

II-2-1 Telecommunications business

(1) Number of telecommunications carriers

The number of telecommunications carriers has seen a steady increase.

In fiscal 1998, the Japanese market saw the entry of 903 telecommunications carriers, following 1,298 new entrants in fiscal 1997. In particular, there has been a steady increase in the number of newcomers in Type II telecommunications business that provide mainly Internet access.

Thirty-eight companies were granted licenses for Type I telecommunications business in fiscal 1998, bringing the total to 179 carriers at the end of the fiscal year (Table and Fig. 1).

Also in fiscal 1998, 17 companies were newly registered for the Special Type II telecommunications business, bringing the total to 88 (including 84 International Special Type II telecommunications carriers) at the end of that year (Table and Fig. 2). During the same period, 848 companies newly submitted notifications for General Type II telecommunications business, totaling 6,514 carriers as of the end of fiscal 1998 (Table and Fig. 3).

Table Number of telecommunications carriers

		Fiscal 1997	Fiscal 1998	Change	
Type I telecommunications carriers	NTT	1	1	0	
	KDD	1	1	0	
	NTT DoCoMo Group	9	9	0	
	NCCs	Long-distance/ International carriers	6	12	+6
		Regional carriers	47	77	+30
		Satellite carriers	5	6	+1
		Mobile carriers	84	73	-11
Subtotal	153	179	+26		
Type II telecommunications carriers	Special Type II carriers (International carriers)	95 (67)	88 (84)	-7 (+17)	
	General Type II carriers	5,776	6,514	+738	
	Subtotal	5,871	6,602	+731	
Total		6,024	6,781	+757	

Fig. 1 Newcomers in Type I telecommunications business in fiscal 1998

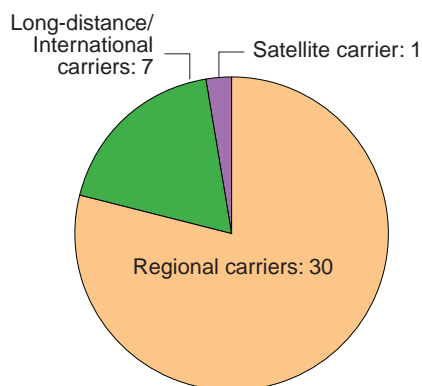


Fig. 2 Newcomers in Special Type II telecommunications business in fiscal 1998

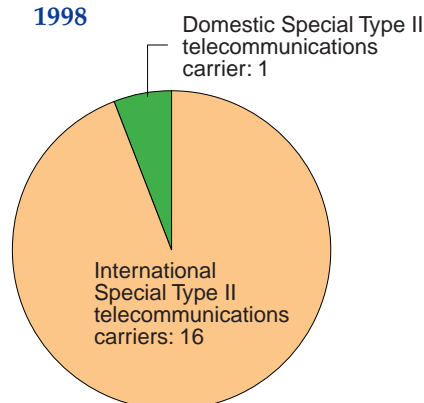
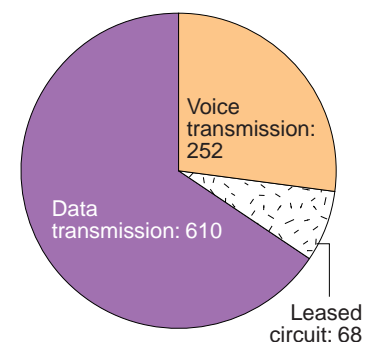


Fig. 3 Newcomers in General Type II telecommunications business by service in fiscal 1998



Note: The total number indicated exceeds the actual number of carriers due to multiple notifications submitted by a single carrier.

Source: MPT

(2) Operating revenues

Trends in operating revenues by business type

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1. Type I telecommunications carriers

The total operating revenues (excluding revenues other than for telecommunication services) of Type I telecommunications carriers during fiscal 1997 stood at 11,378.4 billion yen, up 10.7% over the previous fiscal year.

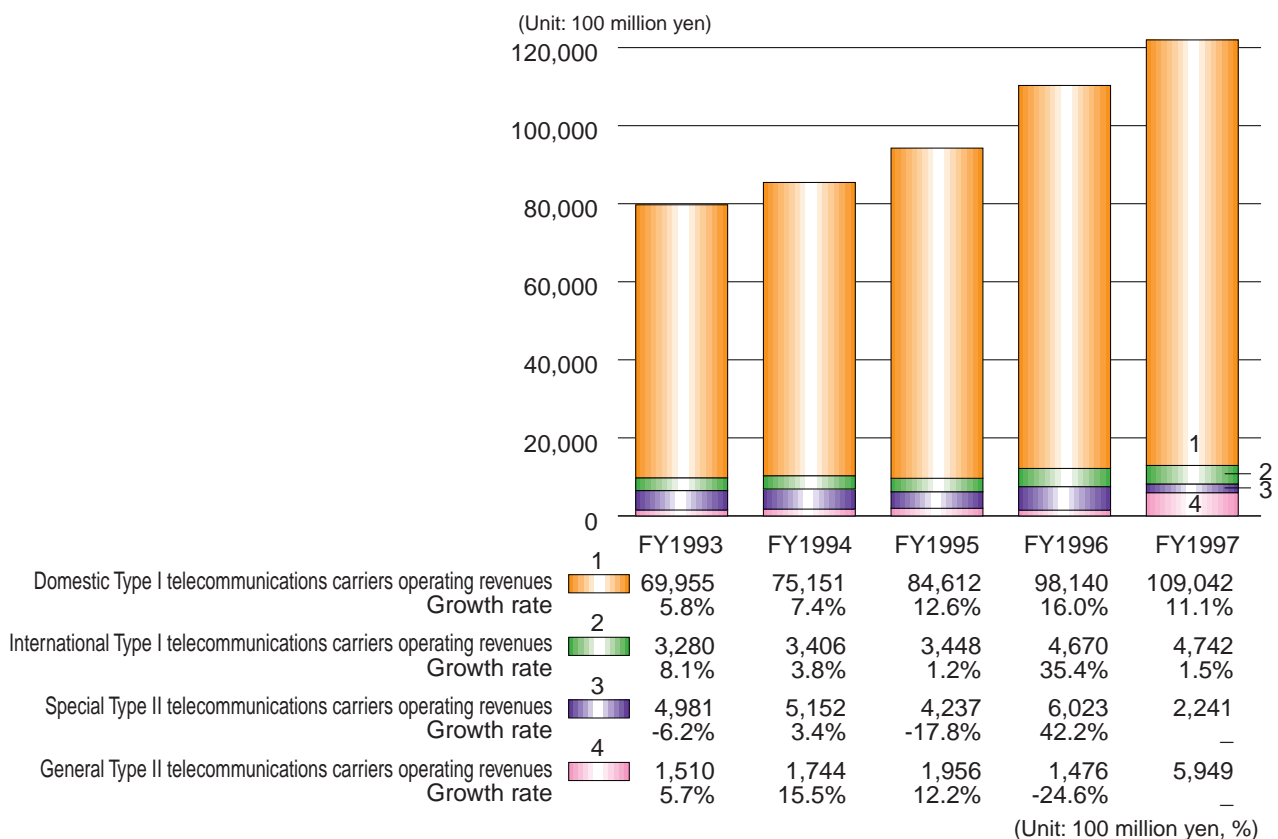
By business type, domestic Type I telecommunications carriers posted 10,904.2 billion yen in revenues, up 11.1%, while international Type I telecommunications carriers recorded revenues of 474.2 billion yen, up 1.5%. For detailed data including revenues other than for telecommunications services, refer to Appendix 7.

