Last updated: July 13, 2011

Rating Methodology by Sector

Railroad

1. Business base

Most railroad companies in Japan are engaged in operating other businesses, such as real estate, distribution, and leisure services, in addition to their core railroad business. The credit ratings of railroad companies reflect the stability of railroad business, as it is an important part of the public infrastructure. JCR assesses the companies' overall businesses in credit ratings, as the risks of some of the related businesses are susceptible to economic fluctuations, countering the stability of cash flow from the railroad and real estate rental business, based on the rating methods used for each business.

(1) Characteristics of the industry

(i) Market overview

According to the *Annual Statistical Report on Railway Transport*, the annual number of rail passengers has remained largely unchanged in recent years, at approximately 22 billion. Because railroad business is a part of the domestic infrastructure, passenger numbers are affected by local conditions, such as demographics, economic conditions, and types of transportation used. A decline in the number of passengers is generally more apparent in the Kinki area than in the Tokyo metropolitan area. The effects of the declining birthrate and aging population, however, are inevitable, despite regional differences in the pace of these changes, and the number of passengers is expected to decrease in the long run. Train users are broadly divided into commuters using commuter tickets and non-commuters. Concerns over the declining birthrate and aging population have resulted in railroad operators placing higher priorities on attracting non-commuters by promoting tourist attractions along the railroad lines and improving the drawing power of commercial facilities around the stations. An increase in sharing tracks with other operators, which is often the case with private railroads, is considered a part of the efforts to increase and maintain the number of passengers through offering greater convenience.

The related businesses, including real estate, distribution, and leisure services, are characterized by their development for the purpose of retaining ridership and increasing the convenience of the residents around terminals and along the railroad lines in addition to improving the drawing power of station facilities.

While the Great East Japan Earthquake of March 11, 2011, did not cause any apparent damage to the facilities of private railroad companies, it inflicted severe damage on those of East Japan Railway Company (JR East). However, the railroad facilities are expected to be restored as scheduled, and JCR will monitor ridership trends, with a periodic focus on tourist transportation to the Tohoku region.

(ii) Competitive situation

Railroad business is subject to a license issued by the Minister of Land, Infrastructure, Transport and Tourism (MLIT) according to the Railway Business Act. Barriers to entry are high, due to the massive infrastructure development required, necessitating large outlays of funds, the lengthy investment recovery time frames, and the advanced expertise necessary for train operation. The competitors of private railroads and the local JR lines are buses and private automobiles, and each region has its own situation in terms of competition among the various types of transportation. The *Annual Report on Urban Transportation* states that while railway ridership in the Tokyo metropolitan area comprises approximately 57% of total transportation, such ridership in the Nagoya metropolitan area is only 21%, with a higher percentage using private automobiles. In the Tokyo area, JR and the private railroad companies have separated the geographical areas of their operations, whereas, in other regions, private and JR lines often compete against one another. Further, even in the same region, the competitive situations of private railroad companies and JR vary depending on the track. JCR, therefore, examines the competition and its effect on ridership for each of the tracks.

The Shinkansen lines operated by the JR companies are examined in the context of their competition with airlines. The announced market shares of the Shinkansen in comparison to those of the airlines suggest the significant advantages of Shinkansen travel based on journey times and schedule frequency, with a near 100% share of the market for journeys of less than two hours, including the time it would take to reach the airports, 80% to 100% for journeys of about 2.5 hours, and approximately 60% for journeys of slightly over three hours.

The Linear Chuo Shinkansen project promoted by JR-Central plans to start operations between Tokyo and Nagoya in 2027 and between Nagoya and Osaka in 2045. This line will dramatically reduce the travel time between Tokyo and Osaka to approximately 70 minutes, which is expected to change the competitive situation with the airlines.

(iii) Cost structure

An upper limit approval system for railroad fares has been adopted, which is based on the yardstick method to determine the fares according to the standard cost calculated by comparing the costs of multiple companies. Although fares below the upper limit are left to the decision of the railroad operators, in reality, flexible pricing responsive to demand is difficult, partly due to the requirement of reporting to and examination by the MLIT. As a consequence, railroad companies need to observe conditions in regard to maintaining and increasing ridership and cost reductions in their railroad business.

Railroad business is a typical process industry, encompassing (a) extensive railroad networks, (b) numerous station facilities and railroad cars, and (c) advanced train operating systems. At the same time, the ratio of fixed costs, particularly those related to labor and the depreciation of vehicles, is high due to the necessity of employing a large workforce for train operations. In view of such a cost structure, JCR considers that the reduction of personnel expenses through such efforts as improving the efficiency of station operations, implementing driver-only operation, and adopting reemployment after mandatory retirement to retain personnel is important in increasing profit in addition to raising the ridership ratio.

