

## Rating Methodology by Sector

### **Marine Transportation**

#### **1. Business base**

The shipping industry is a market-driven industry and it cannot avoid repercussions from market fluctuations such as freight rates, fuel oil, and foreign exchange rates. The industry is also a kind of process industry. Consequently, it carries a heavy burden of fixed costs and its earnings often fall when demand is sluggish. Taking these factors into account, when determining ratings, JCR focuses on how shipping companies are containing these risks. The key points include the diversification of portfolio by businesses and vessel types, accumulation of stable earnings such as medium and long term contracts, and cost competitiveness.

##### (1) Characteristics of the industry

###### (i) Market overview

The world's seaborne cargo traffic has been rising thanks to progress in economic globalization and economic growth in emerging countries. Since only vessels can connect various parts of the world and transport large volumes of goods simultaneously, and no other logistics means can substitute for them, the industry is of great importance as a global infrastructure. In Japan, marine transportation is responsible for a large portion of the trade volume.

Shipping is broadly categorized into liners and tramps. Liners operate on specific routes on a regular basis, and the majority are containerhips. Containerhips transport a wide variety of cargoes, including daily necessities, foodstuffs, clothing, building materials, and auto parts, in standardized containers. There are many routes connecting various parts of the world, with the two major routes being from Asia to North America and Europe, where the volume of cargo transported is the largest. In addition, with the economic growth of emerging countries, the volume of cargo transported on intra-Asian routes is growing.

Tramps transport specific cargoes separately using dedicated vessels. The main types of vessels of tramps are dry bulkers, tankers, and car carriers. Dry bulkers transport different cargoes depending on their size. Capesize bulkers mainly transport steel raw materials, Panamax bulkers transport coal and grain, while handymax and small handy bulkers transport steel, nonferrous metals, and other minor bulks. Tankers are categorized into crude oil tankers, such as very large crude carriers (VLCCs), product tankers that transport petroleum products, chemical tankers that carry chemical products, and LNG carriers that carry liquefied natural gas. Car carriers are vessels used specifically for the transportation of passenger cars and trucks, and consist of a limited number of players for both cargo owners and shipping companies.

Freight rates are determined by supply-demand balance of shipping capacity. Demand is cyclical in the short term, influenced by economic cycles and other factors, and can fluctuate greatly on a temporary basis. On the other hand, since it usually takes about two to three years to build new vessels from the time an order is placed

to delivery, halting orders for new vessels at the time of falling demand could not immediately reduce the supply of shipping capacity. In addition, shipyards in South Korea and China are expanding their construction capacity, creating a supply-demand structure that can easily lead to an oversupply of shipping capacity. Adjustments to shipping capacity are made by stopping, mooring, and scrapping vessels, and their slow steaming, but freight rates are highly volatile due to the expectations of market participants and other factors.

Furthermore, the majority of ocean freight rates are denominated in US dollars, and more than 80% of revenue of shipping companies is denominated in US dollars. The shipping companies have sought to denominate their expenses in US dollars, going through periods of a stronger yen in the past. Although about 70% of expenses are now in US dollars, there are still gaps and there is no change in their structure where their yen-based profits will be squeezed when the yen strengthens.

#### (ii) Competitive situation

The domestic shipping industry has now established a stable industrial structure through a series of industrial consolidation during the periods of economic slumps in the past. Nippon Yusen Kabushiki Kaisha, Mitsui O.S.K. Lines and Kawasaki Kisen Kaisha are the three major comprehensive shipping companies with a diverse range of vessels, while the other shipping companies have a business structure specializing in particular types of vessels.

Meanwhile, shipping companies compete with global shipping companies based on the principle of freedom of shipping. That presents broader business opportunities to Japanese shipping companies, but with severe competition. In addition, it is generally difficult to differentiate services in the shipping business, and freight rates tend to fall when supply-demand balance slacken. However, some types of vessels, such as tankers, have strict safety standards, and barriers to entry are relatively high. In addition, containerships have become more consolidated as a result of industry restructuring, and the risk of excessive competition is considered to be controlled compared to the past.

#### (iii) Cost structure

Costs of shipping companies comprise the costs of procuring vessels and the costs of operating them. Typical costs for the former are expenses for building new vessels or chartering them, while typical costs for the latter are expenses for fuel oil and crews. These costs fluctuate with their individual markets, noticeably impacting the business results of shipping companies. Fixed costs for maintaining and expanding fleets are also large. For these reasons, JCR focuses on measures taken to contain cost fluctuation risks, size of fixed cost burden, and room for cost cutting.

Fuel oil costs in particular account for a large proportion of costs and have a large swing. However, shipping companies are reducing the impact on their performance, albeit with a time lag, by introducing fuel surcharges and other means.

#### (iv) Risks related to policies

While the shipping companies operate in compliance with the legal and tax systems of each country, their business field is basically a single global market, which means that they are exposed to competition from overseas shipping companies under different competitive conditions. While Japan has introduced policies such as a special depreciation system for ships and a tonnage tax system for Japanese-flag vessels, other countries have introduced more preferential policies to promote the shipping industry, and Japanese shipping companies are not necessarily in an advantageous position.

On the other hand, as the global trend toward decarbonization intensifies, environmental regulations related to vessels are being progressively tightened. Shipping companies are expected to continue to bear a high level of investment burden over the medium to long term due to the development and construction of vessels powered by next-generation fuels. In addition, the price of these vessels powered by next-generation fuels will be higher than that of conventional vessels, and operating costs are also expected to rise as well. These increased burdens need to be appropriately reflected in freight rates.

