

How does regulation influence asset renewal and investment in rolling-stock ?

Ichiro Takahashi

East Japan Railway Company

Brussels Branch

Outline of JR East (1)

High Speed (Shinkansen)



Metropolitan



Regional



Network: 7.513 km
Number of Passengers: 17 million /day
Number of Trains: 13.000 /day
Annual Operating Revenue: € 22,3 billion
Net Annual Income: €1,5 billion
Number of Employees: 59.000

*Numbers are as of FY ended March 31 , 2013

**Calculated by €1 = 120 JPY



Outline of JR East (2)

- East Japan Railway Company (JR East) was established in 1987 due to the division and privatization of Japanese National Railways (JNR). JNR's railway business was divided into six regional passenger railway companies and one nation-wide freight railway company. JR East is one of these six passenger railway companies.
- While JR East is still called “*de fact* regional monopolistic private company” by European Commission, JR East doesn't have any PSO. Then, JR East has had “No Subsidies” from the central and local government or “No Red account” for the past 27 years.
- In addition, JR East is already listed in the stock exchange market and “No Shares” are owned by the governments. Approximately 30 % of the shares of JR East are now held by the foreign institutional investors.

Outline of JR East (3)

- And “No Special relation” with the governments doesn’t exist today. Therefore, it can be said that JR East resembles “Total”, a French oil and gas company, very well.
- JR East is an integrated railway company, namely owns the railway infrastructure and operates trains. It is also possible for JR East to lease its infrastructure to other operators on commercial basis. Actually, JR East has been leasing it to the freight railway company.
- In Japan, customers have very high expectation toward railway services and JR East has to respond it. Therefore, JR East has been making a lot of efforts to provide reliable and punctual services to customer passengers.

Validation of Vehicles in Japan

Railway Business Act Article 13 (extract)

- 1. When the Railway Transportation Business Operator intends to use any of their vehicles for the said Railway Business, he/she shall obtain validation of the Minister of Land, Infrastructure, Transport and Tourism (MLIT) that the said vehicles conform to the regulation.**
2. When the Railway Business Operator intends to change the structure or the equipment of the vehicle for which he/she obtained the validation of the preceding paragraph, and to use it for the said Railway Business, he/she shall obtain validation of the MLIT in accordance with the same rule as the provision of the said paragraph, provided, however, that this shall not apply if the Railway Transportation Business Operator intends to make any of the minor changes and use the vehicles for the said Railway Business.
3. In the case of the proviso of the preceding paragraph, the Railway Transportation Business Operator shall notify the MLIT to that effect in advance.

Validation of Vehicles in Japan

Railway Business Act Article 13

- This is a mechanism of checking that the structure and equipment of vehicles suits the railway technical standard.
- In Japan, railway companies take responsibility about the validation of vehicles. Therefore, while safety is a main check item, reliability is not so important as in EU.
- Even in case of new vehicles, as far as its basic design is almost same as the existing vehicles', the second paragraph can be applied.

Certified Railway Business Operator

Railway Business Act Article 14 (extract)

1. The MLIT shall certify that the capability of the office conforms to the standard, by the application of the Railway Business Operator made for each office that conducts the business related to the design of the Railway Facilities or the vehicles systematically and in the organized manner.
2. If the Railway Business Operator who obtained the certification of the preceding paragraph for the office it establishes is confirmed, at the time of application or notification of approval or validation, that the office that the Railway Business Operator establishes and for which the certification of the preceding paragraph was obtained has designed the Railway Facilities or the vehicles, and the office conforms to the regulation, **he/she may follow the procedure dispensing with a part of the entries or the required attachments pertaining to these application or notification or other simplified procedure.**
3. The person who is a Railway Business Operator and obtained certification for a branch office, shall take the measures necessary for properly conducting the business concerning the design of the Railway Facilities or the vehicles at branch offices.

Certified Railway Business Operator

Railway Business Act Article 14

- The system of “Certified Railway Business Operator” was introduced as part of deregulation in March 2000. Certified railway companies take more responsible for the validation of vehicles.
- Almost all of the major railway companies in Japan are already certified railway companies.
- Certified railway companies can dispense with a part of the entries.

Certified Railway Business Operator

Railway Business Act Article 14

| Equipment of Rolling-stock | Structure and Device |
|---------------------------------|--|
| 1. Common | Countermeasures against fire |
| 2. Traction Equipment | Material and Composition of Bogy, Wheel and Axle |
| 3. Brake Equipment | Type of Brake, Brake Ratio |
| 4. Operation Security Equipment | Function and Structure of ATS and ATC *Automatic Train Stop = ATP in EU |

- When Article 13 (2) is applied, the entries themselves have approximately 10 pages and the attachments have also approximately 30 pages. And, it usually takes about 3 months for them to obtain the validation of vehicles.

Lessons to be discussed (1)

- In EU, railway suppliers take responsibility about the validation of vehicles and railway companies purchase and utilize them.
- In Japan, when the validated vehicle has defect or malfunction and even if it causes an accident, the railway company takes all the responsibility for end-users (customer passengers).
- Therefore, the procedure of the validation of vehicles in Japan might be simpler than that in EU.

Lessons to be discussed (2)

- We have about 200 railway companies in Japan and then have big differences of technical expertise between major companies and others. But, we have culture to cooperate with and learn from each other, though we are sometimes competitors too. It is for the good of railway development.
- At this moment, though the number of certified railway companies is not so big, all the railway companies in Japan are able to obtain the validation of vehicles by themselves.
- It can be said that these regulations might partly contribute to urging the railway companies to invest their rolling-stock.

Thank you for your attention.

Ichiro Takahashi
East Japan Railway Company
Brussels Branch