Maritime Transportation

Guidelines for Importers

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Textbook on sea transport (in a series on import management and purchasing techniques, prepared for developing country importers - discusses factors relating to transport in import procurement: responsibility for international transport, the purchase contract terms, sea transport alternatives, types of cargo, types of ships, containerisation; structure of sea transport services, liner and charter shipping: multi-modal transport; the ocean freight market structure, freight rates; freight forwarding and clearing of goods; risk, sea carrier's liabilities, marine cargo insurance; appendices give sample charter-party document and bill of lading, glossary of selected sea transport terms, and bibliography.

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Chapter 1

INTRODUCTION

1.1 Import procurement and international transportation

Import procurement consists of several elements. The purchase contract is an important one of these elements. The purchase contract sets out the rights and obligations of the buyer on the one hand, and the rights and obligations of the seller on the other. A basic obligation of a seller is to manufacture or to procure and assign specific goods to the contract and thereby fulfil his commitment to sell to the buyer the goods agreed in the purchase contract.

However, an importer will achieve his procurement objective only when the contracted goods are physically in his possession at his place of use and in his country. International transportation is the vital service which makes it possible for the goods to be moved from the foreign source of supplies to the buyer's place of use. International transportation adds utility and value to a product in the same way as the manufacturing process does. Transport expenses are therefore an inherent and generally significant part of the total landed cost of imported goods.

If his overall strategy for procuring imported goods is to be efficient, the buyer must keep transportation costs to a minimum in the same way as he would look for and obtain a competitive quote for the goods he wishes to procure. Apart from the nature of the goods themselves, two other obvious factors will affect the cost of international transportation: the distance from the source of supplies to the buyer's place of use and the mode of transport used.

In general, and other considerations being the same, the more distant the source of supply, the higher the transportation costs will be. When he weighs up offers from different sources, the buyer should adjust the prices quoted in terms of the transportation costs involved. In some cases, transport costs are not included in the supplier's price - where the offer is made on FOB terms, for instance. [1]

The buyer should select the mode of transport which will be the most cost-effective.

[1] See International Trade Centre <u>Practical Guide No. 9 Bid Evaluation in Import</u> <u>Procurement</u>, Geneva, 1985, pps. 21-22

1.2 Selecting the most cost-effective mode of transportation

Various modes of transportation are now available for moving goods from foreign sources of supply to an importer's country: sea, air, road, rail and a combination of these (multi-modal transport). For each of these the freightage for the same cargo and between the same places will normally differ.

The importer has to decide which form of transport would be the most economical for his particular purposes. Sometimes, of course, cost may take second place to more pressing or urgent considerations, such as:

■ an urgent need for a spare part to reduce down time of a piece of equipment without which production would be disrupted;

■ disaster relief supplies to relieve the suffering of the people affected, or medicines required to contain the spread of a virulent epidemic.

In normal circumstances, an importer should select a mode of transport only after he has compared the costs of all feasible modes available to him. At the same time, he should remember that freight cost - the transport operator's fee or charges - is only one element of the total cost of transportation. Other costs also form part of transportation costs. The more important ones are:

the

(1) the type of packing required; (2)

extent of damage, pilferage and loss;

- (3) insurance premiums;
- (4) capital tied up in the goods during the voyage.

Costs like these will differ with the mode of transportation and also with the type and value of the cargo.

(1) Packing

Packing is intended to protect goods against damage, pilferage or loss during their journey. Sea transportation usually means greater transit time, more handling, and the use of relatively less efficient methods and equipment for loading and unloading than for air transportation, for example. Storing goods before and after shipment at congested sea-port quays, wharves and warehouses also means sea cargoes are exposed to greater risk than air cargoes.

To withstand these and other rigours in transit, packing has to be sturdier for goods shipped by sea than for goods shipped by other means. Other things being equal, strong packing normally brings higher costs.

(2) Damage, pilferage and loss

The buyer's chief objective is to receive on time the goods that he ordered - in the right quantity and of the right quality. This objective will not be met if his goods are damaged, pilfered or lost. In the second place, great cost in time and resources will be taken up with disposing of damaged goods, filing claims and making arrangements for replacements. Goods are more exposed to these hazards in one mode of transportation than in others. The additional costs due to damage, pilferage or loss can offset the advantages of relatively low freight rates.

(3) Insurance premiums

Importers can protect themselves by insuring their goods against the risks to which they are exposed during transportation. The insurance premium is the cost of this protection. This premium for the same consignment carried between any two given points will not be the same for sea and air transportation. The premium will generally be lower for goods moved by air. This is because the incidence of damage, pilferage or loss is likely to be less. The freight charges themselves, however, will be higher for air than for sea transportation. Lower sea freight charges may not always be as advantageous as they first appear when compared with air freight. Importers should always take into account the differential insurance premium rates as well as the other points mentioned here.

(4) Locked-up capital

Goods in transit are like inventory in a buyer's warehouse. Whatever their nature and location, all inventories entail costs equal to the value of interest which can be imputed to the capital involved or tied up with the inventories. Since the voyage time by sea is usually greater than by air, for instance, the cost of capital locked up with goods in transit by sea will be higher.

A note on cost comparisons

Some of the cost advantages associated with transportation of goods by air also apply to some other modes, road haulage in particular. The advantage of picking up goods from the supplier's warehouse and delivering them direct to the buyer's warehouse, without in-between unloading or reloading, is unique to transportation by road. This accounts for its increasing use in certain trades between some countries where this type of transport is possible.

A straight comparison of freight rates of different modes of transportation for a given consignment from a specified source will not provide the importer with a sound basis for selecting the most cost-effective mode. He should take account of all the advantages (or disadvantages) with the associated savings (or costs) which can be legitimately ascribed to each specific mode of transportation.

1.3 Importance of maritime transportation

Some modes of transport may have cost and other advantages, such as speed, over maritime

transportation under certain circumstances (for certain goods and/or routes). Nevertheless, sea transportation is generally the preferred and apparently the most cost-effective mode. This is borne out by the extent of its use compared to others. While no precise figures are available, some estimates put the share of maritime transportation at 95% of all goods moved internationally. [2] Such an overwhelming share would show sea transportation to have the competitive edge over other modes in most cases.

[2] White, Lawrence J., <u>International Trade in Ocean Shipping Services</u>, Ballinger Publishing Company,

Cambridge, Massachusetts, 1988, p. 1

Maritime transportation has a distinct edge in the area of bulk cargo, be it for dry bulk commodities, tanker cargo or liquefied gas. For the major proportion of general cargo too, it seems to be more economical. Exceptions would be for urgent deliveries, for transporting perishable products or products with a high value relative to their weight and/or volume.

1.4 Selecting the right shipping service

If and when the importer identifies marine transport as the most cost-effective mode, he should select from the available ships and shipping services the one which is cost-effective but at the same time fulfils his other procurement objectives, such as prompt delivery.

The aim of this Guide is modest. It is intended to provide importers with general background on this subject so that they can evaluate alternative shipping services and/or discuss these matters knowledgeably with shipping companies, freight forwarders and others in the business.

As maritime transportation costs generally form a significant proportion of the total delivered cost of most imported products, it is important for the importer to be familiar with different aspects of this mode of transport. To this end, the Guide seeks to provide a practical overall understanding of the subject of marine cargo shipping services, freight structures and other connected issues.

Chapter 2

RESPONSIBILITY FOR INTERNATIONAL TRANSPORTATION OF GOODS:

The Purchase Contract Terms

2.1 Terms and conditions of contract

The core element of an international purchase contract is the agreement of the buyer to buy and the seller to sell specified products at mutually agreed quantities and prices. The terms and conditions of the contract define all the rights and obligations of the two parties. If these terms and conditions are honoured, both parties can be expected to fulfil their objectives satisfactorily.

A purchase contract should set out precisely but in full detail each one of the agreed terms at which the transaction is to take place. Each party will then be clear about his rights and/or obligations. For the sake of brevity and precision, as well as to avoid clerical mistakes, a set of acronyms or abbreviations for major contract terms has evolved over time, each implying a defined set of rights and/or obligations. The same acronyms, however, have not always had the same meaning from country to country, both in domestic as well as international commerce. At times this has been a source of misunderstanding and friction. For use in international transactions it is essential that a term and its acronym have the same definition for the buyer as they have for the seller. Only then will the scope for misunderstanding be eliminated. Attempts at international level have therefore been made to standardise the scope of the trade terms in common use. The use of such a term with a reference to the source of its definition is a clear proof of the intention of the parties as to their agreed obligations.

2.2 The INCOTERMS

The Paris-based International Chamber of Commerce (ICC) has been active in developing rules, procedures, codes and definitions to harmonise commercial practices so that the scope for misunderstandings and misinterpretations between contracting parties of two (or more) countries is minimised, if not eliminated altogether. As part of this effort, ICC has standardised the definition of some of the terms used in international commercial transactions in goods. In particular, its International Commercial Terms (commonly referred to as INCOTERMS) define precisely the obligations of the buyer and the seller in regard to the international movement of contracted goods, including the question of the incidence of associated costs and risks and the transfer of documents.

The first set of INCOTERMS was drawn up by ICC in 1936. Several updates of these definitions have since been made to take into account the developments in transportation modes and/or techniques. The latest revised version of INCOTERMS came into effect from 1st July 1990. [3]

The 1980 INCOTERMS were 14 in number. The 1990 set consists of only 13 terms. This has been the result of broadening the scope of the term "Free carrier ... named point" to make its use applicable to any mode of transportation including a combination of two or more different modes. This made it unnecessary to retain some of the previous terms, which were specific to

a particular mode. It was then possible to drop the term "Free on Rail/Truck" (FOR/FOT) as well as "Free Airport" (FOA). As part of this revision the abbreviation for "Free carrier .. named point", which in 1980 INCOTERMS was FRC, has now been changed to FCA.

2.3 INCOTERMS and contract of carriage

Reference to a specific INCOTERM in a purchase contract is a shorthand way of affirming the respective responsibilities of the two parties. A term defines the reponsibilities of each party for arranging for the movement of the goods, the appropriation of specific costs associated with this movement, and the cut-off point where risk of damage or loss is transferred from the buyer to the seller. A reference to a specific INCOTERM in a purchase contract serves two purposes. Firstly, it obviates the need for listing all the obligations of the two parties to the contract and the incidence of associated costs. Secondly, it removes the possibility that the parties to the contract may interpret the terms differently.