### (2) Important factors in market position and competitiveness

#### (i) Market position

The shipping industry has a large number of players, with the exception of some types of vessels such as car carriers, and no one company holds enough market share to control the market. In addition, in many cases, contracts for tramps are concluded on individual terms and conditions with customers, so large companies do not necessarily always have advantages. However, the source of revenue of shipping companies is their vessels, and to ensure a certain level of earnings strength, they must have a reasonable size of fleet. Japan's three major companies have one of the largest fleets in the world, especially in the tramps.

#### (ii) Customer base

The shipping industry carries different types of cargo depending on the type of vessel, so JCR focuses on the status of transactions with leading companies in each industry. JCR believes that having a strong customer base helps limit the risk of earnings volatility. Many Japanese shipping companies have been in business for a long time, and JCR believes that they have a certain customer base.

On the other hand, there are industries that cannot foresee demand growth, because their domestic markets have matured. Responding to this situation, the domestic shipping companies have been expanding transactions with overseas companies using the know-how they have developed through business with Japanese companies. The key point is to what extent they can expand their overseas customer base while maintaining their domestic customer base.

#### (iii) Accumulation of steady earnings

Since the earnings structure of shipping companies is subject to fluctuations caused by various market conditions, it is effective to secure stable earnings from medium- to long-term contracts, which are less

susceptible to market fluctuations, in order to reduce the risk of a downturn in earnings.

Medium- to long-term contracts are mainly for Capesize dry bulk carriers, crude oil tankers and LNG carriers. While domestic crude steel production and crude oil processing are declining, demand for LNG is on the rise. However, the number of entrants in the LNG carrier market is increasing as the market expands, competition is intensifying, and vessel prices are high, placing a heavy financial burden on the industry. It is therefore necessary to check that the contracts are designed to provide stable revenues.

#### (iv) Business portfolio

While most overseas shipping companies specialize in specific types of vessels, Japan's three major companies have a wide range of vessels from liners to tramps. Since factors for market fluctuations vary by vessel type, diversifying their business portfolios across a variety of vessel types is effective in reducing earnings volatility.

Expanding non-shipping businesses is also an effective way to control earnings fluctuations. As an example, the real estate business is a stable source of earnings, although its scale of operations is smaller than that of the shipping business. Other businesses can also be an additional source of earnings if a certain level of profitability can be secured. Furthermore, businesses closely related to the shipping business, such as logistics, could exert a synergistic effect by responding to customers' needs in a comprehensive manner, thereby contributing to the expansion of earnings in the shipping industry.

Each company's business portfolio reflects its management policies and strategies. As the portfolio is reviewed in response to changes in the business environment, attention should be paid to changes in the business portfolio of each company and their impact on the operating results of each company.

#### (v) Cost competitiveness of fleets

It is common for vessels to be in use for more than 20 years after new construction, and some chartered vessels are procured under long-term contracts. On the other hand, freight rates are subject to significant declines, so it is important to keep fleet costs as low as possible in order to remain profitable. JCR therefore focuses on whether shipping companies can enhance the cost competitiveness of their fleets by securing vessels with low vessel prices and chartered vessels with low charges and reducing the mismatch between transportation and charter contract periods.

## 2. Financial base

### (1) Earnings strength

JCR places a weight on earnings strength from the perspective of maintaining and expanding the business. As the earnings of shipping companies, however, are easily affected by economic cycles and various market fluctuations, JCR looks at not only results for one term, but also evaluates the results over a certain economic cycle. When significant changes in the earnings level are monitored, JCR analyzes factors that triggered such changes. If these factors are not the economic cycle or temporary developments, but are structural and trend changes that are taking place, then JCR reflects such changes in ratings. While it is also important to get high

level of earnings when the economy is booming, JCR focuses more on whether companies have an earnings structure resilient to an economic slump, limiting a fall in earnings in the face of sluggish economic conditions.

Key financial indicators:

- Operating income
- Ordinary income
- EBITDA
- Ordinary income on sales
- ROA

## (2) Cash flow generation capacity

Shipping companies are constantly raising funds to maintain and expand their fleets and are continuously investing. It is necessary to confirm if the investments made have produced the results expected, and if the cash flows generated have been used appropriately to repay external debts. Since there is a time lag between the decision to invest and the delivery of a vessel, and most payments are usually made several years later, it is important that the shipping companies maintain sufficient cash flow to also cover past investments.

Key financial indicators:

- Operating cash flow
- Free cash flow
- Ratio of interest-bearing debt to EBITDA
- Ratio of interest-bearing debt to operating cash flow

## (3) Safety

As the earnings volatility of shipping companies is high, it is important to have sufficient shareholders' equity that acts as a buffer against earnings fluctuations. In addition, the shipping industry is a kind of process industry, so heavy capital investments often results in high levels of interest-bearing debt, and many of the companies' fleets include vessels procured through off-balance sheet transactions such as leases and charters. Therefore, JCR focuses not only on interest-bearing debts that are reported in the balance sheets, but also on the status of liabilities including lease transactions and charter contracts.

Key financial indicators:

- Shareholders' equity
- Interest-bearing debt
- Interest-bearing debt and lease / charter fee liabilities
- Equity ratio
- Debt equity ratio



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