24-D-0277
June 3, 2024

Revisions of Rating Methodologies "Pharmaceuticals" and "Marine Transportation" by Sector

Japan Credit Rating Agency, Ltd. (JCR) hereby announces that it has revised rating methodologies by sector "Pharmaceuticals" and "Marine Transportation."

The revisions do not alter the framework, concept, treatment, or other details of the methodologies. Descriptions in the methodologies have been revised to reflect recent trends and other factors in the explanation of industry characteristics that form the backgrounds of the methodologies, or to make the explanation of the concept easier to understand. Therefore, there is no impact on individual ratings.

The revised rating methodologies will be posted on the page of “Rating Methodologies: Corporates” (https://www.jcr.co.jp/en/rrinfo/meth_corp/) of JCR’s website.

Rating Planning Department

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

Last Updated: June 3, 2024

Rating Methodology by Sector

Pharmaceuticals

Pharmaceuticals are mainly categorized into ethical drugs, which are provided to patients by hospital pharmacies or by dispensing pharmacies outside hospitals in accordance with a doctor's prescription, and over-the-counter (OTC) drugs that are freely available at pharmacies and other stores without a doctor's prescription. Ethical drugs involve pharmaceutical companies who develop, manufacture, and sell pharmaceuticals, pharmaceutical wholesalers who are engaged in the distribution of the drugs, and dispensing pharmacies who directly provide the drugs to patients. This document will describe pharmaceutical companies, pharmaceutical wholesalers, and dispensing pharmacies. Pharmaceuticals in this document refer to ethical drugs.

1. Business base

Prices of pharmaceuticals (National Health Insurance (NHI) drug prices) in Japan are official prices that are set by the government and are revised every year. As a result, the pharmaceutical industry is noticeably influenced by the policy and fiscal situation of the government. As the government aims to cut drug costs in its effort to contain the rise in the nation's medical expenses resulting from the aging of society and the progress of medical technologies, the growth of the domestic pharmaceutical market has been sluggish. In response, pharmaceutical companies have been focusing on developing operations in overseas markets, where the medium-to long-term growth can be expected. In contrast, pharmaceutical wholesalers and dispensing pharmacies are businesses that mainly operated in Japan. While there is almost no entry of foreign companies into the domestic market, overseas expansion of domestic companies is also limited to a few. Pharmaceutical wholesalers are caught between pharmaceutical companies that want to maintain the drug prices and hospitals and dispensing pharmacies that want to earn larger gains from differences between the selling prices and purchase prices, and their margins tend to decline. With a significant market reorganization since the late 1990s in a bid to offset falling margins with cost cutting, there are now roughly four pharmaceutical wholesaler groups. The dispensing pharmacy market has matured, as the separation of prescribing and dispensing drugs has been widely spread. The profit environment has become more difficult due to the revision of dispensing fees.

(1) Characteristics of the industry

(i) Market overview

The size of the global pharmaceutical market exceeds 200 trillion yen and is expanding. The size of the Japanese market is about 11 trillion yen and is growing slowly. In recent years, drug discovery methods have been diversifying, and in addition to small molecule drugs and antibody drugs, gene therapy and cell therapy have been put to practical use, and their presence is increasing. Generic drugs are becoming increasingly popular around the world, including Japan, and original drugs that have reached the end of their sales exclusivity period are to be basically replaced by generic drugs.

(ii) Competition situation

Pharmaceutical companies, pharmaceutical wholesalers, and dispensing pharmacies face different competitive situations. The pharmaceutical companies are competing globally, as major foreign companies have been operating in Japan for some time, and major Japanese pharmaceutical companies are also developing overseas businesses, although they have lagged their major overseas peers in this respect. Meanwhile, pharmaceutical wholesalers and dispensing pharmacies mainly operate in Japan, and there are almost no foreign companies operating in the Japanese markets. As a result, their competition is limited to Japan only.