(2) Important factors in market position and competitiveness

(i) Market position

Railroad companies own transportation infrastructure in each region that is highly public in nature, which supports the stability of cash flow in their railroad business. A long route distance, however, does not necessarily result in high competitiveness. Rather, transportation efficiency may suffer if many routes prove unprofitable. In some cases, the profit before depreciation in the railroad business of a private railroad company with long routes is less than that of a company with shorter routes. JCR, thus, considers that the population along the railroad lines and efforts to improve the efficiency of railroad transportation, including the responses to unprofitable routes, must be observed.

Although the same applies to the JR companies, their strong business foundations backed by dominant railroad networks in the metropolitan areas are regarded as sufficient to cover the current loss from regional unprofitable routes.

(ii) Environment along the railroad lines

The development of each railroad company is indivisible from the development of economies along the railroad lines. Whether the core railroad business and related segments will maintain the ability to generate stable cash flow in the future is affected significantly by the drawing power and potential of core terminals and tourist attractions along the railroad lines as well as the characteristics of areas along the railroad lines, demographics, and trends in the development of the surrounding areas connected by railroads. Hence, JCR analyzes in detail the surrounding environment of each railroad line and applies its competitiveness to a rating assessment.

(iii) Measures to improve the value of areas along the railroad lines

Currently, as the market turns from its mature state to one of contraction, efforts to minimize the effects of the declining birthrate and aging population are important. Activities to improve the value of areas along the railroads of each company, such as (a) maintaining residents along the railroad lines, (b) acquiring residents from areas around the railroads of other companies to the company's own area, and (c) promoting tourist attractions along the railroad lines and developing commercial facilities at the company's terminal to increase the number of non-commuters, are likely to have an impact on future ridership. Although some of these activities will not contribute to short-term earnings, JCR expects long-term benefits to areas along the railroad lines and, therefore, monitors the progress of such efforts in each area.

(iv) Cost reduction in railroad business

Maintaining cash flow from the railroad business is important, as there are many companies whose railroad business constitutes the major portion of their consolidated profit before depreciation. In regions other than the Tokyo area, however, personnel expenses have already been reduced in response to the falling number of passengers and, thus, room for further cost reduction is likely diminishing. JCR expects that the number of trains in service will have to be reduced by revising the timetables in the future and that cost reductions more drastic than in the past will have to be made.

(v) Contribution of related businesses to profit and their synergy

Because room for increasing profit in the railroad business is limited in the long run, the operators need symbiotic businesses to support their railroad business. While profits from real estate rental business are relatively stable, large housing development projects aimed at increasing the population along the railroad lines, promoted particularly by private railroad companies, have been declining. Distribution and hotel businesses are susceptible to business fluctuations, changes in consumer behavior, and other factors. Due to the close relationships between the development of related businesses and the above measures to improve the value of areas along the railroad lines, JCR considers it necessary for a railroad company to first identify the characteristics of the areas along the railroad lines and, then, to develop clear strategies, such as the establishment of a business to increase its profits; to improve its brand image, helping to differentiate itself from the competition; and to contribute to the convenience of the residents along the railroad lines. For this reason, JCR examines each company's policies on its related businesses through an analysis of its medium-term management plan, which is applied to the rating assessment.

2. Financial base

(1) Earnings strength

JCR attempts to understand not only the consolidated earning power, but also the conditions related to cost in the railroad business and the financial positions of segments and sub-segments, if necessary, in each of the related businesses. The trends in extraordinary profits and losses are also monitored due to the large assets owned and frequent reorganization of business segments.

Key financial indicators:

■ Operating margin

■ Extraordinary profit/loss items

(2) Cash flow

Improving and maintaining the ability to generate cash flow are important due to the necessity of continuous and safe investment in railroad business. In addition to the ability to generate consolidated cash flow, trends in the cash flow of each segment, such as the stable railroad business and real estate rental business, must be confirmed.

Key financial indicators:

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

(3) Safety

In the railroad business, the amount of interest-bearing debt tends to be large due to the massive investment required and the length of the investment recovery time frames. In addition, ensuring the balance between capital accumulation and interest-bearing debt is important, as business and financial restructuring in some cases have resulted in significantly reduced capital in the past. Since the scale of capital investment affects interest-bearing debt, the balance between capital expenditure and cash flow in each business segment is confirmed.

As for real estate for sale, JCR periodically observes accounting treatments related to the differences between the book values and market prices. Because land for business use is revaluated by some companies while not revaluated by others, JCR makes comparisons after adjusting the revaluation excess in its analysis of equity ratios and other indicators.

Key financial indicators:

- ■ Interest-bearing debt
- ■ Equity ratio
- ■ Debt equity ratio

Japan Credit Rating Agency, Ltd.
Jiji Press Building, 5-15-8 Ginza,
Chuo-ku, Tokyo 104-0061, Japan
Tel. +81 3 3544 7013, Fax. +81 3 3544 7026