Although a trade term (whether within the INCOTERM framework or otherwise) defines the responsibilities of the two parties to the contract in regard to transportation of goods, it is not a contract of carriage as such. Once the purchase contract is in place, the party responsible for arranging the international transportation of the contracted goods will have to conclude a separate contract of affreightment with an owner or operator of a carrier who, in all likelihood, will be a third party with no connection to the parties to the purchase contract.

2.4 Maritime transportation and the INCOTERMS

The six INCOTERMS more closely associated with deep sea maritime transportation are:

FAS (Free Alongside Ship) FOB (Free On Board) CFR (Cost and Freight) CIF (Cost Insurance and Freight) DES (Delivered Ex Ship) DEQ (Delivered Ex Quay). [4]

[3] See, International Chamber of Commerce: <u>INCOTERMS: 1990</u>, Paris, 1990

[4] The International Chamber of Commerce (ICC) has, apart from defining each term by a customary or standard

definition (e.g. "free on board") also identified these by a three-letter abbreviation or an acronym which may not

always correspond with the customary abbreviation. For example, the term ''cost and freight'' (customarily C&F)

has now been given the acronym CFR by ICC in the 1990 INCOTERMS.

The other terms, while not applicable to deep sea transportation are more appropriate for "short sea", road, rail and multi-modal transportation.

EXW (Ex Works) CPT (Carriage Paid To) CIP (Carriage and Insurance Paid To) (Delivered at Frontier), DDU (Delivered Duty Unpaid) DDP (Delivered Duty Paid)

The terms FOB, CFR (C&F) and CIF are the ones which are more commonly used by importers in developing countries. With growth in containerisation of cargo for deep sea transportation, another 1990 term, FCA (Free Carrier), is also likely to be used increasingly.

Table 1 on the next page gives some salient features of the specific responsibilities of the buyer concerning the shipping of goods, and the incidence of costs and risks of damage or loss.

INCOTERMS - the scope for variations

Once the parties agree that INCOTERMS will apply to their transaction, the scope of the respective obligations of seller and buyer are precisely defined. However, this does not preclude one of the parties from carrying out one or more such obligations on behalf of the other at the other party's cost and risk.

In an FOB contract, for example, the seller's obligation is discharged once he has handed over the specified goods to the carrier. However, he may, at the cost and risk of the buyer, arrange for the contract of carriage and also for marine insurance. If he does so he may obtain a mates receipt when the goods are on board and later exchange it for a bill of lading. Here also he may obtain the bill of lading in his own name and endorse it to the buyer's name. Alternatively, he may obtain the bill of lading in the name of the buyer in the first place. In this way, the parties may mutually agree to broaden the scope of the rights and obligations associated with a particular INCOTERM. The changes in responsibility must, however, be specified in the contract.

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<u>Table</u>	<u>l.</u>	<u>Buyer's Responsibility</u>			<u>ity</u> (1)
Nature of obligation/incidence of cost/passing of risk		CIF	CFR	– FOB	FCA
1. Obtain at his own risk and expense any					
export licence and carry out all export customs formalities in the supplier's country.		-	-	-	-
2. Contract at his own expense for the carriage					
of goods from the named:					
(a) place in supplier's country;		-	-	-	1
(b) port of shipment.		-	-	1	-
3. Take delivery of goods:					
(a) For FCLs, when the loaded container					
is taken over by the sea carrier;		-	-	-	1
(b) For LCLs, when the container has been					
carried to an operator of a transport					
terminal acting on behalf of the carrier					
and has entered his premises;		-	-	-	1
(c) When placed on board the ship on the					
date or within the period stipulated in					
the purchase contract.		1	1	1	-
4. Bear all risks of loss or damage of goods:					
(a) From the time the delivery of goods has					
been taken, in accordance with 3 (a).		-	-	-	-
(b) From the time the goods have passed the					
ship's rail. [NB. In an FOB contract,		1	1	1	-
if the buyer fails to nominate a vessel					
in time to arrive in accordance with					
the contract, the risk will pass to the					
buyer on the day he was supposed to take					
delivery and the supplier has assigned					
the goods to the contract.]					
5. Arrange for maritime transportation					
and bear freight costs.		-	-	1	1
6. At his own cost, arrange insurance of					
goods once the goods have been					
delivered in accordance with 3. above. [See also 4. above].		-	-	1	1
7. At his own risk and expense, obtain any					
import licence or other official					

authorisation and carry out all customs formalities for importation into his country.	1	1	1	1
8. Pay taxes, duties and other official charges payable upon importation of goods.	1	1	1	1

Chapter 3

MARITIME TRANSPORTATION

ALTERNATIVES

3.1 Product transport match

Maritime transportation today offers a shipper (an importer) a wide variety of cargo vessels to choose from. When the importer is directly responsible for arranging transportation, he has to select the alternative which is appropriate for the product to be shipped. In deciding which of the alternative types of maritime transportation would be the most suitable, the shipper should take into account the following:

- the type of cargo: its physical features and technical, chemical and other characteristics;
- different types of available cargo vessels;
- freight cost in relation to likely risk of delay, loss or damage to cargo if shipped by one type of vessel rather than another.

3.2 Types of cargo

(1) Physical nature of goods to be shipped

Goods which have to be transported across oceans come in one of three different physical forms:

- liquids
- gases, or
- solids (dry)

The physical state of a product has important implications for its transportation. Liquids and gases cannot be transported unless contained in some suitable receptacle. Liquids in a free state will flow over. Likewise, gases not held in sealed containers will escape into the atmosphere. Such cargo, therefore, has to be either contained in drums, flasks, tanks, etc. or be shipped in special vessels with in-built cargo tanks.

Another important consideration in selecting an appropriate vessel and, as we shall see in Chapter 4, the right type of shipping service, is the quantity of the product to be transported, be it in liquid, gas or solid form. The size of the shipment will determine whether it will be feasible and/or economic to transport it as bulk cargo, break-bulk cargo, or general cargo.

Bulk cargo

Bulk cargo is carried in loose form without any packing. The product to be carried, therefore, has to be homogeneous in terms of quality, grade and other features and characteristics. Even two consignments of a product, wheat for instance, coming from the same source and meant for the same destination cannot be transported together in bulk unless the two are of identical grade and technical specification. Large quantities of products of homogeneous characteristics constitute bulk cargo and are transported as full or part shiploads.

Such products include crude oil, most solid minerals (coal, iron ore, manganese, bauxite, etc.), food products (rice, wheat, maize, tapioca, vegetable seeds/oils, salt, etc.) and some chemicals in solid and liquid form.

Break bulk

When a bulk cargo shipment is too small in relation to the capacity of a bulk cargo vessel, it will not be economical to ship it in bulk. In this case it will normally be shipped as general cargo packed in drums, boxes, cases, casks, crates, etc. The process of unitising bulk cargo to make it suitable for shipment as general cargo is referred to as *break bulk*. Often the two terms, *break bulk* and *unitisation* are used interchangeably. Unitisation is a characteristic feature of general cargo.

General cargo

General cargo consists of a variety of products intended to be transported on board the same vessel. This type of cargo is always packed so that consignments of different products and/or products meant for different consignees and destinations do not get mixed up. Most manufactured goods are shipped as general cargo.

The classification of cargo into bulk and general cargo on the basis of the above characteristics is only loosely applied, however. Often more than one type of bulk cargo is carried by the same ship, each cargo being stacked in different holds. Likewise, a shipment of a product classified as general cargo because it is packed could equally be carried as a full shipload; this would be the case with rice packed in bags.

(2) Other features and characteristics of cargo

Besides their physical nature, other qualitative features and characteristics of the goods to be shipped must also be taken into account when the type of maritime transportation is being selected. It is important that the vessel's structure and/or equipment matches the specific and special requirements of the goods to be shipped. Here are some examples of products which need special provision during transportation:

<u>Perishable goods</u>: These require refrigerated holds. Alternatively they can be carried in refrigerated containers by a cellular container vessel or by a general cargo vessel with provision for carrying containers as a part load.

<u>Liquid sulphur</u>: This solidifies below a certain temperature. Tanks should have heating coils. <u>Hides and skins</u>: These sweat and need proper ventilation to prevent them deteriorating. <u>3.3 Principal types of cargo vessels</u>

3.3 Principal types of cargo vessels

The shipping industry has over the years kept pace with the diverse needs of different types of cargo. There are two very broad categories into which the world's cargo fleet can be divided: bulk cargo carriers and general cargo vessels. However, within these broad classes are many types of special purpose vessels which cater for the needs of specific types of cargo. These are in addition to more general purpose vessels which meet the needs of a mix of cargo types. In more recent times many other types of vessels have been introduced which have taken into account the changes in transportation technologies, equipment and methods. Any attempt to classify the world's cargo fleet into precise groupings, therefore, presents some difficulties.

Different types of vessels have different features which make them more appropriate for transporting one type of cargo rather than another. It is equally true that different types of cargo require different types of ship structures and/or gear and other equipment for efficiency in loading, storage during voyage and unloading at destination.

By describing the characteristics of different types of vessels, we may group the world cargo fleet, very loosely, as in Table 2 below:

Table 2Types of cargo vessels

(1) Conventional vessels

The more familiar and the oldest type of ship is usually referred to as a conventional vessel. Over time, these vessels have changed substantially in structure, internal design, storage space, handling equipment and gear. To refer to a modern cargo vessel as a conventional vessel is, therefore, something of an anachronism. A conventional break bulk, or general cargo, vessel is usually a *tween deck* ship. This means the ship has two decks (or compartments), one below the other, and several holds. Such a vessel is, therefore, suitable for the storage and stacking of general cargo. It may be fitted with its own derricks or cranes for loading and unloading cargo as shown in Figure 1.

Figure 1. Tween Deck Vessel (with cargo

gear)

It is also possible for such a vessel not to be fitted with derricks and other cargo handling gear. In this case, the vessel depends on on-shore loading and unloading equipment at ports as shown in Figure 2 below:

(2) Bulk carriers

Bulk carriers are designed to carry a particular product or a group of products in bulk, that is without packing or containers. Liquid bulk cargo vessels are called *tankers*, while vessels for dry bulk cargo are called *dry cargo bulk carriers* or simply *bulk carriers*. (a) **Tankers**

By far the most important type of vessel in a tanker fleet is the oil tanker, accounting for 94% of the world tanker gross deadweight tonnage. Liquid natural gas tankers account for 4% of the total with chemical tankers and others accounting for the remaining 2%. [5]

Oil tankers

An oil tanker is essentially a single deck vessel without any hatches or derricks, in contrast to dry cargo vessels. The holds are constructed to be the tanks. These are designed to take into account the properties of oil, such as free surface effect in partially filled tanks, and expansion due to heat.