In the pharmaceutical companies, rather than competition among companies, there is competition among drugs for the same indications, and drugs with better evidence are more competitive. Therefore, it is important to be the first to launch a drug among candidate chemical compounds with the same mechanism of action, or to launch a drug with higher efficacy. Generic drugs are difficult to be differentiated by evidence, and the larger the sales scale of an original drug, the more likely they are to be launched by many companies, so competition is more intense.

Competition exists among the four integrated groups of pharmaceutical wholesalers. When pharmaceutical wholesalers were the group companies of pharmaceutical manufacturers, their product lineups were weighted in favor of certain products. Following industry reorganization, however, each group now handles almost a full range of products of pharmaceutical companies. As pharmaceutical wholesalers cannot differentiate themselves from their competitors in terms of their product lineups, they often engage in price competition. Although the "Guidelines for the Improvement of Commercial Transaction Practices of Ethical Drugs for Manufacturers, Wholesalers, and Medical Institutions/Pharmacies" issued by the government have been used to ensure appropriate price formation, it is necessary to keep an eye on this trend. In addition, in recent years, an increasing number of products are being handled by pharmaceutical companies with limited wholesalers. These are drugs that require special management, and the accepting these products requires comprehensive capabilities, including logistics and price management functions.

The market share of even major dispensing pharmacies is only a few percentage points, and there are still many small and midsize chain operators and mom and pop dispensing pharmacies. However, dispensing fees are likely to be squeezed even further in the future, and major dispensing pharmacies, with more buying power of pharmaceuticals and a superior ability to secure and train pharmacists, develop automated dispensing operations, and control inventory are likely to increase their dominance in the market. As a result, small and midsize chain operators and other dispensing pharmacies are likely to be acquired by the major pharmacies.

(iii) Cost structure

Since the cost structures of pharmaceutical companies that develop, manufacture, and sell pharmaceuticals are very different from those of pharmaceutical wholesalers and dispensing pharmacies that distribute pharmaceuticals, let's take a look at each sector.

Even among pharmaceutical companies, the cost structures of the companies who focus on original drugs and those that specialize in generic drugs are different. Generally, the manufacturing cost of original drugs is small relative to the drug price, making it easy to secure gross profits. However, companies focusing on original drugs need to spend a large amount on R&D expenses. It takes more than a decade for a pharmaceutical company to go through all the basic research, nonclinical trials, clinical trials (Phase I through III), approval applications, screening, and approvals needed to launch a new drug. Moreover, the majority of candidate chemical compounds have had to be discontinued or suspended due to safety, efficacy, and post-launch economics. Including R&D expenses for chemical compounds whose development was terminated, R&D expenses for one new drug can be huge. For that reason, it is important for the pharmaceutical companies to streamline expenses and improve their success rates. Often, pharmaceutical companies in-license candidate chemical compounds from externally to strengthen their drug pipelines. In these cases, the companies usually make contractual upfront payments and milestone payments in accordance with the stage of development. The amount of contractual upfront payments tends to be large for candidate chemical compounds that are at the advanced development stage, i.e., are considered to have a good chance of being approved as new drugs, or that are expected to become large successful drugs after they are launched. Meanwhile, as generic drugs are developed based on experience in the clinical use of original drugs for an extended period, the R&D expenses of pharmaceutical companies that specialize in generic drugs are low. However, generic drug prices are low and the weight of manufacturing costs is high, making it difficult to secure gross profits. The fixed cost burden for stable supply and other purposes is also heavy, so accurate cost management is important.

Pharmaceutical wholesalers report operating income that is calculated by subtracting expenses from the difference between the prices of products delivered to medical institutions, such as hospitals and dispensing pharmacies, and the effective prices of products purchased from pharmaceutical companies (including rebates and others). The prices of products delivered to medical institutions vary depending on the degree of competition among peers. Based on the Guidelines for the Improvement of Commercial Transaction Practices of Ethical Drugs for Manufacturers, Wholesalers, and Medical Institutions/Pharmacies, issues including the following have been improved: (i) continual delivery without price agreements (transactions involving the delivery of products to medical institutions even before product prices are decided, in light of the nature of the emergency of pharmaceuticals); (ii) bundled transactions (transactions whose prices are determined based on the overall transactions, not on the prices of each product); and (iii) negative margin (wholesalers' selling price to medical institutions and pharmacies are lower than their purchase prices from manufacturers), and price competition has become more moderate than in the past. The logistics costs at sales offices, distribution centers, and other facilities and personnel costs for marketing specialists (MS) and other staff account for large portion of expenses for pharmaceutical wholesalers. Through the industry reorganization to date, streamlining have been promoted and there is less room for cost reduction.