2. Type II telecommunications carriers

According to MPT's survey on the "Overall Status of Japan's Communications Industry (Telecommunications Carriers and Broadcasters)," in fiscal 1997 the total operating revenues of Type II telecommunications carriers were 818.9 billion yen, up 9.2% from fiscal 1996.

By business type, Special Type II telecommunications carriers posted total operating revenues of 224.1 billion yen, while General Type II telecommunications carriers recorded 594.9 billion yen.

Fig. Telecommunications service operating revenues by type



Note: Because the classification of the Type II telecommunications business was revised in November 1998, the operating revenues of Special Type II telecommunications carriers and General Type II telecommunications carriers in fiscal 1996 cannot be directly compared with those in fiscal 1997 (Refer to III-2-2-(1)).

Sources: MPT data for Type I telecommunications carriers; "Survey on the Overall Status of Japan's Communications Industry (Telecommunications Carriers and Broadcasters)," (MPT) for Type II telecommunications carriers

(3) Business performance

The average ratio of ordinary profit to net sales of Type I telecommunications carriers was 110% higher than the average for all industries.

An analysis of the average financial indicators of the 127 Type I telecommunications carriers in operation in Japan in fiscal 1997, in comparison with the average for all industries, produced the following results:

1. Profitability

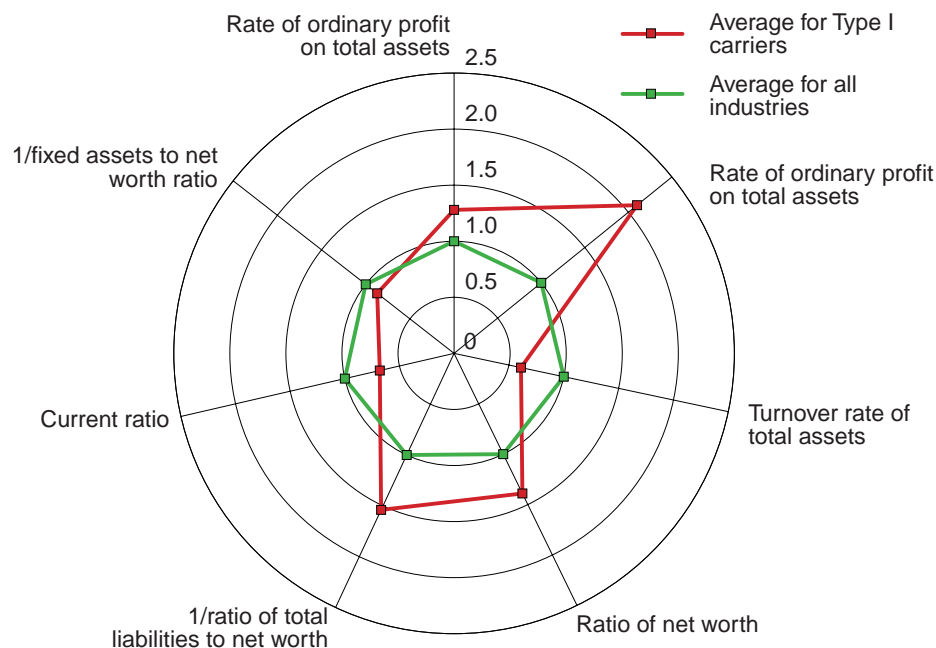
The average rate of ordinary profit on total assets of Type I telecommunications carriers was 30% higher than that for all industries, and the average ratio of ordinary profit to net sales was 110% higher than that for all industries. In contrast, the average rate of return on total assets of Type I telecommunications carriers recorded a dismal 40% lower

performance than the all-industry average.

2. Stability

The average ratio of net worth for Type I telecommunications carriers was higher by 40% than that of all industries; the average ratio of total liabilities to net worth was 40% lower than that for all industries. In addition, the average current ratio was 30% lower than the all-industry average and this, combined with the fact that the average fixed assets to net worth ratio for Type I telecommunications carriers was 20% higher than that for all industries, indicates the large-scale infrastructure requirements of the telecommunications business.

Fig. Comparison of average financial indicators of Type I telecommunications carriers with the all-industry average (index: all-industry average=1.0)



	Average for Type I carriers (index)	Average for all industries (index)
Rate of ordinary profit on total assets	2.71% (1.3)	2.12% (1.0)
Ratio of ordinary profit to net sales	3.97% (2.1)	1.89% (1.0)
Turnover rate of total assets	0.68 times (0.6)	1.12 times (1.0)
Ratio of net worth	27.70% (1.4)	19.88% (1.0)
Ratio of total liabilities to net worth	261.06% (0.6)	402.94% (1.0)
Current ratio	73.63% (0.7)	108.54% (1.0)
Fixed assets to net worth ratio	293.85% (1.2)	254.42% (1.0)