The cargo handling gear of a tanker is a pump (or two) situated in between the tanks. The pump is used to pump in the cargo at the loading point, and to pump it out at the unloading point.

Figure 3. Tanker

Because of their specialised nature, oil tankers can be used in one direction only - from the oil source to the place where the oil is to be refined. The vessel has to complete its return journey *in ballast* (that is without cargo). Tanker vessels are available in different sizes to meet different types of demand. Some in sizes of 10,000 to 12,000 tons are useful for very low volume demand and, more so, for shallow draft ports. In the early sixties many vessels were built in the size range of 60,000 to 70,000 tons. This was the largest size which could pass fully loaded through the Suez Canal. Later on came larger sizes between 100-150,000 tons. However, in view of the economies of scale necessary for such operations, a number of VLCCs (very large crude carriers) of between 175,000 to 300,000 tons and ULCCs (ultra large crude carriers) of over 300,000 tons are now being operated on selected routes.

Liquefied gas carriers

Like oil tankers, the liquid gas carriers or tankers are specific-purpose vessels. These carry either liquefied petroleum gas (LPG) or liquefied natural gas (LNG). The liquefied petroleum gas carriers are sub-divided into vessels carrying gas made liquid by pressure, by refrigeration or by combining

both pressure and refrigeration.

[5] See: <u>Review of Maritime Transport, 1989, Report by the UNCTAD Secretariat</u>, United Nations, New York, 1990,

Table 9, p.17 The tanks in a gas tanker are either spherical or rectangular in shape and are cast in aluminium or stainless steel. In order that the liquefied natural gas retains its liquefied form, the temperature of the holds may have to be as low as -258 F. A diagram of a liquefied gas tanker with spherical holding tanks is shown at Figure 4 below.

Figure 4. Liquefied Gas Tanker

Chemical tankers

The chemical tankers are designed to carry more hazardous, toxic, corrosive, or reactive chemical products in liquid form. Often carriage of such products requires that the vessels are so structured as to ensure segregation of cargo if two or more products are carried at the same time. The standards of safety have to accord with the International Maritime Dangerous Goods Code laid down by the International Maritime Organisation. The vessels may have stainless steel tanks for such inorganic chemicals as phosphoric and sulphuric acids.

Miscellaneous tankers

Apart from these major types of specialised vessels there are other tankers for transporting petroleum products (naphtha, diesel oil, etc.), molten sulphur, bitumen, beer, wine, and other liquid products.

(b) Dry cargo bulk carriers

As their title suggests, these carriers are used to transport dry cargo in bulk. These vessels have a single continuous deck with several large holds [See Figure 5]. The hatches of these holds are large enough to provide easy access to cargo, enabling faster loading and unloading. The size of holds and hatches also allows the holds to be loaded in a way which eliminates the need for *trimming*, that is, filling different corners to achieve an even spread of the cargo. A wide hatch allows the crane with its grab, bucket, sling, etc., to move around and drop the cargo vertically in different places in the hold. Because of the ease of uniformity in loading, such vessels are called *self trimmers*. This arrangement reduces the turnaround time of the vessel as well as loading and trimming costs.

Large carriers of 300,000 DWT and above are being used to transport coal, iron ore and other bulk minerals.

Figure 5. Single-deck vessel bulk carrier

(c) Mixed cargo bulk carriers

Special-purpose bulk carriers for transporting dry cargo are useful when a large quantity of a single product is to be shipped more or less regularly between any two points. Apart from the fact that this restricts the use of these types of vessels to selected routes and products, such bulk carriers are usually obliged to complete the return journey in ballast. To overcome this disadvantage the shipping industry has introduced bulk carriers which can be switched over to carry different types of bulk cargo. Three of the more common types of such bulk carriers are the ore/oil (O/O), ore/bulk (O/B) and ore/bulk/oil (O/B/O) vessels.

Ore/Oil carrier

This type of carrier is designed to transport ore on its outward journey and crude oil on its inward journey or vice-versa.

Ore/Bulk carrier

Some bulk carriers are designed to carry only dry bulk cargo, but can be switched from ore to carrying one of several types of bulk cargo, such as different kinds of grains and fertilisers in bulk.

Ore/Bulk/Oil

A more versatile bulk carrier is a multi-purpose one which can be used to ship either ore, one of several dry bulk products or oil. These vessels have special holds which can be filled with dry cargo or any ore as an alternative. Their initial high cost is offset by their flexibility of use, which reduces the possibility of ballast voyages to a minimum.

(3) Specialised vessels

The continued search for efficiency in maritime transportation of international cargo has given rise to three inter-related developments. One of these has been to view international cargo movement as an integrated operation, from the foreign seller's warehouse (or factory) to the buyer's premises in his country, rather than only as a movement of goods from the port in the seller's country to the port in the buyer's country. Unitisation of cargo, that is its packaging into standardised containers, has facilitated this.

A second development, following from the first, has been the emergence of specialised vessels which take into account the integration of the inland and overseas transportation segments. While there are many different types of specialised vessels, the two which fit the multi-modal characteristics of an integrated transportation system are the container and roll-on-roll off (RO/RO) ships, or a combination of the two.

A third development, of an institutional character, has been the emergence of multi-modal transport-operators (MTOs) and of non-vessel-owning multi-modal transport operators (NVO-MTOs). [6] These operators take on the responsibility for arranging for door-to-door transportation of cargo. This relieves the buyer (or the seller) from having to enter into contracts of affreightment (and/or related services) with several agencies. The multi-modal transporter may often be an owner of one of the modes, who acts as the principal supplier of the required transport services to the shipper (importer or exporter) and enters into subcontract arrangements with the owners of other modes.

(a) Containerisation and containers

It has become clear that the perceived advantages of through land-sea-land transportation of goods can be realised only if a way can be found to transfer cargo from one mode of transport to another with ease and speed in handling and with minimum risk of damage or loss of goods in the process. Containerisation has been the answer.

Containers

Originally a "container" meant a receptacle - a box, bag, basket, or something which could hold together goods or packages of goods for the same purpose. However, once the word was used in this new context of maritime and multi-modal transportation, it was inevitable that its definition had to be standardised. So did the shape, size and material specification of containers. The United Nations Economic Commission for Europe defines containers as an article of transport equipment with the following features:

- strong enough to be suitable for repeated use;
- designed to facilitate transfer of goods by one or more modes of transport, without intermediate reloading;
- fitted with hardware to allow easy handling, especially when transferred from one mode of transport to another;
- designed so that it can be easily filled or emptied;
- designed to have an internal volume of 1 m³ (35.3 cu.ft.) or more and to include all normal accessories and equipment to a container.

A variety of containers meet these specifications. Many have other features designed to meet the special needs of the cargo to be carried. Some perishable cargoes need refrigeration; others may need a certain minimum temperature to prevent them solidifying. The shape, size, material structure or other physical features of a cargo may demand a container of special design. The range continually increases to meet special needs. Some types of containers currently in use are set out in Table 3.

[6] Further extension of the institution of MTOs is what has come to be called the total distribution operator (TDO)

who caters to the special needs of the shipper in his logistic management further downstream. Such institu-

tional developments in most developing countries are as yet either in their infancy or non-existent.

Of the different types of containers in use, the general cargo container [See Figure 6] is the most representative and accounts for an overwhelming percentage of all containers in use. These are made of steel, aluminium and fibreglass reinforces plastics.

Figure 6. A general cargo container The major containers in use have been built to ISO specifications which include their dimensions, material norms, physical features, maximum gross weight, minimum internal dimensions, minimum door opening dimensions, etc.. Most containers come in two standard sizes which are commonly referred to as 20 foot and 40 foot containers. This statement is slightly inaccurate as the ISO standard dimension for the "20 foot" container is in actual fact 19 foot and 10.5 inches in length. Moreover, these two containers come in two variations as far as height is concerned, as is shown in Table 4.

Table 4. ISO freight container dimensions and

pay load

Container vessels

The growing use of containers as transport equipment has brought with it the development of hull structures with specially designed holds and hatches for easy loading and unloading of containers and for ensuring the maximum use of space within the ship. In a lift on/lift off container ship, the containers are lowered into holds by cranes and are lifted off from the holds at the discharge port in the same manner. A further development is the use of cellular vessels in which the holds are designed as a series of cells into which containers fit snugly. A cellular container ship [See Figure 7] is not usually fitted with cranes but relies on shore-based cranes at ports for loading and unloading of cargo.

Figure 7.Cellular Container Vessel

The full efficiency potential of containers as transportation equipment can be achieved only if the loading/unloading movement of containers from the berth to the yard, etc., is carried out rapidly. Fast handling is only possible if the necessary portside equipment and the infrastructure connecting the container yards and berths is in place. This involves a fairly large amount of investment, which many developing countries are unable to mobilise. For this reason, although container use is increasing in developing countries, the full benefits of this system have yet to be realised fully in developing countries.

(b) Roll-on/roll-off (RO/RO) vessels

A basic feature of Ro/Ro vessels is that goods are loaded in and out of the vessel horizontally. This is unlike the loading and unloading of other vessels which is a vertical lift on/lift off operation. Many types of vessels fit this definition [See Figure 8]. These types of vessels best meet the needs of a multi-modal transportation system where their cargo, along with their inland transportation equipment (trailer trucks, rail cars, trailers, containers, pallets, etc.), is rolled on and off the vessels by essentially self-propelling devices or with the help of fork lifts, tractors or other means. As of now, this mode of transport is mostly in use on short sea

journeys around Europe and over deep sea North Atlantic trade routes.

Figure 8.

RO/RO Vessel

(c) Barge carriers

Quite a few types of barge carriers are in use. The size of these vessels may differ as well as the size and number of barges they are designed to carry underneath their decks, in addition to cargo. The cargo may be in standard containers, cartons, bags, etc. or as bulk in bundles or rolls. A gantry crane fitted to the vessel helps lower barges on the water and also to off-load cargo from the vessel on to the barges. Several advantages are claimed for barge carriers. This type of vessel does not need any harbour facilities. A deep sea Lash vessel will not need a deep draft port as the cargo can be off-loaded on to barges in mid-stream. The barges can discharge the goods at small wayside coastal ports or upstream river sideports which may be more convenient to the customer.