Revenue for dispensing pharmacies consists of drug fee and technical fee. The operating income of each store is calculated by subtracting the costs of products purchased from pharmaceutical wholesalers and expenses related to the store from this revenue. Major dispensing chains who can exert buying power are able to relatively lower their purchase prices (expansion of gains from differences between the selling prices and purchase prices). In addition, introducing equipment to streamline dispensing operations, strengthening the system of training for pharmacists and improvement in their quality, and sophistication of various systems such as those for managing a drug history and inventories, are important to increase technical fees and streamline store expenses.

(2) Important factors in market position and competitiveness

(i) Market position

JCR focuses on how strong pharmaceutical companies are in specific areas, and the extent of the progress they have made in developing overseas operations. Pharmaceutical companies with a large presence in a specific area are more likely to be able to secure excellent human resources in that area, and also have an advantage in in-licensing and co-development of candidate chemical compounds. Companies with global sales channels and development sites are more likely to maximize profits from a single product.

Although the four integrated groups of pharmaceutical wholesalers now operate nationwide with almost full lineup of products, it is important to build a certain business base in each operating region and secure a reasonable market share from the perspectives of securing rebates and allowances and expanding fees from information provision.

Although the market share of major dispensing pharmacies is still low, the chain operators who manage large-scale operations across larger areas (nationwide) actually have an edge in negotiating the purchase of pharmaceuticals and recruiting pharmacists. As universities with pharmaceutical faculties tend to be concentrated on major cities, small and midsize chain operators who operate in local regions are finding it difficult to secure pharmacists. If these operators, however, operate across larger areas, they can transfer pharmacists who are recruited in cities to local regions.

(ii) Earnings strength of core businesses

For pharmaceutical companies, it is important to consider whether they produce good drugs, maximize profits from the drugs they produce, have a large number of good drugs, and have candidate chemical compounds that could become their future mainstays. From these perspectives, JCR confirms sales trends of existing drugs, overseas expansion, and new drug development status. In terms of sales trends of existing drugs, JCR analyzes the medium-term earnings strength of each product. JCR also pays attention to the degree of diversification of revenue sources. Viewing the overseas development as the foundation for maximizing product value, JCR pays attention to global sales and development systems, as well as sales trends by region. In R&D, JCR confirms factors such as the number of late-stage candidate chemical compounds that have obtained PoC (confirmation of efficacy in humans), the expected level of contribution to performance, and the schedule until launch.

For pharmaceutical wholesalers, JCR looks at factors in a comprehensive manner, including the characteristics of the areas where sales bases are established, progress of management streamlining, size of rebates and allowances, ability to negotiate with medical institutions, price management capabilities, and information provision fees. While the reduction of drug prices and the spread of generic drugs are putting downward pressure on the unit price of pharmaceuticals, the increase in the volume of pharmaceuticals due to the expansion of medical needs is increasing the burden of management costs.

In dispensing pharmacies, experiencing sluggish earnings growth from the existing stores, it is necessary to expand the store network and increase the prescriptions filled in the whole store network to continually secure earnings. In determining store development capabilities, JCR confirms the dispensing pharmacies' information collection system for potential properties for new stores, pharmacist recruitment and training system, store opening criteria, and investment recovery plan. JCR also pays attention to the store formats such as "pharmacies right outside hospitals or clinics," which are opened in the vicinity of hospitals or clinics, "pharmacies accepting prescriptions from an unspecified number of hospitals or clinics," and "pharmacies within the premises of hospitals or clinics," which were deregulated in 2016. When engaging in purchase of stores and M&A, it is necessary to pay attention to whether the acquisition price is appropriate.