Sources: MPT; "Financial Statement Statistics of Corporation by Industry," MOF

(4) Stock prices

Trends in the telecommunications stock price index

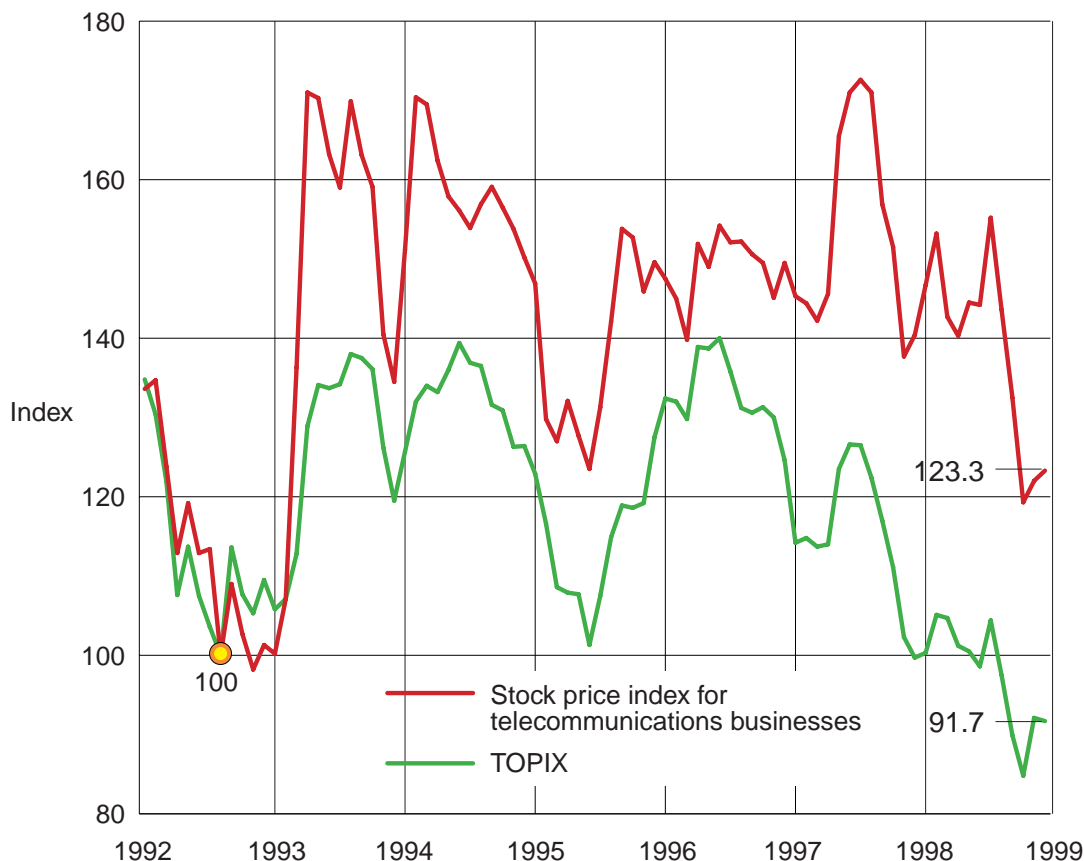
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A comparison of the monthly average of the Tokyo Stock Price Index (TOPIX) with the stock price index for telecommunications businesses reveals the following data on the business environment for telecommunications carriers.

To make the results easier to visualize, the monthly stock price averages for both indices are set at 100 for August 1992. Comparing the indices between August 1992 through December 1998,

TOPIX declined by 8.3%, while the telecommunications index rose by 23.3% and surpassed TOPIX in almost every month during the period. Therefore, although the extent of influence caused by external factors such as economic conditions during the period could not be analyzed, it can be inferred that the financial market expects the telecommunications businesses to grow faster than the all-industry average.

Fig. Trends in stock price index (stock price averages in August 1992=100)



Source: Tokyo Stock Exchange

(5) Market entries and withdrawals

From 1991 through 1997, the number of telecommunications businesses rose by 150%.

Data from the “Establishment and Enterprise Census” (Management and Coordination Agency) were used to analyze trends in new business entries by industry, while bankruptcy data from Teikoku Databank were used to indicate withdrawals.

1. Rate of increase in the number of new companies, by industry ((Number of companies in 1996 – Number of companies in 1991) ÷ Number of companies in 1991)

Between 1991 and 1996, the number of telecommunications businesses operating in Japan increased by 153%, reflecting the surge in Internet

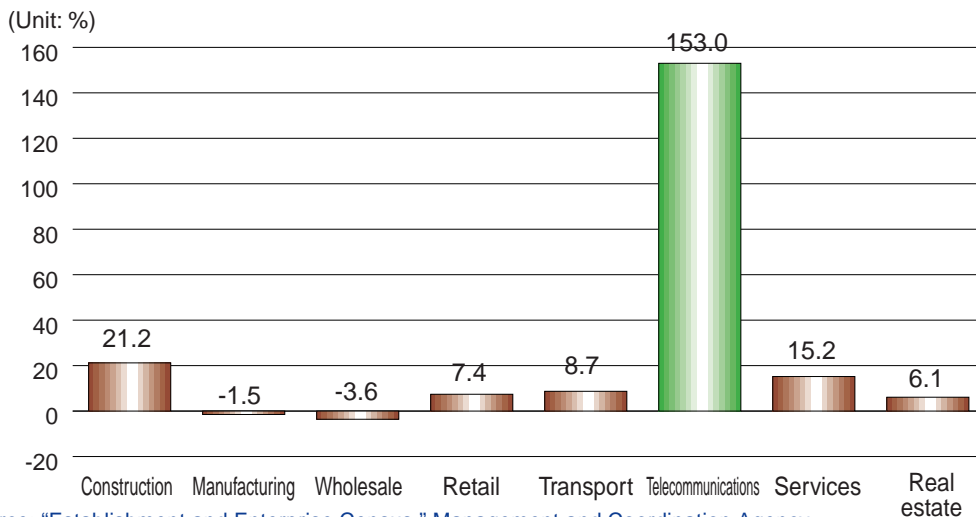
service providers (ISPs).

Taking a look at other major industries, the construction industry showed a higher 21.1% increase and the services industry a 15.2% increase. (Fig. 1)

2. Rate of withdrawal from business, by industry (Cumulative number of bankruptcies from 1992 through 1997 ÷ Number of companies in 1996)