Various types of these vessels are in service. They go by names like LASH, SEABEE, Beco liners, BECAT, and VALMET.

3.4 Selecting a vessel

The nature of the consignment - the characteristics and volume of the cargo - will be an important deciding factor in vessel selection. If the consignment is of dry bulk cargo and the volume is large enough to provide a full load for a cargo vessel, a basic question to be settled, on the face of it, would be the size of the vessel. However, vessel selection is often more complex. For example, it may be possible to load a big (O/O, O/B or an O/B/O) vessel with an ore consignment providing part cargo with other cargo consignments making up the rest.

This is not all. A shipper may possibly find a vessel, normally too large, which is facing the prospect of having to make the journey in ballast. The shipper may be offered an even better rate for use of this vessel than for another of more appropriate size. Purely on freight rate considerations, the shipper would select the larger vessel. However, the shipper would have to consider other factors such as the speed of the ship, its loading and unloading gear as well as port conditions at the two ends of the journey.

A shipper will therefore have to take a number of factors into account when selecting a vessel which will meet his requirements in an overall cost-effective way. Nevertheless, the characteristic features of a consignment - such as the physical and chemical properties of the goods, the size of the lot to be shipped, whether as bulk or general cargo - will have a profound if not decisive influence on his selection of vessel.

Many developing countries, however, have established so-called *reserve cargo* systems under which a certain share of the cargo (50%, for example) carried to and from the country must be done on national flag vessels.

The UN Convention on a Code of Conduct of Liner Conferences signed in Geneva, which came into force in 1983, lays down that 40% of cargo should go to shipping lines of the exporting country, 40% to lines of the importing country and 20% to lines of the third countries. These systems are often likely to restrict the choice of vessels available to an importer. This may mean longer lead times and/or higher costs. As developing countries become increasingly aware that such shipping restrictions may make their trade less competitive, they are doing away with them under the realisation that shipping must serve trade and not the other way around.

Chapter 4

STRUCTURE OF SHIPPING SERVICES

4.1 The market organisation

The nature of the cargo, its technical characteristics and the size (weight and/or volume) of the consignment, is an important factor in identifying a suitable vessel. It is equally important for the shipper to know what shipping services are in fact available from the port of origin of the cargo to the port of destination.

International shipping services are broadly divided into two main categories: liner and charter (or tramp) services. Each of these two types of service has certain distinguishing characteristics; together they are geared to meet a shipper's varied and specific needs. Liner shipping meets the maritime transportation needs primarily of general cargo shippers, whereas tramp (charter) shipping meets the same needs of bulk cargo shippers.

4.2 Liner shipping

A principal characteristic of liner shipping is that the vessels carry a variety of goods from different shippers which may be destined for more than one port. The cargo that a liner vessel caters to, therefore, is general or break-bulk cargo. It can also be cost-effective for a liner vessel to carry a small consignment of bulk cargo when it is unitised, for instance sugar in bags, vegetable oil in drums, acid in flasks.

The selection of the most suitable ship and shipping service should take into account:

- appropriateness of the vessel for the cargo to be shipped
- efficiency of the service, and

■ freight rate.

Liner vessels are usually fitted with an assortment of gear to accommodate the requirements of different types of cargo. A vessel may have air-tight containers for goods likely to degenerate through

moisture. For perishable products, it may have either refrigerated containers or refrigerated storage space. Similarly, a vessel may have special-purpose containers for hazardous goods like explosives or inflammable products. Cargo accommodation in liner vessels is typically flexible. The vessel selected must always be appropriate for the goods which make up the cargo.

Efficiency of service depends on the speed of the vessel, the route it covers and the number and the quality of the ports it will call upon *en route*. When he selects the liner vessel for carrying his goods, an importer should always consider the service in relation to the freight rate.

Shipping lines do not charge the same freight rates for the same class of goods. Neither do they all operate with the same degree of efficiency. A shipper should, therefore, estimate the trade-off between the freight rate and the level of service. If his existing stock of the goods in question is sufficient to carry him over the longer lead time, he may opt for a vessel which offers a lower freight rate even though the voyage period is longer.

Liner shipping is organised around conference and non-conference individual shipping lines.

(1) Liner conference system

Liner conferences are associations of shipowners who run liner services in particular trade areas. They operate along definite routes and call at specified ports, offering a scheduled service on a continuous basis. The frequency of sailings is determined by the volume of cargo on a given route. Conferences fix freight rates for different types of cargo and routes. Members of the conference are obliged to quote these rates to shippers, thereby ensuring that members do not compete with each other.

There are two conference systems: open and closed conferences. Any shipowner may join an open conference, provided he satisfies certain minimum technical and financial standards established by the conference, and is willing to abide by its rules and regulations.

Membership in a closed conference is not automatic. The existing members will normally decide whether or not the induction of a prospective applicant will be in the interest of the conference as a whole. Closed conferences provide for the right of refusal.

A conference system has certain advantages for the shipper:

- a regular schedule of sailings, routes and ports, enabling the shipper to plan his overseas supplies,
- stable freight rates, with conference rules stipulating that 30 to 90 day notice be given before freight rates are raised,
- largely non-discriminatory rates, and

■ a greater degree of reliability (important in view of the growing menace of maritime fraud). Against these advantages is an obvious disadvantage. A conference system reduces competition, compelling shippers to pay higher freight charges than would probably be the case if more competitive conditions prevailed in the shipping industry. With this in mind, a shipper should know that inter-conference competition does exist; different conferences may compete for cargo through a system of

rebates.

(2) Non-conference shipping services

Non-conference shipowners with vessels suitable for transporting general cargo provide, individually or in cooperation with other shipowners, services similar to those of conference lines. Until about fifteen years ago, the share of non-conference services and other shipping lines in total liner trade was relatively insignificant. Some estimates placed this share as no more than 10%. With the increasing use of containers in maritime transportation of general cargo and the introduction of large-sized special container vessels, the share of these "outsiders" in the liner trade is now estimated to account for about 50% on some routes. Non-conference services and other shipping lines have been offering stiffer competition. They have forced even conferences in certain cases to permit their members to negotiate freight rates more flexibly with individual shippers.

4.3 Charter shipping

Unlike liner services, charter shipping has no fixed schedule or route. It also has no established freight structure, as the ship (with or without the crew) is rented out. The rent is negotiated on a charter-to-charter basis (depending on the charter market conditions) between the shipowner and the charterer, that is the party hiring the ship or its services.

Chartering is the system by which the charterer acquires the right to employ a whole ship on a given voyage or voyages or for a given period of time. The document containing the Contract of Affreightment (the leasing of the ship) is called the *Charter-party*. The *charterer* may charter a vessel with the intent to use the vessel to carry his own goods, or to enter into subcontracts of carriage with other shippers for the supply of the whole cargo or a part of it. Making use of charter facilities will be particularly cost-effective if the importer is importing a full shipload of cargo. If the importer decides to charter a vessel himself or wishes to make use of a chartered vessel, he should make sure that the vessel is equipped with suitable gear for handling the type of cargo he wishes to ship.

There are two types of charter-parties: *by demise* and *not by demise*. In the first case the owners place the ship at the disposal of the charterer for the period of the charter and for an agreed rate of hire per deadweight ton (DWT). The charterer may or may not use the owner's master and crew as his own employees. For this reason, a by demise charter is called a bareboat or *net charter*. The charterers obtain complete control of the vessel which they operate as if they were the owners. All expenses for crew, bunker, routine maintenance and repairs are on the charterer's account. Since a bareboat charter means owners lose control over operations and management of the vessel for the charter period, they do not, in normal times, hire out ships on bareboat terms. If in addition to operating expenses, other expenses such as port charges, loading and discharging expenses or tally charge are for the owner's account, the charter-party is referred to as a *gross* charter.

On the other hand in the *not by demise* charter, the charterer acquires the right of use of the ship along with its master and the crew. In other words, the shipowner agrees with the charterer to render services by his master and the crew to carry the charterer's goods or those which are loaded on his behalf.

Charter-parties not by demise fall into two main categories: time charters and voyage charters.

(1) Time charter

In a time charter the shipowner agrees with the charterer to make available his vessel and to render services by his master and crew to carry goods on behalf of the time charterer for a named period, e.g. six months or a year. The remuneration of the shipowner is referred to as *hire* and is usually a certain rate per DWT per calendar month. It is entirely up to the charterers to provide for a full cargo up to the vessel's DWT capacity. Generally time charter parties stipulate that the owners should provide and pay for all expenses involved with operating the ship including salaries and wages of the crew.

There may be occasions when a shipper finds it economical to make use of time charter facilities. For example, in a period of excess shipping capacity it may be possible to charter a vessel at fairly low rates. The important points to be taken into account when chartering a vessel are:

- The deadweight and bale capacity of the ship
- Rate of hire
- Delivery rate
- Duration of the charter
- Port of delivery (where the owners will make the vessel available to the charterer) and redelivery (where the charterer hands it back to the owner)
- **Type of propulsion, speed and bunker (fuel) consumption**
- Provisions relating to over-age of the vessel
- Arrangements for "off hire" periods, if any, (i.e. periods when the ship cannot be operated because of extraordinary circumstances such as breakdown of some machinery)

(2) Voyage charter

A voyage charter is an arrangement by which the shipowner puts a vessel at the disposal of the charterer for the carriage of cargo from one or more ports to the named port (or ports) of destination. The cargo to be shipped may be less, equal to, or more than the full deadweight capacity of the vessel. If it is more, the vessel will have to make several voyages. The terms and conditions of the charter, including the freight rate, will be as agreed between the shipowner and the charterer.

Unless the charter-party provides for exemptions, the freight is usually all inclusive with the shipowner having to defray all costs such as the operating costs of the vessel, port dues, loading and unloading charges.

There are two variants of the voyage charter: the single voyage charter and the consecutive voyage charter.

Single voyage charter

When the cargo to be carried is less than or equal to the deadweight of the vessel, it can be carried in a single voyage. The charter-party will therefore be for this one voyage. If the cargo to be transported is less than the deadweight of the vessel, the freight will depend on the quantity to be shipped unless the charter is for the full deadweight of the ship and the shipper is unable to provide the full load. In

this case the freight which the shipper will have to pay would be as if he made use of the full capacity of the vessel.

