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THE COMMERCIAL ASPECTS OF FREIGHT TRANSPORT
OCEAN TRANSPORT: FREIGHT RATES AND TARIFFS

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The need to determine the delivered costs of imported or exported commodities occurs with increasing frequency in many Bank or IFC lending operations. Ocean transport usually represents a significant proportion of these costs. It is therefore necessary to understand the different forms of ocean transport, and how they are priced.

The ocean transport industry provides a wide range of shipping services which may be broadly split into two main categories: tramp shipping and liner shipping. There are six distinct markets which are served, namely the dry bulk trades, the oil and refined products trades, the gas and chemical trades, the general cargo trades, the container trades, and the reefer (i.e., refrigerated cargo) trades. Liner shipping is the common arrangement for general cargo and containers, whereas all other trades are usually accommodated through tramp shipping. However, this divide is not strict, as liner operators may charter tramp ships to complement their fleets in times of peak demand, and tramp operators may occasionally engage in regular liner services for limited periods.

TRAMP SHIPPING

The environment in which tramp shipping takes place is close to the model of perfect competition, and pricing is fully governed by the law of supply and demand. Ships are chartered under different terms and conditions, including single voyage or consecutive voyage charters, contracts of affreightment, period or time charter, tripcharter, or bareboat charter. (For a discussion of these and other terms see the Annex.)

The composition of the charter rates under each of the above arrangements is depicted in the table below.

	Voyage	Affreightm.	Time/trip	Bareboat
Capital Costs	x	x	x	x
Operating Costs	x	x	x	
Voyage Costs	x	x		
Cargo Handling Costs	x			

The charter rates are quoted on a competitive basis through brokers in various exchanges throughout the world. The major elements which influence the fixing of a specific rate are: (a) ship specification; (b) trade and route; (c) general market conditions; (d) terms of charter party, i.e., distribution of costs between shipowner and charterer; (e) duration of charter; (f) the urgency of the charter; and (g) the convenience of the charter to the shipowner. A special situation applies to tanker chartering. The majority of tanker contracts are arranged in accordance with the provisions of the specialized Worldwide Tanker Nominal Freight Scale (Worldscale). Several indices are available to keep track of rate fixing in the international dry bulk markets, such as the Baltic Freight Index (BFI) which is determined by an expert group and published daily by the London-based Baltic Exchange.

Typical monthly charter rates (US$/DWT) at the beginning of 1990 were:

Dry bulk carriers (time charter):
25,000 DWT - 10.15; 60,000 DWT - 6.35; 120,000 DWT - 4.70;
Tankers (time charter):
30,000 DWT - 9.70; 80,000 DWT - 5.35; 250,000 DWT - 2.00;

General cargo ships (trip charter):
between 12,000 and 20,000 DWT - 12.60.

LINER SHIPPING

Liner shipping takes place in an environment which is totally different from tramp shipping in that liner services are provided on the basis of fixed schedules and itineraries. Until recently, the liner shipping sector was largely oligopolistic in that these services were controlled by cartels, called shipping conferences. A conference exists for each major trade route, and it is the conferences that draw up tariffs, scheduling freight rates at which goods will be transported. However, since the mid-1970s many independent carriers have entered the liner shipping sector, and they fix their rates on the basis of 'what the traffic will bear,' essentially applying market pricing techniques.

Two basic factors affect rate fixing in liner shipping: port and distance related factors and cargo related factors. There are three types of conference rates, including commodity rates, class rates, and commodity-class rates. Under the first category, rates are quoted individually for several hundred commodities; under the second category tariff specific commodities are grouped into a limited number of classes. The third category represents tariffs which are a combination of the two others. Liner freight tariffs are commonly based on what is called 'liner terms' under which the carrier assumes responsibility for loading and discharging expenses, as well as the carriage of the goods by sea. Cargo unitization has generated two additional types of rates, namely container rates and intermodal rates. The period during which the tariffs are applicable is not strictly fixed. Tariffs are frequently amended in light of changes in the relation of currencies the -- US$ is the currency of international shipping --and the costs of bunker, through currency (CAF) and bunker (BAF) adjustment factors, respectively. In addition, surcharges are commonly applied to published tariffs for unforeseeable reasons, such as port congestion, excessive cargo weight or dimensions, and insurance to cover war risks.