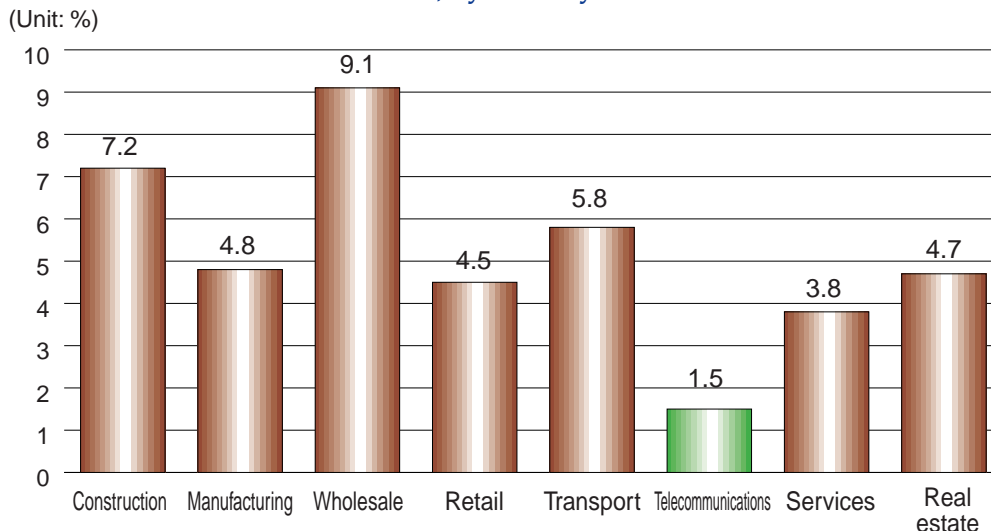
For the rate of bankruptcies by industry (the rate of withdrawal from business), in comparison with other industries, the rate of withdrawal from business in the telecommunications industry was an extremely low at 1.5% (Fig. 2).

Fig. 1 Rate of increase in the number of new companies, by industry



Source: “Establishment and Enterprise Census,” Management and Coordination Agency

Fig. 2 Rate of withdrawal from business, by industry



Sources: “Establishment and Enterprise Census,” Management and Coordination Agency; Teikoku Databank

II-2-2 Broadcasting

(1) Number of broadcasters

Trends in the number of broadcasters

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1. Terrestrial broadcasters

At the end of fiscal 1998, there were 319 terrestrial broadcasters operating in Japan, comprising 129 TV broadcasters, 48 AM radio broadcasters (including 37 concurrent TV broadcasters), 170 FM radio broadcasters (including 2 concurrent TV broadcasters), 2 shortwave radio broadcasters (including 1 concurrent TV broadcaster), 1 FM teletext multiplex broadcaster and 9 TV multiplex broadcasters. In fiscal 1998, new licenses to broadcast were obtained by 28 companies.

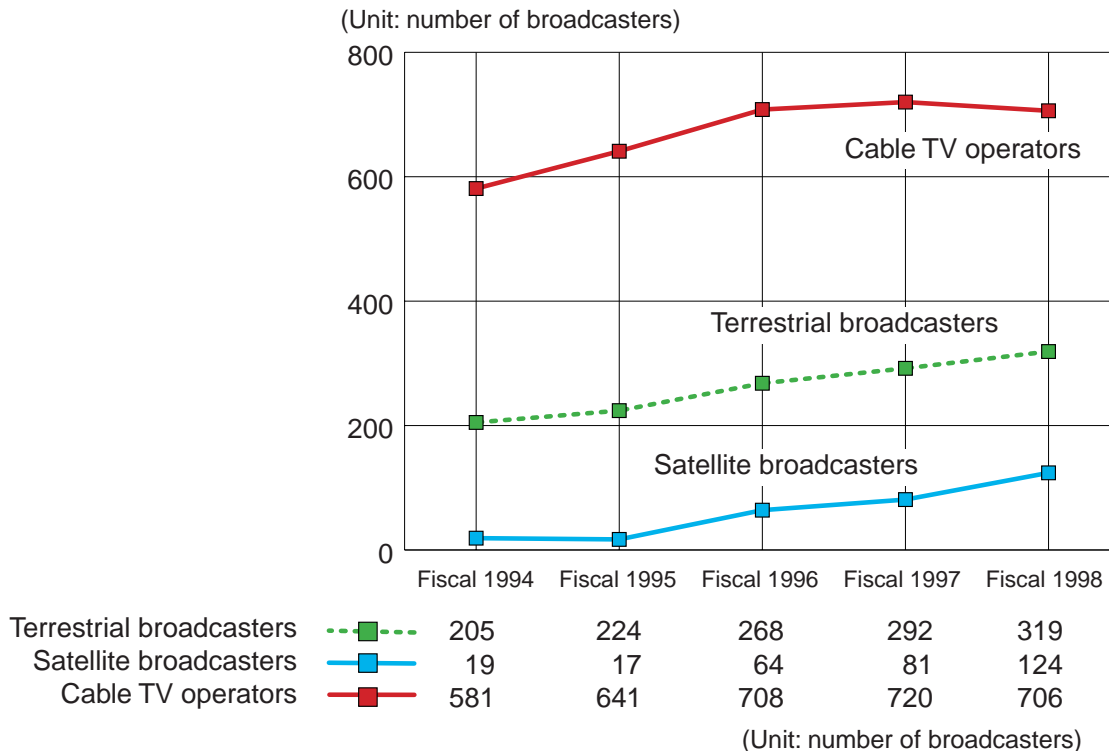
2. Satellite broadcasters

There were 124 satellite broadcasters in operation at the end of fiscal 1998, comprising 2 broadcasting satellite (BS) broadcasters and 122 communications satellite (CS) broadcasters. In fiscal 1998, new business approvals were obtained by 48 CS digital program-supplying broadcasters (43 digital TV broadcasters, 3 audio broadcasters and 2 digital data broadcasters).

3. Cable TV operators

At the end of fiscal 1998, Japan had an estimated 706 cable TV operators (providing original programming).

Fig. Trends in the number of broadcasters



- Notes: 1. Terrestrial broadcasters include NHK and the University of the Air Foundation.
 2. Satellite broadcasters include program supplying broadcasters and facility supplying broadcasters using CSs, excluding NHK and the University of the Air Foundation.
 3. Cable TV operators are those broadcasting original programming, the number of operators is an estimate.

Source: MPT

(2) Operating revenues

Operating revenues for all commercial broadcasters totaled 2.8 trillion yen in fiscal 1997.

1. Terrestrial commercial broadcasters

The operating revenues for all terrestrial commercial broadcasters totaled 2,546.3 billion yen in fiscal 1997, up 3.2% from the previous fiscal year and the fourth annual rise in a row (Refer to Appendix 8).