Consecutive voyage charter

In a consecutive voyage charter the contract of affreightment (the charter-party) remains valid for the period between two specified dates - the beginning date of the first voyage and the terminal date of the last voyage. The contract envisages a given number of voyages, one after the other, to carry a specified cargo from and to specified ports, on the terms and conditions and at the freight rate agreed between the charterer and the shipowner.

(3) Charter-parties

The contracts of affreightment in a charter system are called charter-parties. Over time, charter-party forms have been standardised to some extent and these are being used more and more. The number and variety are large. For example, at least 8 forms are in use for fertiliser shipments. There may be 15 forms for general cargoes and about 10 for coal. Moreover, parties having large cargo movements create their own forms. These are usually adapted from those known in the trade but tailored to their particular requirements. However, the use of standard charter-parties avoids disputes.

Once the charter-party is established, the shipowner and the charterer have to agree on freight rates. Should the charterer consider it necessary to modify any of the terms of a standard charter-party form, he should seek the help of a competent professional, who would be able to assess the often subtle implications of the various clauses and the desired modifications.

Charter-parties (or Maritime Contracts), in addition to their basic structured clauses, contain the principal elements of most other service contract details.

A charter-party will include:

- Name of the vessel, its description and capacity.
- **Description and quantity of the cargo.**
- Loading and unloading ports or places.
- Freight rate(s).
- How, when, where and in what currency the freight is payable.
- Time allowed for loading and unloading (laytime). When and under what preconditions such time is to commence and terminate, as well as whether or not any excepted time is applicable (such as non-weather working days or holidays, etc.). Penalty, if any (demur

rage) for failure

to perform the loading or unloading within the prescribed period or reward (dispatch) for having done so in less time.

Some of the important points to which the shipper (the charterer) should pay special attention in a charter-party, are:

■ Quantity: provision for option to increase/decrease.

- Freight rate: clarification of whether free in and out or liner terms apply (incidence of loading/unloading, stowing/trimming, etc., costs).
- Loading and discharging ports: **number and location**.
- Loading dates: commencement and cancellation dates and the required notice period: dispatch, demurrage provisions.
- Payment: currency and schedule.

Specific individual conditions may be negotiated to meet special requirements. Clauses such as Owner's Responsibility, General Ice, New Jason, Both to Blame Collision, Clause Paramount, Chamber of Shipping War Risk and P. & T. bunkering, are almost invariably included in most charter-parties. The full texts of these clauses are contained in paragraphs 32 through 38, inclusive on the General Purpose, GENVOY, Charter format [See Annex I]. These clauses are also generally incorporated in liner freight contracts directly, or by reference, in the bills of lading.

4.4 The shipping market

The shipping market, as it has evolved over time, is fairly diverse. It presents the shipper (importer) generally with a degree of choice enabling him to select a service which meets his cargo transportation objectives on competitive terms. If an importer is to be able to take advantage of the full range of shipping opportunities, two things are important. First, he should know the type of shipping services that are available for a given cargo/route as well as the general terms and conditions which apply. Second, he should monitor the state of international freight markets.

A non-conference liner vessel may, for example, operate a less direct route to the port of destination than a conference vessel. However, it is possible that the former may offer a freight rate which will more than compensate the importer for the longer shipping time. If the importer can afford extended delivery time for his supplies, he can take advantage of the lower freight rate of the non-conference vessel.

Charter vessels often have full cargo load on the outward journey and little or no load on the return journey. To avoid having to return in ballast, an owner may be willing to offer a very competitive freight rate for his vessel.

Before he selects a shipping service, an importer should analyse and evaluate all the available options. He can then choose the one most suitable for the product to be shipped, which also meets his service objectives in a cost-effective manner. To make such an informed judgment is not always easy.

Information on the international shipping market

The international maritime market is a complex one. The main markets are concentrated in London, Hamburg, Rotterdam, Oslo, Piraeus, Singapore, Hong Kong and other places far away from importers in most developing countries.

To remain directly in touch with the international shipping market on a day- to-day basis can be difficult and expensive for the importer. Because the main markets are complex and distant, it is often not worthwhile trying to do so. It is often better for the importer to gain access to market information by keeping in touch with freight forwarders/cargo brokers, shipping agents and shipping brokers. They normally are the main players in the market and interchange a lot of information during the course of their business together. They are, therefore, abreast of market trends. They know the specific shipping lines offering shipping space for general cargo and which vessels are on offer (for charters). They are up to date with other events, such as marine casualties, typhoons, other natural calamities, or political conflicts which affect freight rates on certain routes or for specific cargo.

It is also advisable for the shipper to subscribe to a few selected published sources of information on international shipping and freight rates. Besides journals, there are a few specialised news services such as the Transportation News Ticker in the United States and Canada and UNICOM (in the United Kingdom) which report information on a daily basis. [7]

[7] For further details see: International Trade Centre <u>Practical Guide No. 5: Information for</u> <u>Better Import</u>

Management, Geneva 1990 (Rev. Ed.) ppgs. 80-81

Chapter 5

MULTI-MODAL TRANSPORT

A series of developments in transportation technologies and concepts of logistics management has promoted multi-modal transportation as a more efficient and cost-effective approach to the international movement of goods.

The introduction of containers, pallets, trailer trucks and the like has facilitated cargo unitisation. Cargo can now be packed at the supplier's warehouse in a form that suits the needs of buyers or destinations. This eliminates the need for freight to be collected and consolidated at or near port premises.

Specialised ships in ocean transportation, such as combis (vessels capable of carrying different types of bulk, general, palletised and/or containerised cargo at the same time), cellular (container) ships and roll-on/roll-off vessels, have revolutionised port handling. Cargo can now be loaded more quickly and more easily into ship holds or onto decks, either directly or with the help of on-shore cranes. These innovations have greatly reduced total costs of transportation - freight, packing, handling, insurance and capital tied up during the voyage period.

5.1 Disadvantages of uni-modal transportation

Traditionally, shipowners have confined their services to transporting goods from a port in one country to a port in another one. The shipowner has had the custody of goods during the sea voyage and has therefore been responsible for their safety and condition during this period. The shipper's responsibility has been for arranging the movement of goods from the supplier's premises to the loading port and from the discharge port to the buyer's premises. Under the purchase contract the shipper may be the buyer himself (as in an ex-works contract) or the seller (as in a DDP contract). Naturally this has meant several contracts of affreightment: one with a shipping company for the sea voyage part, and one each with a road/rail haulier in the supplier's and the importer's countries.

It has also meant loading and unloading goods from one carrier to another, involving a high incidence of delay, pilferage, theft, damage and loss of goods. When claims are made or settled, establishing responsibility for damage or loss has itself been a difficult task when many parties have been involved.

The advent of multi-modal systems of transportation has overcome some of these disadvantages associated with the uni-modal transportation of goods.

5.2 Multi-modal transportation

Multi-modal transportation systems signify a totally new concept in the international movement of cargoes. Instead of viewing this movement as the transportation of goods from one country to another, it is now seen as the movement of goods from a supplier in one country to an

importer in another.

The different segments of transportation are no longer viewed as independent and separate operations but as linked sequential stages in an integrated chain.

(1) **Definition**

The United Nations Convention on International Multi-modal Transport of Goods defines multi-modal transport as:

"...the carriage of goods by at least two different modes of transport on the basis of a multi-modal transport contract from a place in one country at which the goods are taken in charge by the multi-modal transport operator to a place designated for delivery situated in a different country".

Multi-modal transport has the following characteristics:

The carriage of goods involves at least two modes of transportation one of which will be maritime transportation, i.e. a sea-going vessel.

A multi-modal transport operator (MTO) assumes full responsibility. He may be either a vessel owner (VO-MTO) or a non-vessel owner (NVO-MTO).

Transportation extends backwards at one port and forwards at the other, thereby providing these services not only on a port-to-port basis but also on a warehouse-to-warehouse or door-to-door basis.

A single contract of affreightment is made between the shipper and the MTO to cover all modes of transport.

(2) The multi-modal transport operator (MTO)

Along with the concept of multi-modal transportation has emerged the multi-modal transport operator (MTO), who has given the idea an operational content. Instead of having to enter into a series of contracts with different transporters, the shipper now has an institution available to him. The MTO can assume full responsibility for the custody and carriage of goods from the moment they leave the supplier's premises to the moment the consignment is in the hands of the importer at the place of his choice. The shipper signs only one contract of affreightment. The MTO concludes all the necessary sub-contracts of affreightment with several transport operators - airlines, railway companies, road haulage operators or shipping lines. These sub-contracts, however, do not affect the MTO's obligations to the shipper. It is to the shipper that the MTO remains solely responsible for any damage, pilferage or loss, even if the goods may have been in the custody of any one of the sub-contractors when the loss occurred. The MTO may own as well as operate a sea, air, land and/or any other carrier. However, the functions of the MTO are being increasingly performed by non-vessel owning operators (NV-MTOs).

Depending on the nature of the contract, the duties of an MTO will begin and end at any point in the transport chain as shown in the box below.

The point of demarcation where risk is transferred from the seller to the buyer is no longer the ship's rail. In a multi-modal transportation system, it is the point where the seller delivers the goods to the first carrier.

(3) Multi-modal transportation and importers in developing countries

The multi-modal system of transportation offers certain benefits to the importer. Among these are the cost benefits of quick transit time, cheaper packing and less susceptibility to damage during the journey. The use of containers, trailers, self-propelling pallets and other equipment for the multi-modal transportation of cargo makes port handling much faster than in conventional systems. Both time and transportation costs are saved.

However, if multi-modal transportation of international cargo is to be successful and effective it requires:

- appropriate institutions, like the MTO,
- streamlined procedures and documentation,
- standardised containers, trailers, self-propelling pallets and other equipment,
- suitable infrastructure at ports and in the hinterland in both the buyer's and seller's countries.

To acquire the equipment and construct or modernise the infrastructure requires a great deal of capital investment. In the short term, many developing countries are not in a position to provide this. This means that many of these countries have not so far been able to raise the standard of their facilities high enough to benefit from the advantages of multi-modal transportation.

The importer should therefore always carefully verify the standard of port and inland facilities before he agrees to a multi-modal shipment.

Chapter 6

OCEAN FREIGHT STRUCTURE
6.1 Overall demand and supply characteristics

The price of freight services is largely determined by forces of demand and supply, as in any industry. The demand for shipping services is a demand derived from the level of activity in the international trade of tangible goods. If the volume of trade increases, the volume of operations in the shipping industry should also increase, other things remaining the same. The demand for shipping services is also influenced by changes in the geographical patterns of international trade - new sources of supply, for instance. If such changes lengthen the distances to be traversed, ships will have to stay longer at sea. This could result in shortages of supply and increases in freight rates.

