ADVISORY COMMITTEE ON SUPPLY CHAIN COMPETITIVENESS
MARITIME CARRIER BANKRUPTCY RISK ASSESSMENT FRAMEWORK

April 20, 2017

Introduction

During the past decade, global maritime carrier companies invested heavily in new container megavessels, partially in anticipation of trade growth after the Great Recession. However, the expected trade surge did not meet the carriers' projections, leading to record-low shipping rates and a historic imbalance between vessel capacity and space demand. As a result, each of the world's major maritime carriers experienced significant financial losses during this period, and debt levels grew throughout the container carrier industry. A maritime industry assessment in September 2016 indicated that all but two major carriers were in financial distress,[1] and suggested that only the world's top five shipping companies were safe from bankruptcy at that time.[2]

On August 31, 2016, South Korea's largest container carrier, Hanjin Shipping Co. (Hanjin), filed for bankruptcy protection after experiencing losses for four consecutive years and after the state-owned Korea Development Bank refused to extend further credit to keep Hanjin in operation. Hanjin subsequently halted the movement of its vessels and failed to meet many of its cargo delivery and payment obligations, sending shock waves through U.S. and global supply chains.

Hanjin's actions heavily impacted the operations of many U.S. ports and supply chains during the busiest shipping months of the year, substantially delaying the flow of cargo, containers and chassis and greatly magnifying the bankruptcy's financial impacts on the U.S. shipping sector. Shippers, ports, and the Federal Government worked together closely to keep ports open and to try to resolve disruptions. Small-to-medium-sized U.S. importers and exporters were disproportionately affected by Hanjin's decision to offload their cargoes at the port of entry rather than ensure their delivery to their intended destinations at the originally scheduled times. These entities often do not have sufficient resources available to make alternative delivery decisions.

Best Practices

The Committee has prepared the following best practices to help supply chain stakeholders understand how they can improve their decisions when contracting with a maritime carrier. This document also contains recommendations intended to help Federal Government officials

[1] *Shippers Look Deeper Than Carrier Losses To Avoid Next Hanjin*, Journal of Commerce, October 22, 2016, at http://www.joc.com/maritime-news/container-lines/hanjin-shipping/shippers-look-deeper-carrier-losses-avoid-next-hanjin_20161022.html
[2] *Shippers Struggle to Gauge Financial Health of Alliance Partners*, Journal of Commerce, September 27, 2016, at http://www.joc.com/maritime-news/shippers-face-headaches-assessing-financial-health-liner-partners_20160927.html

improve their ability to assess and address the risk of future maritime carrier industry bankruptcies.

Supply Chain Stakeholders

The Committee recommends that, as a voluntary best practice, individual U.S. beneficial cargo owners and other supply chain stakeholders should significantly expand their due diligence before selecting a maritime container carrier for cargo transport and other supply chain activities.

The Committee has identified a number of criteria that stakeholders can use for this purpose. These criteria include indices, scores, corporate filings, and other company data that many shipping industry members use to evaluate the financial health of potential partners, and that financial institutions' lending committees commonly use to assess investment risks. A list of these criteria is attached as Appendix I.

Where a potential carrier is privately held and does not publish its financial results, stakeholders should request access to carrier financial data, in exchange for signing a non-disclosure agreement, as needed to improve the transparency of the carrier's finances for contract decision purposes.

The Committee is sharing these criteria to help supply chain stakeholders, particularly small-to-medium-sized entities, identify resources that they and their financial advisers can use during carrier selection and contract negotiations to assess the level of maritime carrier bankruptcy exposure that they are willing to accept. It is important to note that the decision to approve a carrier lies with the stakeholder's financial and legal departments, and is a decision that each stakeholder needs to make based on its own assessment.

In providing these criteria, the Committee notes that they may not completely predict or reduce this risk exposure, as a carrier's financial condition may not be the only factor that triggers its bankruptcy.