2. Satellite commercial broadcasters

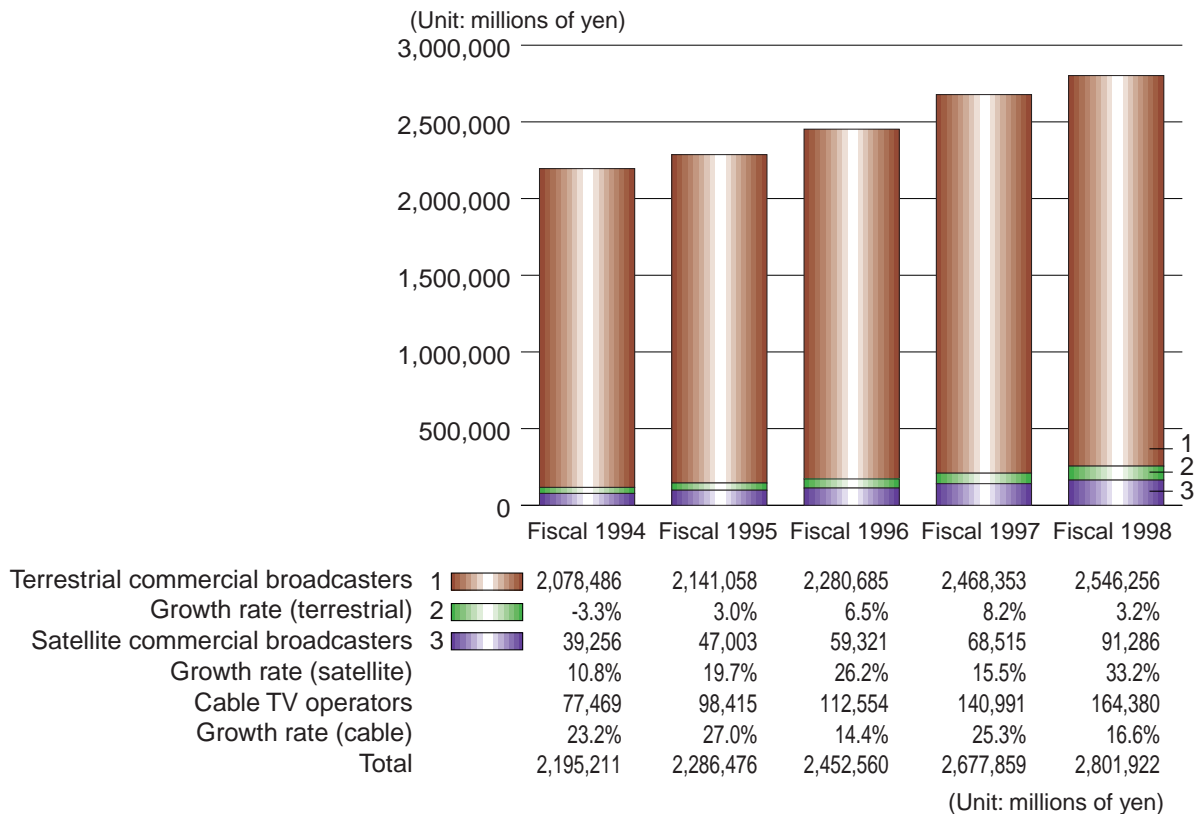
The total operating revenues for all satellite commercial broadcasters achieved a huge 33.2% increase in fiscal 1997 from the previous fiscal year, reaching 91.3 billion yen. In particular, CS digital

broadcasters showed a remarkable growth in operating revenues, thanks to an increase in the number of subscribers (Refer to Appendix 8).

3. Cable TV operators

In fiscal 1997 the operating revenues for cable TV operators totaled 164.4 billion, up 16.6% from the previous fiscal year. However, an increase in depreciation costs, accompanied by investments in facilities and equipment, expanded ordinary losses from the previous fiscal year (Refer to Appendix 9).

Fig. Operating revenues of commercial broadcasters and growth rate



Notes: 1. Satellite broadcasters include 2 BS broadcasters and program supplying broadcasters using CSs, provided that in the case of CS program supplying broadcasters, only the operating revenues of program-supplying business are included.

2. Cable TV operators are those for profit; the operating revenues from other services such as telecommunications services are excluded.

Source: MPT

(3) Business performance

Commercial broadcasters' average ratio of ordinary profit to net sales in fiscal 1997 was 370% higher than the ratio for all industries.

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An analysis of the average financial indicators of the 189 commercial broadcasters operating in Japan in fiscal 1997, compared with the all-industry average, gave the following results:

1. Profitability

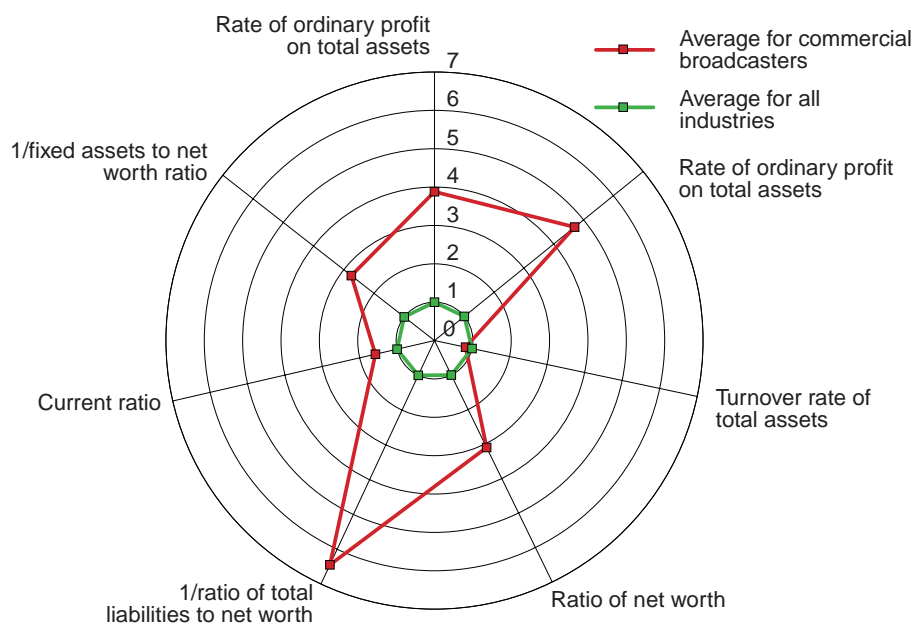
In fiscal 1997, the average rate of ordinary profit on total assets of commercial broadcasters was 3.9 times higher than that for all industries and the average ratio of ordinary profit to net sales was 4.7 times higher. However, the average rate of commercial broadcasters' return on total assets recorded a slightly lower performance than the all-industry average.

2. Stability

The average ratio of net worth of commercial broadcasters was 3.1 times higher than that for all industries; the average ratio of total liabilities to net worth was only 20% compared to the figure for all industries.

The fact that the average current ratio of commercial broadcasters was 60% higher and the average fixed assets to net worth ratio 60% lower than those for all industries contrasts sharply with the telecommunications business, where the average current ratio was 0.7 times compared with the all-industry average and the average fixed assets to net worth ratio was 1.2 times.