The aggregate supply of shipping services is directly related to the size of the world merchandise fleet in sea-worthy condition at a given time. In the short run the size of the fleet is fixed but may go up (or down) depending on investors' expectations of returns on investment in the shipping industry in relation to expectations of returns on investment in other industries. Ship building is not only capital-intensive but also has a long gestation period directly related to the time taken for construction.

The industry is therefore characterised by "booms" and "busts". Levels of investment are high when current and expected demand is high and reduced when demand is sluggish. During times of depression, ship repairs and rehabilitation are not carried out and the rate of sales of old ships for scrap goes up sharply. Such a period is one of disinvestment and a contraction of the size of the merchant fleet.

6.2 The freight market

The market for shipping services is not unified but has two broad segments with limited elasticity of substitution. This means that the services of one segment can be used only to a limited extent to substitute and meet the demand for the services of the other. These two segments are:

- the charter (or tramp) market
- the liner market

As seen earlier, the charter market caters to the need of bulk cargo (liquid and dry), while the liner market meets the needs of general cargo.

(1) The charter market

The charter market itself can be divided into two principal sub-markets. These are:

- tankers
- dry bulk carriers

The freight market within each of these two sub-markets is determined by the prevailing demand and supply conditions for the specific products to be carried.

For example, if global industrial activity increases and the demand for petroleum crude and products goes up, the demand for tankers will also go up. Since in the short run the supply of tankers cannot increase, given the long construction time, the higher demand for tankers will bring about an increase in the freight rates for these services. If this trend in demand and freight rates continues for a reasonably long period - sufficient to influence investor sentiment - new investment will be attracted into tanker construction, increasing the tanker fleet and bringing supply and demand into equilibrium. During a down-turn in industrial activity, demand for petroleum and tanker services will decrease, resulting in a downward pressure on freight rates.

In the same way, the freight market for dry bulk cargo vessels is determined by the state of demand and supply of their services. However, since dry bulk cargo includes different types of grains, oil seeds, minerals, fertilisers and other raw materials, the demand for dry cargo bulk carriers can be expected to be somewhat more stable than for tankers. Unless demand in the international market for all types of dry cargo increases (or decreases) at the same time, the demand for dry cargo bulk carriers is likely to be affected by changes in demand for different types of cargo. Consequently, fluctuations in demand will be moderated.

During a period of economic boom, it is not uncommon for the demand for a large number of internationally traded bulk commodities to go up at the same time, pushing up the overall demand for bulk cargo shipping services and the freight rates. During a depression, the opposite is generally the case.

(a) Brokers

Charter rates are therefore constantly fluctuating. The importer should always remain in touch with the market and on the look-out for bargains. He will generally find it difficult, however, to monitor day-to-day developments in the charter market. The ideal thing to do is to entrust this job to a shipping broker. In any case the importer will have to approach the broker since it is he who brings the charterer and the shipowner together.

Brokers are quite active in the main charter markets such as the Baltic and International Maritime Conference in London, as well as others in Hamburg, New York, and some other centres.

(b) Charters and freight rates

For charter ships the freight rate is negotiated between the shipowner and charterer, through a broker, and forms part of the contract, the charter-party. The freight rate may be quoted per ton of cargo or, more often, as a rate of hire for the ship, daily or per ton deadweight per month. The terms of the charter party may be all inclusive, in which case the rate of hire would include operating costs (including the wages and salaries of the crew and the bunker). Alternatively, the charter party may be only bare boat terms; the hire would then exclude all operating costs.

- (2) Liner market: freight rates
- (a) Complexity

Liner shipping is dominated by conferences, which are groupings of shipowners or liner-service operators. Each of these conferences fixes the routes on which their member ships will operate.

For each route, they also fix and publish freight rates in the form of rate or tariff books for use by their members. The tariff describes the goods and shows the applicable freight rate for each on the different routes. Conference lines usually establish two types of rate structures: commodity rates and class tariff rates. Under the first of these, conferences establish specific rates for certain defined commodities. These commodities are listed in the rate book and identified by their CCCN (Customs Cooperation Council Nomenclature) or SITC (Standard International Trade Classification) codes. The applicable tariffs are shown against each.

A separate rate for each product moving over a conference route, however, would mean establishing thousands of different rates. Therefore, conferences also establish class rates, with one class rate applying to a group of products. The products are listed alphabetically and identified by their CCCN or SITC code number. A symbol indicates the tariff (freight) class to which each belongs and the applicable tariff.

Rate books, however, may not cover all the products that a conference will accept for transportation. In such cases, the rates are open and negotiated between the shipper and the conference, or between the shipper and a member line of the conference.

Individual commodity freight rates also apply to containerised cargo, particularly for less than full container-load (LCL) shipments. When the shipment is sufficient for a full container load (FCL), the simplified commodity class freight rate schedule is normally applied.

While the published tariff rates apply generally to all shippers, special rates may be agreed for shippers who enter into long-term agreements with a conference. These are negotiated by the conference with individual shippers who express an interest in such an arrangement. Some of the variants of the system are:

- Ioyalty rebates
- volume incentive payments

Loyalty rebate

Most conferences do at times offer rebates if a shipper agrees to ship all his consignments through a particular liner conference over an agreed period of time. These rebates vary from conference to conference and from route to route. The normal period of agreement is six months; the more common percentage of rebate is 10%.

Volume incentive payment

Rebates are generally linked to the volume of freight which a shipper agrees to provide to a shipowner or ship operator of a conference. Against the loyalty rebate, which ties a shipper of goods to a system of all or nothing, the volume incentive payment (v.i.p) provides an incentive for the shipper to stick to one shipowner (or a conference) and obtain an increasing rate of rebate with every additional volume of cargo. While the level of rebate will be held constant within one tranche of cargo it will vary, and increase, from one tranche to another as agreed between the shipowner/operator and the shipper.

If another line offers the shipper a freight rate (net of any v.i.p to which he is entitled) lower than that which he gets from his existing shipping line,

the shipper is free to enter a contract of affreightment with this other line. Before he does this, the shipper would have to satisfy himself that the quality of service in each case was comparable. The shipper's freedom to change shipping lines normally ensures that the shipper's current conference line will try its best to maintain the quality of service at a competitive rate.

From the shipper's point of view, the system of volume-based incentive payments is preferable to the system of loyalty rebates, which ties up a shipper's entire freight over a specified period of time. Greater pressure is also put on the shipowner to maintain quality of service under the v.i.p. system.

(b) The setting of freight rates

The basis for setting liner freight rates is not standardised. Liner conferences generally use two principles for setting these rates: the cost of service and the value of the service. However, these principles can rarely be applied very precisely across all products because they often have different characteristics. For example, one product may have a far higher volume to weight ratio than another one with a higher density. The first product will occupy a proportionately larger space but exert a lower pressure on the ship's deadweight capacity. This means that if the entire cargo of the ship is composed of products of low density, the ship's deadweight capacity will not be fully used. Similarly, if the cargo is largely composed of high density products, the ship's volume capacity will not be fully used. Ideally, shipowners aim to have a cargo mix that optimises the ratio of a ship's volume capacity to its deadweight capacity. Conferences try to do this by applying a different base for setting the rates for different products. One of four bases is used:

- Per weight tonne (W)
- Per measurement tonne (M)
- Per weight tonne or measurement tonne, whichever is more favourable to the shipowner
- According to the value of the product (ad valorem)

Unit of freight

The units of measurement (weight and dimensions) vary between the English and American systems, on the one hand, and the metric system on the other. Thus, a weight ton may in some tariff books be a metric ton of 1000 kg or a long ton (equivalent to 1016 kg). A measurement ton is traditionally defined as 40 cubic feet. But increasingly it is being defined as 1 cubic metre, equivalent to 35.5 cubic feet.

An example will illustrate how a rate may actually be applied to a shipment by a liner conference or by an outsider:

Rate:	US\$ 200 per		
tonne or US\$ 180 per m ³			
Weight of package:	10 tonnes		
Size of package:	2m high x 2m wide x 3m		
long			
Therefore, volume:	$12m^{3}$		
Freight calculation:			
by weight tonne	= 10 x US\$ 200 = US\$ 2,000		
by measurement tonne	$= 12m^3 x US$ \$\\$ 180 = US\$ 2,160		

Since the freight by volume is more favourable to the carrier, the shipping line will charge by

volume and not by weight; it will charge US\$ 2,160 and not US\$ 2,000.

While the stowage factor or the loadability (its weight/volume ratio), of a consignment would in principle provide a better basis for freight differentiation between different products, conferences also give consideration to such tors as the value of the consignment in relation to its stowage factor. Empirical studies have confirmed that the stowage factor and the value of a commodity per tonne are the two principle variables which have marked influence on freight rate structures. [8]

FAK rates

FAK is an abbreviation for freight all kinds. FAK rates (a single rate for all kinds of freight) are not of much relevance to liner cargo as the structured commodity tariff is the rule and FAK rates the exception.

<u>Liner terms</u>

Conference freight rates are quoted on liner terms. This means that liner freight is inclusive of the cost of loading the cargo onto the ship at the loading port and of unloading it from the ship at the discharge port. In other words, these costs are borne by the shipping line. Port charges do not fall into this category. These have to be borne by the shipper unless a conference freight schedule specifies its rates as inclusive of these charges.

Rate stability and increases

Shipping lines profess that one positive feature of conferences is the stability of freight rates. Intended increases in current freight rates are effected by conferences only after due notice has been served on shippers of the extent of the proposed increase. About three months advance notice is generally provided. This period includes the month in which the notice is given and the following two months. The freight structure and any increases are often discussed by conferences with representative bodies of shippers such as shippers' councils. Usually conferences provide full justification for freight increases, substantiating these with an analysis of movements in operating, maintenance, repair and/or capital costs. Nevertheless, the capacity of importers to influence or control freight rates may be greatly increased if they participate in shipper's councils, which provide a counterweight to often powerful liner conferences.