(iii) Earnings strength of diversified business

Many pharmaceutical companies were once handling over-the-counter (OTC) drugs, nutritional supplements, agricultural chemicals, animal drugs, in addition to ethical drugs. However, as a result of selection and concentration of business, companies can be divided into those that specialize in original drugs, those that are also involved in generic drugs, and those that continue to engage in OTC drugs in addition to ethical drugs. With respect to companies that are also engaged in generic drugs and OTC drugs, JCR focuses not only on the earnings strength of these individual businesses, but also on their positions in the group and the synergies with other businesses.

Pharmaceutical wholesalers are developing pharmaceutical manufacturing, dispensing pharmacy, digital services, etc. as a group. As the industry reorganization has reached a stage of resting place and the market has matured, the room for growth in the core business has narrowed, and securing earnings in peripheral businesses is important. Since many of these businesses in general utilize the operating base of core business, JCR believes that synergies are expected to be easily achieved. However, when they enter into the dispensing pharmacies, it is necessary to pay attention to the maintaining relationships with the dispensing pharmacy chains outside the group, which are their customers. In addition, the movement toward business integrations and business alliances across industries, such as those with medical equipment wholesaling, daily necessities wholesaling, and food wholesaling, should be carefully evaluated for synergies with the core business.

Dispensing pharmacies are also engaged in generic drug related businesses, retailing of cosmetics, etc. In cases of generic drug related businesses, there is a difference in business risk between those that have expanded into the manufacturing field and those that remain as wholesalers specializing in generic drugs. In both cases, however, the generic drug related subsidiary's main customers are their own group's dispensing pharmacies, and sales are likely to be stable. In the cosmetics and other retail business, it is important to differentiate their product lineups from those of major drugstores.

2. Financial base

(1) Earnings strength

The operating income of pharmaceutical companies is very susceptible to fluctuations in R&D expenses. Therefore, JCR looks at not only operating income, but also operating income before R&D expenses. JCR also tries to understand trends in earnings from major products and trends in earnings by region as much as possible. For pharmaceutical wholesalers, JCR looks at operating income after understanding fee revenue and others. In the dispensing pharmacies, JCR looks at operating income after understanding items such as the details of dispensing fees, gains from differences between the selling prices and purchase prices, store expenses, and profits and losses by store in the core business. JCR also analyzes the earnings strength of the diversified business of all three sectors based on operating income by segment.

Key financial indicators:

- Operating income and ordinary income
- Operating income by segment
- ROA

(2) Cash flow generation capacity

It is important to secure enough cash flows to finance investments and loans on a normal basis, such as in-licensing of candidate chemical compounds for pharmaceutical companies, investments in distribution facilities for pharmaceutical wholesalers, and opening of their own new stores and acquisitions of competitors for dispensing pharmacies. In addition, when heavy investment is required on a temporary basis by pharmaceutical companies to conduct M&A to develop overseas operations, or by pharmaceutical wholesalers or dispensing pharmacies to conduct M&A to develop diversified businesses, JCR focuses on whether or not the companies have sufficient cash flow generation capacity to restore its financial structure in a relatively short period of time, even if their financial structure is temporarily deteriorated.

Key financial indicators:

- Operating cash flow
- Investment cash flow
- Ratio of interest-bearing debt to EBITDA

(3) Safety

All three sectors have a number of companies with relatively sound financial situations. However, some companies that have made large M&A deals or large investments in new businesses have been left with weaker finances relative to past years. Goodwill and intangible assets tend to become large for pharmaceutical companies due to their large-scale M&A to expand overseas operations or to secure new drugs, and for dispensing pharmacies due to the full-scale industry reorganization. JCR also pays attention to the risk of impairment of these assets and their balance with their equity capital.

Key financial indicators:

- ■ Interest-bearing debt
- ■ Shareholders' equity and 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

Last Updated: June 3, 2024

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 containerships. Containerships 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

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