned)	99/98	00/99	FY2000	
	(127 firms)		(141 firms)				(141 firms)	(of All Firms)
Total	4,675	4,787	6,008	6,844	2.4	13.9	100.0	2.8
Manufacturing	3,818	3,393	4,341	5,183	-11.1	19.4	75.7	6.9
Non-Manufacturing	857	1,394	1,667	1,661	62.7	-0.4	24.3	1.0
By sector								
Materials Processing	1,429	1,034	1,071	1,351	-27.6	26.2	19.7	6.3
Processing and Assembly	1,822	1,940	2,851	3,444	6.5	20.8	50.3	6.6
Energy Related	567	420	420	388	-26.0	-7.7	5.7	0.8
Non-Manufacturing excluding Energy	857	1,394	1,667	1,661	62.7	-0.4	24.3	1.4

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

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