[8] See Jansson J.O, and Shneerson D., <u>Liner Shipping Economics</u>, Chapman and Hall Ltd., London 1987,

pps. 71-79 <u>Adjustments and surcharges</u>

Conferences increase freight rates across the board when general inflation increases the costs of ship operations. Bunker fuel accounts for a major proportion of a ship's operating costs. If fuel prices increase suddenly, conferences generally avoid changing the basic freight rate schedule but use the bunker adjustment factor (BAF) as a method of compensating for increased operating costs due to higher fuel costs. When a conference decides to impose bunker surcharge, it expects its members to continue to use the freight rate schedule as the base rate and to add a bunker surcharge to the invoice.

Conferences deal in a similar fashion with the problem of port congestion, a periodic phenomenon particularly in developing countries. When its members experience delays in getting berthing facilities at a port, conferences usually permit their members to add an agreed congestion surcharge. Once the port operations return to normal, the congestion surcharge is withdrawn.

Another element which can affect net freight rates is the currency adjustment factor (CAF). With the floating of currencies, different currencies at times swing sharply in different directions. The U.S. dollar may move sharply up against, say, the Deutschmark. A shipowner in Hamburg may receive freight charges in Deutschmarks, but may have to pay for the bunker in US dollars. Because of diverging currency movements, the net freight revenue of a shipping line may be lower than it would have been if the exchange rates had remained stable. The currency adjustment factor (CAF) is introduced to hold the tariff revenue at the same level (in the shipowner's currency) regardless of movements in exchange rates.

6.3 Non-price elements

Rate schedules of conferences provide a good basis for an importer to compare the rate which a non-conference line may quote him for transporting goods from a port in the supplier's country to a port in his own country. However, as in procurement of goods, price is not the only variable which he should take into account in taking decisions. There are others, such as:

- reliability of service,
- quality of service,
- speed of voyage, and
- frequency of sailing.

It is important that the importer selects a shipping line which he knows, through experience or market research, to be reliable. A low price may land the goods on the bottom of the sea instead of at the importer's port. The reliability of the shipping line is usually an over-riding consideration.

Some shipping lines provide a better quality of service than others. They are better equipped and handle goods with minimum damage or loss. Even though the price of their service may be higher than others, the importer should consider the risks he would be taking if he selects the cheapest.

Conference lines work to established schedules of sailings, routes and ports of call. Non-conference lines (the outsiders) choose not to sail a definite route. The route may be circuitous depending on the ports where the freight may have to be delivered and/or picked up. As an importer cannot, therefore, be assured of the voyage period, he must be cushioned (in terms of safety stocks, for example) against delays which could otherwise be very costly for him.

Lastly, frequency of service may be an important consideration for an importer who is a regular buyer from the same source. The more frequent the sailings (and more reliable the service), the less is the need for the importer to hold large inventory levels.

Thus, while freight rates are an important factor to be considered by an importer in selecting a shipping line, he should also take into account other factors which will modify the real incidence of the total freight cost.

Chapter 7

FREIGHT FORWARDING

AND CLEARING OF GOODS

7.1 Areas of responsibility

Before goods are put on board a vessel, they have to be cleared through customs at the port of shipment. Once unloaded at the destination port, the goods have again to be cleared through customs. This is a legal requirement in all countries of the world.

Responsibility for clearance of goods - and associated costs - at the two ends of the maritime transportation process will depend on the purchase contract terms. The supplier is responsible for customs clearance at the loading port for all trade terms (INCOTERMS) except when the contract is on ex-works or FAS terms.

The importer is responsible for clearing goods through customs on arrival at the port of his country in all cases except when the purchase contract specifies the following two terms: delivered duty paid (DDP) and delivered ex- quay (DEQ).

(1) The clearance and forwarding process

The forwarding and clearing of goods, has its complexities. Most of all, it requires a good deal of familiarity with port and customs rules and regulations. These rules and regulations are altered and amended off and on throughout the year. This is particularly the case with customs in developing countries, where import trade regulations are constantly reviewed and changed. The reasons for this may include changing domestic supply and/or demand conditions, the foreign exchange situation, revenue and budgetary needs. Interpreting these rules and regulations requires the kind of expertise which often comes more from interacting with customs officials and established precedents than from reading printed manuals.

Apart from customs clearance, under certain trade terms the importer will be responsible for the inland movement of goods in the supplier's country and later in his own country. This requires close contact with local transport operators as well as knowledge of inland freight rates in all the different supply countries.

Customs, port clearance and buying international maritime freight services involve much documentation and filling up of forms prescribed by customs, shipping companies, transport operators, etc. [9] Compliance with requirements and accuracy of information are vital for proper assessment of freight, _____

[9] See: International Trade Centre: <u>Handbook of Import Documentation</u>, Geneva, 1989 customs clearance and settlement of insurance and other claims. Importers need to be familiar with procedures and adept at completing documents correctly if they are to avoid the consequences of mistakes.

Constant contact with shipping companies and shipping brokers is of utmost importance in optimising freight costs through negotiating freights rates, in planning and selecting the most advantageous shipping lines, schedules and ocean routes.

(2) In-house expertise

Purchasing international freight services and the forwarding and clearance of goods is a complex activity which requires considerable expertise in shipping management. Providing for such expertise is costly. The importing enterprise should assess whether it would be more cost-effective to have a well organised and fully equipped in-house shipping department or to depend on outside specialist firms for this purpose.

Unless the importing enterprise is very large, it will not generally be worthwhile to set up an in-house unit able to provide the same level of expert service as an outside specialist firm. Freight forwarders are the specialist firms which provide such services.

(3) The freight forwarder

The United States Government's Federal Maritime Commission, the agency having regulatory and licensing control over freight forwarders in that country, defines a freight forwarder as:

"A person carrying on the business of forwarding for a consideration who is not a shipper or consignee or a seller or purchaser of shipments to foreign countries, nor has any beneficial interest therein, nor directly or indirectly controls or is controlled by such shipper or consignee or by any person having such a beneficial interest."

These regulations further state:

"The term 'carrying on the business of forwarding' means the dispatching of shipments by any person on behalf of others, by ocean going common carriers in commerce from the United States..." *and also adds*, "... and handling the formalities incident to such shipments."

Traditionally, the freight forwarder's role has been largely confined to arranging transport as an agent of the shipper (e.g. importer) and to preparing documentation at the supplier's and the importer's ends. Over time, however, this role has been transformed, especially with the development of containerisation and multi-modal transportation. Instead of acting only as intermediaries, many freight forwarders have themselves become transport operators offering container services as well as uni-modal and/or multi-modal inland and overseas transportation. Their legal status however, varies from country to country. For example, according to the United States Shipping Act of 1984, a company acting as an *ocean freight forwarder* cannot legally issue an ocean bill of lading or multi-modal transport document. On the other hand, a *non-vessel operating common carrier* can issue such documents.

More generally, barring the exception cited above, a freight forwarder may fulfil one, some, or all of the following services:

• act as a shipper's agent, arranging transport services and preparing documentation;

■ act as a transport specialist assisting the shipper in selecting the most economical mode of transport and/or most cost-effective route;

■ act as a multi-modal transporter, i.e. as a principal transport operator with direct contractual responsibility for the carriage of goods from door to door, assuming liability for those segments of transportation for which he himself may not be the actual operator;

• act as a provider of specialist services in packing, container stuffing/de-stuffing, customs clearance, raising claims, etc.

A more detailed listing of the specific activities entailed in freight-forwarding includes:

- arranging and/or contracting vessel space on behalf of importers;
- arranging for transport of goods from internal origin point(s) to export terminals;
- applying for export licences;
- tracing cargo deliveries to shipside with internal carriers;
- arranging packing and marking of goods;
- arranging warehousing or storage;
- arranging sampling, surveying, etc;
- preparing dock receipts required by customs;

 determining the commodity description/classification to ensure application of the lowest possible freight rate;

preparing consular invoices and/or certificates of origin and arranging for the consultation or visa of these if required;

- arranging cranage or other special services;
- arranging marine insurance;
- negotiating freight rates;

arranging for auditing of freight bills;
 distributingdocumentssuch as bills of lading, etc;

preparing customs bills of entry

at the importer's end;

■ arranging for inspection, surveys (for damage or loss), etc. and other port and customs formalities for clearance of goods.

The specific functions to be performed by a freight forwarder for an importer (as opposed to the supplier) will be determined by the terms of the purchase of contract.

7.2 Selecting the right forwarder/clearing agent

An importer should approach the selection of the right freight forwarder in much the same manner as he selects the right supplier of his goods [10] or a lawyer. The selection process should ensure the competence and integrity of the candidate. Goods of considerable value - as well as their controlling documents - are entrusted to the freight forwarder. Since the importer will often seek the forwarding agent's advice and counsel on how best to protect or advance his interests, the relationship must be built on trust and confidence. In some places, such as the United States, freight forwarders are required to be licensed and to post a bond (which most likely represents only a fraction of the value of cargoes entrusted to them). In many countries, however, there are neither licensing nor bonding requirements.

The forwarder should have the technical knowhow and competence to perform all the services required of him. He should also maintain personal contact with many individuals on various levels who provide the network of essential services to facilitate sound and economic shipping services.

Thus, the fee of the freight forwarder is only one of the factors that should be weighed in the selection process. The most important other ones are:

- financial viability,
- quality of service,
- the terms and conditions of the forwarder's services.

The third point above, "terms and conditions", refers to the fine print which may absolve the freight forwarder of any liability except upon proof of "wilful neglect", which is often difficult to establish and interpret.

The importer can use various methods of obtaining information and commercial intelligence on markets and suppliers including freight forwarders [11].

[10] See International Trade Centre: <u>Practical Guide No. 16: Supplier Sourcing, Appraisal and Evaluation,</u> Geneva, 1988.

 [11] See International Trade Centre:
 <u>Practical Guide No. 5: Information for Better Import Management</u>, Geneva, 1990.
 7.2 The foright for mendade for

7.3 The freight forwarder's fee

A freight forwarder's fee is usually provided in two forms. Vessel owners generally provide in

their tariffs that compensation of 1.25% of the freight charges is payable by them to freight forwarders and similar agents (such as ship brokers). In the United States, for example, no part of this compensation should go directly or indirectly to any party having a financial interest in the goods (e.g. the buyer or the seller).

By *ad hoc* arrangements, freight forwarders also assess charges or fees based upon the volume and/or depth of the detailed work they will be required to do for the shipper. Between them, the shipper and freight forwarder will agree the arrangement for reimbursing the forwarder for expenses which he may have to incur on behalf of the shipper. While many forwarders may agree to meet these expenses initially from their own resources, most now require their principals to place funds with them in advance of anticipated expenses for ocean freights, insurance, internal freight charges, etc. In the case of C&F/CIF purchases, the entire cost of these elements is invariably incorporated into the seller's prices. This means, in effect, that the importer ultimately pays for these costs in the commodity price itself. In such cases forwarders are acting on behalf of the seller who has nominated and paid them.