Fig. Comparison of average financial indicators of commercial broadcasters with the all-industry average (index: all-industry average=1.0)



	Average for commercial broadcasters (index)	Average for all industries (index)
Rate of ordinary profit on total assets	8.23% (3.9)	2.12% (1.0)
Ratio of ordinary profit to net sales	8.88% (4.7)	1.89% (1.0)
Turnover rate of total assets	0.93 times (0.8)	1.12 times (1.0)
Ratio of net worth	61.56% (3.1)	19.88% (1.0)
Ratio of total liabilities to net worth	62.44% (0.2)	402.94% (1.0)
Current ratio	171.25% (1.6)	108.54% (1.0)
Fixed assets to net worth ratio	92.65% (0.4)	254.42% (1.0)

Sources: "Financial Statement Statistics of Corporation by Industry," MOF; "NAB Yearbook," the National Association of Commercial Broadcasters in Japan

II-2-3 Investment in facilities and equipment

Capital investment by the telecommunications and broadcasting industries has remained high.

Investment in facilities and equipment by the telecommunications and broadcasting industries has shown huge growth since fiscal 1994, accompanying active investment by mobile communications carriers.

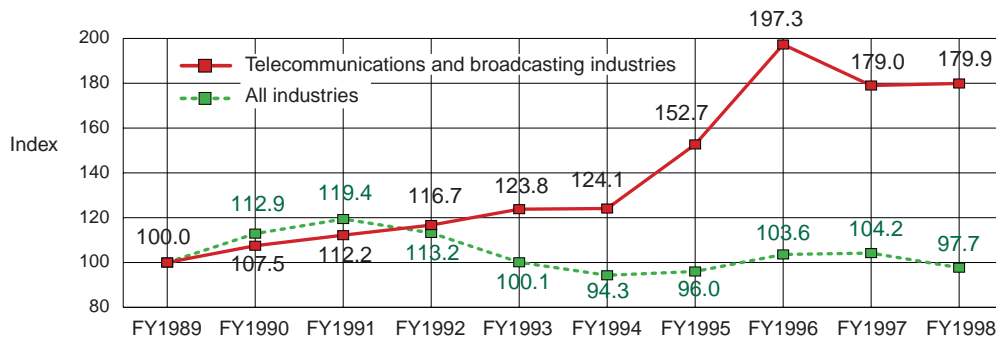
In fiscal 1997, for the first time since fiscal 1989, these industries recorded a drop in capital investment over the previous fiscal year; however, despite the decline, investment levels in the telecommunications and broadcasting industries have remained high compared with Japanese industry as a whole (Fig. 1).

Investment in facilities and equipment by the telecommunications industry was worth 4,177.4 billion

yen in fiscal 1997, down 4.4% from the previous fiscal year, and investment by the broadcasting industry was worth 286.3 billion yen, down 48.0%. This gives a total capital investment of 4,463.7 billion yen, down 9.3%.

In fiscal 1996, the telecommunications and broadcasting industries' investment in facilities and equipment for the first time since fiscal 1989 surpassed the level of investment by the electricity industry. However, a direct comparison is not possible after that year, as the Economic Planning Agency has merged its classification of the electricity industry with the gas industry in its "Business Confidence Survey Results" (Fig. 2).

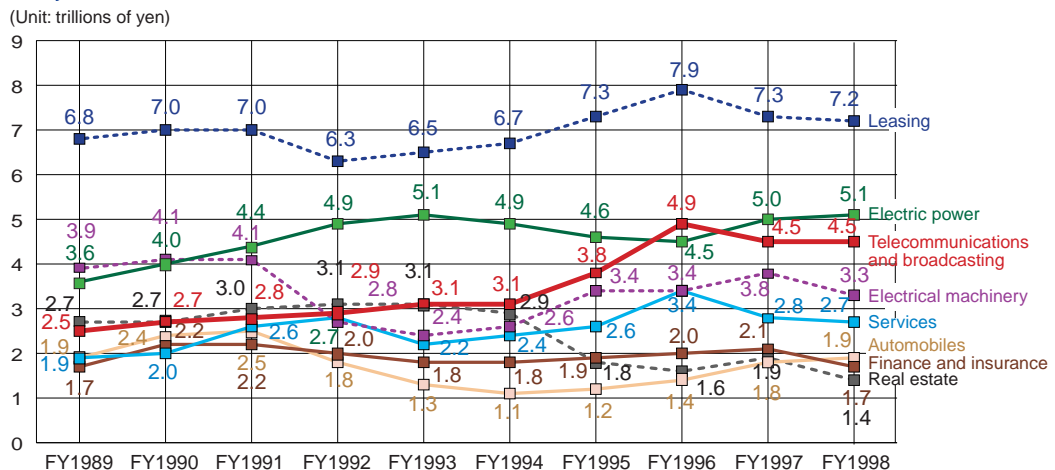
Fig. 1 Capital investment by the telecommunications and broadcasting industries, compared with all industries



Note: For fiscal 1998, indices are based on revised plans.

Sources: "Survey on Facilities and Equipment Investment by the Communications Industry (Telecommunications Carriers and Broadcasters)," MPT; "Business Confidence Survey Results," Economic Planning Agency

Fig. 2 Capital investment by the telecommunications and broadcasting industries, compared with major industries



Notes: 1. Figures for fiscal 1998 are based on revised plans.

2. Since fiscal 1997, the classification of the electric power industry was merged with the gas industry.

Sources: "Survey on Facilities and Equipment Investment by the Communications Industry (Telecommunications Carriers and Broadcasters)," MPT; "Business Confidence Survey Results," Economic Planning Agency

II-2-4 Mergers and acquisitions

Trends among telecommunications carriers and broadcasters

II-2

Communications and broadcasting business

Competition is intensifying among carriers and broadcasters amid Japan's second reform of the info-communications sector and the ongoing program of deregulation in the and broadcasting field. In response to changes in market structure, businesses have sought merger and tie-up opportunities, by combining domestic and international communication services while expanding their economies of scale and scope of business. Fiscal 1998 saw a number of such developments, as follows:

1. Telecommunications (Fig.)

KDD Corp. and Teleway Japan Corp. merged in December 1998. The new company "KDD Corp." has since offered domestic telecommunications in addition to its existing international services.

DDI Corp. began providing international telecommunication services by concluding business tie-ups with Teleglobe Services Japan Inc., Cable & Wireless Japan Ltd. and KDD.

