

Rating Methods by Sector **Telecommunications**

1. Business base

The telecommunications industry is characterized by the services it provides, which are profoundly entwined in the daily lives of users, and by its revenue, which is derived from monthly fees paid under contract and is thus relatively resistant to business fluctuations. The telecommunications business requires a government license and the market is generally oligopolistic.

(1) Characteristics of the industry

(i) Market overview

In the fixed telecommunications market, the number of subscribers to existing fixed-line telephones (NTT subscriber telephones) continues to decline. This is a result of diversified means of voice communication through the increasingly common use of mobile and IP phones. This trend is likely to continue for some time. Meanwhile, although broadband services continue to expand, an increasing number of users are shifting from ADSL to fiber optic service. Changes in the services demanded by users and the types of services in which each company specializes must be confirmed.

In the mobile telecommunications market, the number of subscribers continues to rise despite the already significantly high penetration rate. One reason is the fresh demand created by new services and phone devices. The market is expected to continue to grow for some time, although it may eventually achieve saturation. Trends in the number of subscribers, therefore, must be monitored.

(ii) Competitive situation

Telecommunications services often require government approval or authorization, while developing the necessary infrastructure takes considerable time and money. These two factors create high barriers to entry. New entry is difficult, particularly in the mobile telecommunications market because of the limited availability of frequencies needed to provide the services. As a result, the market has been oligopolistic, consisting essentially of three major groups, including the NTT Group, KDDI Group, and the Softbank Group. These three major groups nevertheless continue to compete fiercely against one another in terms of fees, phone devices, and services. Fee discounts, in particular, have a significant effect on earnings, and an understanding of the competitive situation is a necessity.

(iii) Cost structure

The cost structure of telecommunications services needs to be considered in terms of the cost of providing services and the cost of acquiring new subscribers. The cost of providing services is

characterized by, on the one hand, a heavy burden of fixed costs arising from capital expenditure of a certain scale associated with infrastructure development and, on the other, a relatively small variable cost. Ensuring profit is often easy after the number of subscribers exceeds breakeven. When starting a new service, therefore, the ability to obtain a certain number of subscribers quickly becomes the critical point in the aspect of earnings.

The cost of acquiring new subscribers often includes substantial service charges paid to sales agencies because of the intense competition in the industry. Some services require the payment of tens of thousands of yen for each subscriber. Because of this characteristic, particularly when a new service is launched and new subscribers are aggressively being sought, the Subscriber Acquisition Cost precedes any profitability and the service may operate in the red for a period. The Subscriber Acquisition Cost, however, is recouped by profits from subsequent subscriptions, and the profitability of the service thus needs to be analyzed from a somewhat long-term perspective.

(iv) Approval/authorization and regulations

Many telecommunications businesses require government approval or authorization. The industry includes the NTT Group, which has massive infrastructure and scale. NTT East and West, in particular, are subject to a range of regulations designed to promote competition. These regulations must be monitored, as they can influence the services offered by industry players or even shape the competitive landscape. In the past, opening up telephone office and dry copper (unused metal cable channels) held by NTT East and West provided an opportunity for other companies to launch ADSL and direct access telephone services which do not use the lines held by NTT. Similar cases may arise in the future. In the mobile telecommunications business, new frequencies are sometimes assigned to a new telecommunications carrier. The assignment may alter the competitiveness of each company. The nature of government approval or authorization and regulations must be observed from a medium- to long-term perspective.

(2) Important factors in market position and competitiveness

(i) Market position

Telecommunications services require a substantial capital expenditure, and cost cutting may be achieved through large orders in construction, equipment purchases, and other areas. In the mobile telecommunications business, the larger the company, the more telephone devices it is able to purchase, and this may reduce the purchasing cost per unit. Because, in general, economies of scale can be achieved readily in this industry, market positions and shares are important in the rating decision.

Market shares may change, albeit gradually, with disparities in net gains associated with subscriber acquisition and churn of each company. Changes in market shares are considered one indicator of the current competitiveness of each company, and must be confirmed.