The Committee urges cargo owners to require prospective carriers to demonstrate how their cargo will be delivered to them in the event of the carrier's bankruptcy, or of a bankruptcy involving the carrier's alliance, as part of their contract negotiations with the carrier. These negotiations should also include the financial restitution that the carrier will provide to the cargo owner if the cargo is not delivered, or is delayed beyond the terms of the contract, as a result of the bankruptcy. The Committee also urges cargo owners to take steps to reduce their potential liability if a carrier's bankruptcy prevents them from meeting their minimum container quantity commitments to that carrier.

Federal Government

The Committee recommends that analysts at the U.S. Department of Commerce and other Federal agencies should use these criteria, among others, to improve their ability to assess the risk of future maritime industry sector bankruptcies. The Committee also recommends that the

Department work with its interagency partners to identify policies that would help address the impacts of these bankruptcies on U.S. industries, trade, and competitiveness.

The Committee asks that the Department post these recommendations on its website for access by the public as soon as they are approved. To help ensure that these recommendations are broadly circulated to beneficial cargo owners, the Committee will communicate them to broad industry groups, such as the Retail Industry Leaders Association, the National Retail Federation, the Agriculture Transportation Coalition, and others, for distribution to their membership.

Lastly, the Committee recommends that the Administration establish a White House-led committee that would coordinate interagency response during future bankruptcies and identify government courses of action to restore cargo, container, and chassis movement and reduce port congestion. During the Hanjin bankruptcy, a similar ad-hoc committee led interagency coordination and engagement in the issue, ensured consistent diplomatic communication with South Korean Government leadership, and maintained outreach to ports and cargo owners.

APPENDIX I

MARITIME CARRIER BANKRUPTCY RISK ASSESSMENT CRITERIA

The following maritime carrier risk assessment criteria are provided to stakeholders for their consideration and voluntary use when selecting a carrier and negotiating a contract with the carrier. The Committee recommends that stakeholder reviews of potential carriers include as broad a set of these criteria as possible, to assess the potential risks of using the carrier as thoroughly as possible. For example, looking at a potential carrier's debt level, losses, payment plan for long-term vessel charters, and credit score provides a fuller picture of the carrier's bankruptcy risk than its losses alone.[3] Much of the data used to calculate these criteria can be found in a carrier's balance sheet, or in its profit and loss statement, as available either through its public financial filings or through audited information that may be obtained from the carrier on a non-disclosure basis. Shippers are strongly encouraged to consult with their financial advisers to determine which of these criteria they should use during their carrier selection process.

Fixed Asset Ratio

A carrier's fixed asset ratio divides its sales by its total fixed assets. It shows the amount of sales activity that the carrier is able to derive from its investment in its long-term assets. A downward trend in this ratio indicates that either the carrier is investing heavily in new assets or that its sales are continuing to fall.

Current Ratio

A carrier's current ratio as calculated by its current assets divided by its current liabilities. It is an indicator of the carrier's liquidity, i.e. the cash that it has access to at any one time in order to cover credit or supplier demands.

Acid Test Ratio

A carrier's acid test ratio is calculated as its total current assets minus its inventories, divided by its total current liabilities. The acid test ratio focuses more closely than the current ratio on the amount of a carrier's available cash resources.

Debt/Equity Ratio

A carrier's debt to equity ratio is calculated as the amount of the carrier's net borrowings, as divided by its ordinary shareholders funds. Net borrowings, in this case, essentially equals the company's total borrowings from banks and other financial institutions, compared with the value

[3] *Shippers Look Deeper Than Carrier Losses To Avoid Next Hanjin*, Journal of Commerce, October 22, 2016, at http://www.joc.com/maritime-news/container-lines/hanjin-shipping/shippers-look-deeper-carrier-losses-avoid-next-hanjin_20161022.html

of shareholder investments in the company. A high debt to equity ratio would indicate that the carrier is operating with a high amount of borrowed capital and is at relatively higher risk of bankruptcy.

Altman Z-score

The Altman Z-score, developed as a corporate distress score in the 1960s, uses statistical techniques to predict a company's probability of failure in the next two years, using data from the company's financial statements.[4] A company's fixed asset ratio, current ratio, and debt to equity ratio are all components of its Z-score. It is calculated as an index of the following financial ratios:

- The company's current assets minus its current liabilities, divided by the company's total assets;
- The company's retained earnings, divided by its total assets;
- The company's annualized earnings before interest and taxes, divided by its total assets;
- The book value of the company's equity, divided by its total liabilities;
- The company's annualized sales, divided by its total assets.