Within the NTT Group nine PHS carriers, including NTT Central Personal Communications Inc., transferred their PHS business operations in each region to NTT DoCoMo Group carriers, including

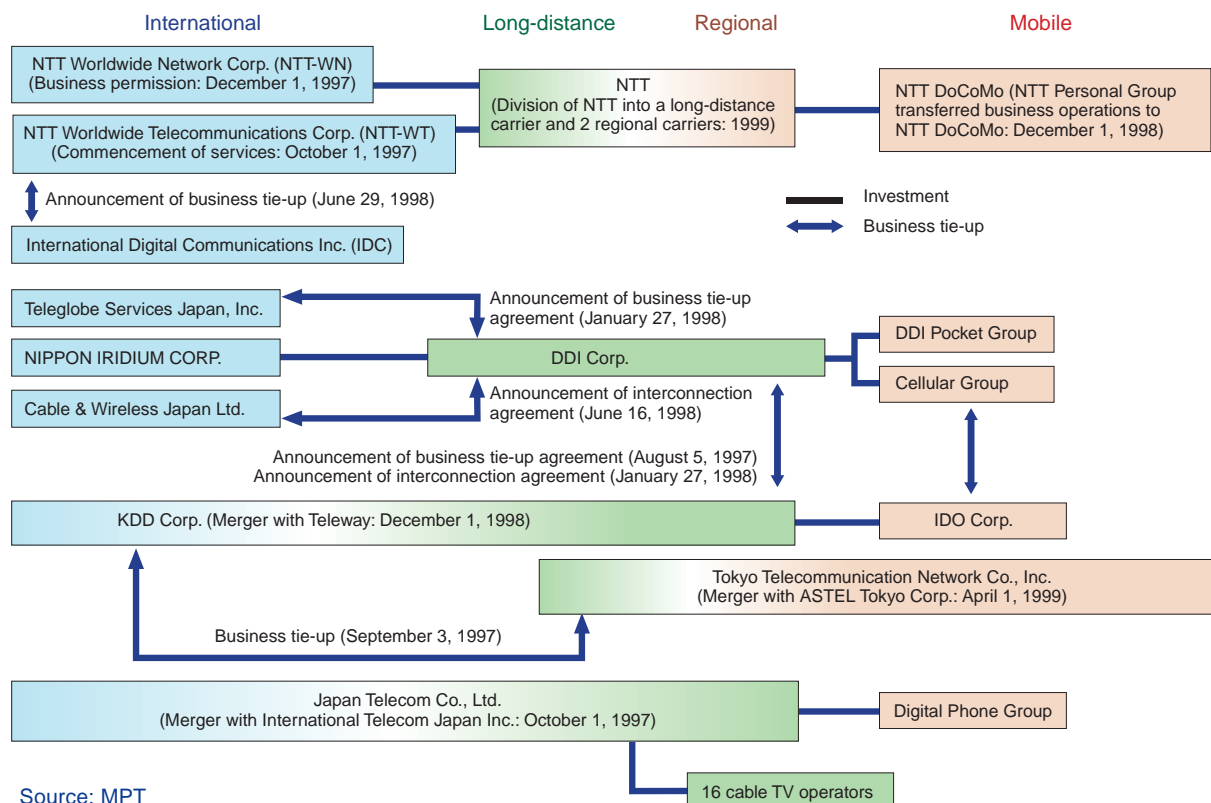
NTT Mobile Communications Network Inc. NTT Worldwide Network Corp., a subsidiary established by NTT before it began offering its own international services, announced in June 1998 that it had signed a business tie-up agreement with International Digital Communications Inc. The agreement included the area of international telephone call discount resale services

PSINet Inc., a U.S. Internet service provider, completed the acquisition of Rimnet Corp., TWICS Co., Ltd. and Tokyo Internet Corp. Ten regional carriers, subsidiaries of electric power utilities, established an organization, Power Nets Japan, to further strengthen their ties.

2. Broadcasting

In the broadcasting market, Japan Digital Broadcasting Services Inc. (service name: PerfectTV) merged with Japan Sky Broadcasting (service name: JSkyB) in May 1998. Japan Digital Broadcasting Services Inc. became the continuing corporate entity (service name: SKY PerfectTV!).

Fig. M&A in the communications industry



Source: MPT

II-2-5 Postal services

For the first time in five years, the Postal Services Special Account was in the red in fiscal 1998.

According to the profit and loss statements for the Postal Services Special Account, in fiscal 1995 profit and accumulated profit expanded; however, from the peak recorded in that year there was a downward trend in profits. In fiscal 1997, profit fell drastically as operating revenues fell below those for the previous fiscal year for the first time since World War II. As a result, a 97.8 billion-yen loss was appropriated in the special account for fiscal 1998 supplementary budget, and a 74.2 billion-yen loss is forecast for the special account in the fiscal 1999 budget (Fig. 1).

In response, MPT has strengthened postal ser-

vices by introducing a new postal code system and improving productivity and efficiency through mechanization. Now, 93.7% of mail carries the new codes, which allow more efficient sorting.

Along with the introduction of the new postal code, 623 new sorting machines, including barcode sorters, were introduced at 388 sorting offices nationwide, resulting in a reduction of over 4,000 employees.

Moreover, the workforce will be cut by an additional 3,000 between fiscal 1999 through 2001, by using more part-time workers for indoor operations, mainly at regional sorting offices.