(ii) Types of services

Advances in telecommunications technology makes new services available. The policy of introducing new technology may vary, however, depending on the strategy and situations of the companies and may affect their competitiveness. Technical advances in the telecommunications business tend to be more rapid than in other industries, and the introduction of new technologies requires attention. Especially in mobile telecommunications, heavier volumes of data tend to be transmitted with greater speed as technology evolves. Technology, therefore, has become one of the criteria for consumers when selecting a carrier.

(iii) Devices

In the mobile telecommunications industry, carriers often purchase mobile devices from manufacturers and offer them together with their communications services. Carriers work in cooperation with manufacturers also in the development of devices, and have been focusing on the development of their own original models. The differentiation of devices often influences the acquisition of new subscribers, and the degree to which the devices meet the needs of consumers becomes important. Some manufacturers plan global sales and develop devices using the latest technologies, and some of those devices sell well. In this case, the ability of the carrier to obtain popular models and sell them as its own devices becomes critical. Devices exclusively for data transmission such as digital photo frames and tablet PCs are often purchased separately from conventional devices for voice communication, which presents an opportunity for new market development. The introduction and sale of these new types of devices must be a focus.

(iv) Service fees

Service fees present one aspect for consumers to consider when selecting a carrier or service. A company actively working to attract new subscribers may introduce a structure of fees that are comparatively lower than those of its competitors. Other companies, however, eventually adopt a similar fee structure to reduce the gap, and the effect of acquiring subscribers often does not last long. Yet the effect of price changes on the profitability of each company may not be uniform. A company with a small number of existing subscribers to the service, for instance, can expect growth in earnings because of the significant effect on the acquisition of new subscribers, regardless of fee discounting. Meanwhile, a company with a large number of existing subscribers may suffer an overall loss, as the decline in the earnings from the existing subscribers is larger than the increase from new subscribers. In this case, adequate competitive action cannot be taken and the gap in competitiveness may remain for some time. Understanding the effect of changes in fee structures on the profitability and competitiveness of each company is therefore essential.

(v) Infrastructure

Infrastructure development is important for carriers to be able to provide stable telecommunications services. Particularly for mobile telecommunications, the extent of service areas and the degree of spare channel capacity affect service quality, indicating that infrastructure development has a substantial impact on the level of user satisfaction. The expansion of service areas requires an increased number of base stations to broaden the reach of radio waves. Increased channel capacity requires higher density base stations and better efficiency of frequency use through the introduction of large-capacity technology. While both cases need infrastructure development, the cost effectiveness varies depending on the characteristics of the frequencies used, the number of users within the area, and other factors, and the infrastructure may vary depending on the situations and policies of each company. This sometimes causes differences in service areas and channel capacities, and the responses of each company must be confirmed.

2. Financial base

(1) Business size

The industry easily achieves economies of scale in capital expenditure, equipment purchase, marketing, and other aspects, and JCR focuses on the number of subscribers and shares in the industry.

Key financial indicators:

- Number of subscribers
- Market share

(2) Earnings strength

Revenue from telecommunications services is calculated by multiplying the number of subscribers by average revenue per user (ARPU), the direction of which must be monitored. Trends in the number of subscribers in the overall market are determined by service penetration. Initiatives adopted by individual companies in terms of fees, phone devices, marketing, communications quality, and other aspects create differences in the number of subscribers. The ARPU is reduced by such factors as fee discounts and reduced frequency of service use, and is increased by factors such as the use of new services and higher frequency of service use. Movements in these factors must be confirmed to understand trends in earnings.

Key financial indicators:

- Number of subscribers
- ARPU
- Operating income

(3) Cash flow

The telecommunications industry requires ongoing capital investment to introduce new

technologies and services and to deal with the increased number of subscribers. Companies need the ability to generate adequate cash flow to finance this capital investment. External funds are borrowed in some cases as funds for capital investment, and the balance between cash flow and interest-bearing debt is an important indicator.

Key financial indicators:

- EBITDA
- EBITDA margin
- Ratio of interest-bearing debt to EBITDA

(4) Safety

New technologies are continuously being introduced in the telecommunications business, and they often result in new services. Maintaining financial health is vital for being able to keep pace with these changes.

Key financial indicators:

- Shareholders' equity
- Debt equity ratio
- Equity ratio

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