Drewry Maritime Research provides Z-scores for individual maritime carriers and for the industry as a whole, in the form of Drewry's Z-score carrier financial stress index.[5] Notably, Hanjin's Z-score at the time of its bankruptcy was higher than those of several other major carriers[6] The Committee notes that a maritime carrier's bankruptcy risk cannot be predicted solely by its financial condition.

Credit score

Credit rating agencies such as Moody's, Standard & Poor's, and Fitch Rating assess the general creditworthiness and financial health of a container carrier and its parent firm when they issue debt securities, such as bonds that are traded on financial markets. Their assessments are based on industry intelligence about such factors as the company's sales, payment performance, and exposure to outstanding debt and liabilities. Ratings can be obtained from the above agencies, or from the Lloyd's List Intelligence Service, which provides a rating service that is specific to maritime container carriers. Cargo owners and other supply chain stakeholders may consider using a carrier's credit agency scores in its set of bankruptcy risk assessment criteria, particularly when the carrier is a private company and does not normally disclose its financial data.

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[4] *Drewry Finds Risk of Carrier Failure Still High*, Maritime Logistics Professional, October 10, 2016, at http://www.maritimeprofessional.com/news/drewry-finds-risk-carrier-failure-296571
[5] Ibid.
[6] *Shippers Look Deeper Than Carrier Losses To Avoid Next Hanjin*, Journal of Commerce, October 22, 2016, at http://www.joc.com/maritime-news/container-lines/hanjin-shipping/shippers-look-deeper-carrier-losses-avoid-next-hanjin_20161022.html

Carrier Finance and Bond Issuance

Maritime industry media and reporting services frequently carry articles on new bond issues by container carriers. These articles often include financial information on these issues' size, purpose, interest rate, and due date, and the name of the bond purchaser. If the carrier involved is a public company, the extent of its outstanding bonds will appear on its balance sheet as a liability.

The nature and extent of this information, measured against the carrier's financial condition and performance, is a bankruptcy risk factor. Specifically, the debt service payments are compared to the issuer's cash flow so as to gauge their ease or difficulty in meeting their financial obligations. Cargo owners and other stakeholders should include this information in their bankruptcy risk assessment criteria when evaluating prospective carriers.

In addition, financial market information, such as the yield on the carrier's bonds and/or on credit default swaps based on these bonds, can also be used to gauge how investors view the carrier's financial condition. Using this type of information, however, does require expertise in analyzing securities prices.

Owned Vessels Versus Chartered Vessels

The number of a carrier's chartered vessels, compared with its total fleet size, may be considered when assessing the carrier's potential bankruptcy risk. This ratio should be viewed with caution, however. It can suggest the extent of the carrier's exposure to bankruptcy, particularly if freight rates are low. Conversely, it can also suggest that a carrier has chosen to minimize this exposure by chartering vessels rather than investing in new vessel capacity. Notably, the majority of Hanjin Shipping Co.'s vessels were chartered, rather than owned. This information should be viewed as a secondary factor when evaluating a carrier's bankruptcy risk.

Operating Margins

A maritime carrier's operating margin is a profitability metric that measures how much of the carrier's revenues are left after its operating expenses and other costs have been spent. A comparatively high operating margin theoretically reflects a carrier's reduced risk of bankruptcy. An industry analysis following Hanjin's bankruptcy filing reported negative operating margins at twelve of the thirteen major global maritime container carriers that report this metric.[7] A carrier's operating margin is reflected in its Z-score and can also be obtained through the Alphaliner maritime industry financial reporting service.

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[7] *Container Lines' Operating Margins Weakest Since 2012*, Journal of Commerce, October 5, 2016, at http://www.joc.com/maritime-news/container-lines/weakest-liner-operating-margins-2012-new-warning-shippers_20161005.html