Fig. 1 Financial status of postal services

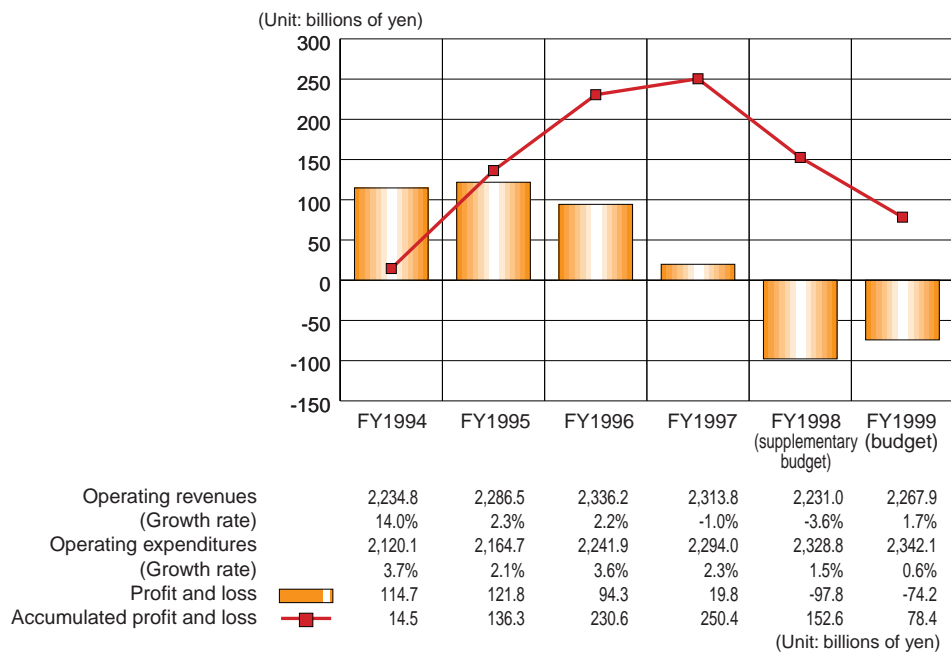
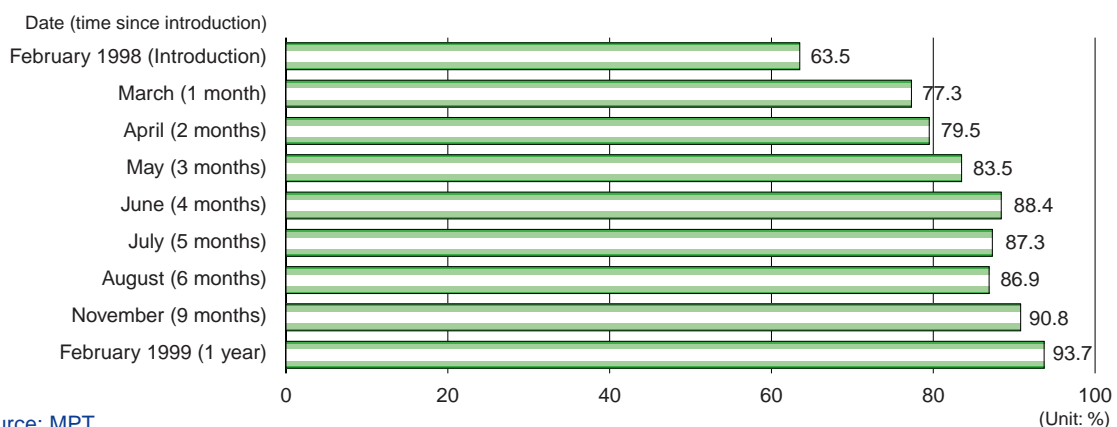


Fig. 2 Trends in fill-out rate of frames for postal code



Source: MPT

Column 1 1999 New Year's lottery postcards

52 designs were available for nationwide and regional issues combined.

MPT issued a total of 601.6 million 1999 New Year's lottery postcards in 52 designs: two nationwide and 50 regional (prefectural) issues. The nationwide issues are sold every year at post offices throughout the country, while each of the prefectural issues can be purchased only at post offices inside that particular prefecture.

• Tohoku region

- Kandachime horses (literally, horses standing in the cold) in Shiriyazaki (Aomori Pref.)
- Mt. Iwatesan (Iwate Pref.)
- Mt. Zao in early spring (Miyagi Pref.)
- Inukko Festival (Akita Pref.)
- Mt. Gassan in spring (Yamagata Pref.)
- The Miharu Ningyo (doll) Tamausagi (Fukushima Pref.)

• Chugoku region

- Mt. Daisen (Tottori Pref.)
- Seto-Ohashi Bridge (Okayama Pref.)
- Nabezuru (hooded crane) (Yamaguchi Pref.)
- Lake Shinji-ko (Shimane Pref.)
- Islands in the Inland Sea (Hiroshima Pref.)

• Hokuriku region

- Traditional craft, Shishigashira (Inami woodcarving) (Toyama Pref.)
- Traditional craft, Kagayuzen depicting red and white plum blossoms (Ishikawa Pref.)
- Traditional craft, paper rabbit doll made of Echizen washi paper (Fukui Pref.)

• Shin'etsu region

- A stream in spring (Niigata Pref.)
- Butterbur flower (Nagano Pref.)

• Kanto region

- Sugao-numa Marsh (Ibaraki Nature Museum) and swans (Ibaraki Pref.)
- Nikko in spring, Kirifuri-kogen Plateau (Tochigi Pref.)
- Japanese witch-hazel (Gunma Pref.)
- Sai-no-kuni in the 21st century, the Saitama New Urban Center and the Chichibu Mountains (Saitama Pref.)
- Tokyo Bay Aqualine "Umihotaru" (Chiba Pref.)
- Departure of a ship (Kanagawa Pref.)
- Mt. Fuji and white Magnolia liliflora (Yamanashi Pref.)
- The New City Core Shinjuku in early spring (Tokyo Pref.)
- Sazae-san, heroine of the four comic strip "Sazae-san" (not available via PDF version) (Tokyo Pref.)

• Nationwide issues

- Spearflower (*Ardisia crispa*) and Siberian meadow bunting (*Emberia cioides*)
- Hare

• Kyushu region

- Kokura Gion-daiko (drum) Festival in the year of Hare (Fukuoka Pref.)
- Ariake Sea (Saga Pref.)
- Hata (kite) Flying Contests and Megane-bashi Bridge (Spectacles Bridge) (Nagasaki Pref.)
- "Antagata dokosa," a children's song in Kumamoto (Kumamoto Pref.)
- Okajo Castle in early spring (Oita Pref.)
- Aoshima Island in early spring (Miyazaki Pref.)
- Mt. Sakurajima (Kagoshima Pref.)

• Okinawa Pref.

Nento-Hiramatsu (500-years old pine tree) in Iheya Village

• Shikoku region

- Oonaruto Bridge (Tokushima Pref.)
- Seto-Ohashi Bridge (Seto-Chuo Expressway) (Kagawa Pref.)
- Setouchi Shimanami Kaido (Nishiseto Expressway) (Ehime Pref.)

• Tokai region

- Rock ptarmigans (*Lagopus mutus*) (Gifu Pref.)
- Mt. Fuji and plum trees (Shizuoka Pref.)
- Hare of the 12 Chinese zodiac signs (Tokai region)
- The Meiko Triton bridges (Aichi Pref.)

• Mie Pref.

- Houses in Ise City on New Year's Day

• Nara Pref.

- A rabbit-shaped bag made of chirimen (silk crepe) (Hyogo Pref.)
- Heijo-kyo (the capital created in AD 710) at dawn