Conventional breakbulk (general cargo) liner tariff rates are assessed on either cargo weight, measurement or value. Goods measuring less than 40 cu.ft. per 1,000 kg are charged on a cargo weight basis, and above that measure by the measurement tariff scale. If goods are of very high value, they are charged irrespective of weight and measurement on an ad valorem basis. In container shipping, different charges are applied to 'less-than-container-loads' (LCL) and 'full-container-loads' (FCL). In the former case, the rates are usually the same as those charged for conventional shipments. For FCL containers there exists the principle of commodity box rates (CBR). CBR is a lump sum payable for the carriage of a container stuffed with a particular commodity. The rate is based on the average utilization of the box, e.g., 13 tons in a twenty-foot container. As a more recent development, container carriers have introduced the 'freight-all-kinds' (FAK) principle. FAK rates are non-discriminatory by treating all commodities the same way. They are basically average cost rates; the shipowner distributes his projected total costs over the anticipated number of containers to be moved. In combined transport arrangements by one carrier under a through document, an intermodal freight rate is charged. This rate is the sum of charges in the port of loading, ocean freight rate, charges in the port of discharge, and the road or rail haulage to the final destination.

Despite the existence of conferences and because of the increasing role of independent carriers in the liner trades, the rates actually charged vary widely and often deviate substantially from published tariffs. Carriers offer loyalty bonuses and apply rebates in violation of conference agreements. Service contracts are gaining importance whereby individual shippers pledge a minimum amount of cargo to be shipped during a certain period in return for specially discounted rates offered by the contracted carrier. Unlike the situation in the tramp sector it is therefore impossible to indicate 'typical liner freight rates.' However, the table overleaf provides some broad indications:

Container Trades - Liner Freight Rates (US$/TEU; August 1990)

Europe - Far East		3,240
North Atlantic (Westbound)	3,155	
TransPacific (Eastbound)	1,880	
Europe - Australia		7,885
Intra Asia	885	
East Africa - Europe (Northbound)	1,815	
East Coast South America - Northern Europe (Southbound)	2,125	

It should be noted that these are average rates; for each route there are considerable spreads, e.g., US $1,500 to US$3,000 in the case of the South America - Europe scenario. The spreads are due to different arrangements, i.e., conference or non-conference carrier, etc., and the intensity of prevailing competition. Important are also exogenous factors, particularly risk. In mid-January 1991, the war risk insurance premium for East Mediterranean, Red Sea and South Asia trades was increased from US$180 per TEU to US$1,080!

There are several sources which provide a track record of actually charged liner rates, such as Lloyd's Shipping Economist and Drewry's Shipping Statistics. Both are available in the Sectoral Library. A number of commercially operated and permanently updated electronic freight rate data banks can be accessed for a fee; the U.S. Journal of Commerce PIERS service is an example. For details on these services call the author's office (#33975).

TO LEARN MORE

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ANNEX: DEFINITIONS

Single Voyage Charter: This type of chartering covers a situation where a ship is employed to carry a particular cargo from a specified port or area to a designated destination, i.e., for a voyage. The shipowner is reimbursed by freight money paid either on a lump sum basis or in relation to the actual cargo quantity carried.

Consecutive Voyage Charter: Although tramp ships are commonly employed for one voyage at a time, seeking new employment to follow discharge of a current cargo, it sometimes happens that such vessels are engaged for a series of voyages under one head charterparty - termed consecutive voyages. In such cases, however, each voyage is considered separately in respect of freights earned.

Period or Time Charter: These charter arrangements arise from an instance where a charterer hires a ship for a period of time. The shipowner is required to operate the ship, but instead of freight he receives previously agreed sums of hire money in advance and at regular intervals. The responsibilities of arranging the vessel's employment and bunker fuel purchases pass on to the charterer.

Trip Charter: This type of chartering is comparable to voyage chartering (in that such a trip represents a single voyage or roundtrip) and to time chartering (since the contracting parties assume the usual roles and responsibilities associated with period employment). The rate of hire applicable to trip charter is generally related more to current spot market freight rates and not to the somewhat lower freight levels that are normally associated with period or time charters.

Bareboat Charter: Under this type of chartering arrangement, which is frequently also termed 'chartering by demise,' the shipowner virtually relinquishes all responsibilities and rights in respect of his vessel for a specified period, in return for a pre-arranged and regular payment of hire. The charterer becomes a disponent owner in the strictest sense, operating, crewing and chartering the ship as if he were, in fact, the owner.

Contract of Affreightment: Such an arrangement applies to a situation where an interested party, either a pool of tonnage or, more typically, an operator of time-chartered vessels undertake to transport a given quantity of some specified commodity or general goods from place to place, over an agreed period and on basic terms and conditions. How the task is managed is left to the carrier. The contract limits its provisions to the movement of the goods, the quantity to be shifted during any fixed period and sometimes the loading and discharging rates involved. A carrier is remunerated on a volume or tonnage basis.

TEU: Stands for Twenty-Foot-Equivalent-Unit and is the common unit used for indicating the container carrying capacity of a ship or the container handling capacity of a terminal.

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