7.4 Getting value for money

Experience suggests that for most importers, particularly the small ones, the freight forwarder's fee is worth the services provided. However, to get the most out of the money he is going to spend, the importer has to be especially careful about two things.

Firstly, he should select a reliable and efficient freight forwarder. Where associations of freight forwarders exist, it will be prudent to select a forwarder who is a member of one. Associations usually lay down codes of conduct and business ethics, which their members are expected to follow. An importer can also learn about a forwarder's standing with his clients by contacting other users of his services.

Secondly, the importer should realise that forwarder's efficiency in handling his goods and arranging for transportation will critically depend on how well and how timely the forwarder is briefed on what the importer wants. For example, the importer should give the forwarder complete cargo shipping instructions as soon as possible so that he is able to book shipping space at competitive rates. [12] In short, if the importer wants the best from the forwarder, he must give his best too.

[12] See Annex II for a format of Cargo Shipping Instructions. Chapter 8

THE RISK FACTOR

AND CARRIER'S LIABILITY

8.1 The risk factor

Goods in transit are exposed to the risk of damage, pilferage or total loss. Before being loaded onto a vessel, goods have to be brought to the port area by trucks, trains and/or other modes of inland transportation. While they wait to be loaded, they have to be stored at the carrier's yard or port warehouse. Once the vessel has docked at the port in the importer's country, the goods will be unloaded and again stored in the port area. During this whole process they are exposed to these risks.

Goods may also suffer damage if they are exposed to rain, snow, wind or other elemental vagaries during the sea voyage itself. Goods, loaded on the vessel in apparent good condition, are exposed to these and other risks collectively referred to as *perils of the sea*. The ship may catch fire in mid sea or hit a rock or shallow waters while leaving or entering a harbour. Unless cargo is properly stowed and secured, it may also be damaged by shifting during the voyage. Some goods sweat or emit obnoxious smells. If not effectively segregated, other goods placed nearby will be damaged through contact.

These possibilities have to be a cause of concern to the importer whose money may already have been transferred to the account of the supplier once the latter has tendered the shipping documents through his bank.

In principle, once the goods are placed in the custody of the owner of a carrier it is his responsibility to protect the goods against these potential risks, with some exceptions. In actual fact, however, immunities exist which have the effect of greatly reducing the ship operator's liability and increasing the risk of the importer to the same extent.

8.2 Sea carrier's liabilities

(1) Historical evolution

The present position on the extent of the sea carrier's liability in the event of damage, pilferage or loss while goods are in his custody has evolved over a long period of time. Historically, the carrier's liability was absolute according to the maritime laws of many countries in those days. The laws provided only a few exceptions when the shipowner could seek immunity from his responsibility and from compensating the shipper of goods for damage or loss, while these were in his custody.

These exemptions were for damage or loss caused by:

- an act of God,
- a public enemy, or
- an inherent vice of the goods.

Over time, shipowners widened the scope of these causes by inserting a variety of clauses in the contract of carriage. This had the effect of absolving them of responsibility for damage to or loss of goods due to many other causes as well.

To redress the grievances of shippers, bankers and insurance and underwriting companies, a number of governments have introduced legal provisions which have sought to make the

contractual relationship between the shipowner and the shipper of the goods more equitable. However, while some of these provisions defined the shipowner's responsibilities, they also created a distinction between "*faults in the management and navigation of the vessel and faults in the care and custody of the cargo*." [13] These also put the onus of proving that the damage or loss was due to one set of faults rather than the other on the shipper and/or others having a stake in the safety of the goods while in transit. To establish that the loss was due to lack of care on the part of the shipowner has not been an easy task. The result is that the shipowner has been able to argue that the damage to or loss of goods was due to causes for which he was not legally liable to offer compensation to the shipper.

Because of this unsatisfactory situation, as well as differences in national laws or the scope for different interpretation of seemingly similar provisions across countries, a need for a set of uniform rules became increasingly evident. The result was the Brussels convention of 1924 at which the Hague Rules were formulated. These rules were later revised in 1968. The revised version is referred to as the Hague-Visby Rules. These revised rules only raised the rate of compensation to be paid to the shipper in the event of damage to or loss of goods. They still allowed the retention of exonerating clauses in the Bill of Lading allowing the shipowner to avoid accepting liability.

The United Nations Convention on the Carriage of Goods by Sea of 1978, referred to as the Hamburg Rules, has proposed a set of new rules which are more equitable in terms of the shipper's and the shipowner's interests. However, these have not as yet taken effect as only twelve countries, eight short of the required number, have so far ratified the Convention.

As of now, therefore, the responsibilities of the shipowner for safe transportation of the goods and the compensation to which a shipper may be entitled in the event of damage to or loss of goods, are regulated by the Hague-Visby rules or the Hague rules, since not all countries have acceded to the revised version.

[13] Document of Title to Goods, Geneva 1987

See: International Trade Centre:

(2) Rate of compensation

The Hague-Visby Rules permit the shipper to opt for compensation either on a per package basis, or on a per kilogram of gross weight basis. To be able to claim on a per package basis, a shipper should have enumerated the number of packages and ensured that these are shown on the bill of lading. The shipper should keep this in mind, particularly for container shipments. Unless the number of packages in a container has been declared, the container itself will be taken as one package, ignoring the number of packages within it. Compensation will accordingly be paid as if the container carried one package only.

The currency basis of present calculations is the IMF's Special Drawing Right (SDR) which

came into force in February 1984. The compensation has been fixed at SDR 666.67 per package or SDR 2 per kilogram. The importer should note that the weight-based option (that is, SDR 2 per Kg) is preferable if the package is big and the weight is above 333.33 kilograms. For small packages with low weight, the package option is more advantageous.

(3) Excepted perils

On the face of it, the shipowner is responsible for the loss or damage to goods if it can be established that these were in apparent good condition when received but in bad condition when they were discharged. However, there are several exceptions which the shipowner can use to absolve himself of any liability.

To do this the shipowner has to establish two things. Firstly, that the ship was seaworthy, meaning that it was structurally and mechanically sound, equipped with all necessary navigational aids; had a proper contingent of crew; that the holds were made fit and safe to receive the cargo. Secondly, the shipowner can claim to be exempted from liability if he can establish that the damage or loss was due to one or more of the following excepted perils:

• act of negligence or default of the master, mariner, pilot or the servants of the carrier in the navigation or in the management of the ship;

- fire, unless caused by the actual fault or privity of the carrier;
- perils, dangers and accidents of the sea or other navigable waters;
- act of God;
- act of war;
- act of public enemies, including pirates;
- arrest or restraint of princes, rulers or people or seizure under legal process;
- quarantine restrictions;

act or omission of the shipper or

owner of the goods, his agent

or representative;

strikes or lock-outs or stoppage or restraint of labour from whatever cause whether partial or general;

- riots and civil commotions;
- saving or attempting to save life or property at sea;

■ wastage in bulk or weight or any other loss or damage arising from inherent quality defect or vice of the goods;

- insufficient packing;
- insufficiency of marks;
- latent defects not discoverable by due diligence;

■ any other cause arising without the actual fault or privity of the carrier or without the fault or neglect of the agents or servants of the carrier.

8.3 Marine cargo insurance

Obviously the shipowner can invoke one or more of the above provisions to absolve himself of any liability for the damage or loss of goods. Even if it is established that it was due to negligence or fault of the shipowner, the compensation to the shipper is limited to SDR2 per kilo or SDR 666.67 per package, as mentioned above. The only way the shipper can have some guarantee of adequate compensation is through additional cover from marine cargo insurance. This issue is dealt with separately in other ITC publications which importers may wish to consult. [14]

[14]	See:	(i)	International	Trade
Centre: Guide on Cargo Insurance for Importer	<u>s</u> , Geneva, 1989			
	(ii) Rair	na, I	Hari K. <u>Guide to</u>	<u>Import</u>

Management, Programme for Developing Economics,

Helsinki School of Economics

and International Trade Centre, 1990, ppsA h20ex1 38

A SAMPLE CHARTER-PARTY

FORM No. 7-9

GENVOY General Purpose Charter-Party

 Owners; Vessels; Position; Charterers. IT IS THIS DAY MUTUALLY AGREED between

 Owners of the ______ of _____ gross/net tons register, classed

 ______ now ______ and expected ready to load under this Charter on or about

 ______ as Charterers:

1. Loading Port; Cargo; Destination. That the said vessel shall proceed to ______ or so near thereto as she may safely get and lie always afloat (except as per Clause No. 11) and there load a full/part cargo of ______ which the Charterers bind themselves to ship, and being so loaded, the vessel shall proceed to ______ as ordered on signing Bills of Lading, or so near thereto as she may safely lie afloat (except per Clause No. 11) and there deliver the cargo.

2. Rate and Payment of Freight. Freight shall be paid on intaken/outturn weight as follows:

Eighty percent of the freight on bill of lading weight to be prepaid in new York within five days of signing and surrender in New York, or as otherwise specified, of Bills of Lading to Charterers or the Charterers' agents. The balance of freight to be paid in new York following completion of discharge of the cargo and to include settlement of deadfreight, demurrage or despatch and adjustment according to outturn weight unless freight is payable on intaken weight. Full freight to be deemed earned as cargo is loaded on board the vessel, and to be discountless and non-returnable, vessel and/or cargo lost or not lost. Charterers are entitled to deduct from the freight all brokerage, also despatch money at loading and discharging port(s) if any.

3. Laydays and Cancelling Date. Laydays are not to commence before ______ and, should the vessel not be ready o load (whether in berth or not) at or before 5.00p.m. ______ Charterers shall have the option of cancelling this Charter-party. Should the vessel be delayed on account of average or otherwise, whether while en route to loading port or thereafter, Charterers are to be so informed immediately.

4. Notice of Expected Readiness. Owners are to give Charterers at least 15 days' notice of vessel's expected readiness at loading port, also stating exact quantity of cargo required to be loaded, subsequently Owners are to give Charterers 10 days and 5 days notice of vessel's definite readiness to load.

5. Preparation of Holds for Loading. At loading port(s), Owners are to tender vessel with holds properly swept, cleaned and dried, and free of residues of all previous cargoes to inspector's satisfaction, and in all respects ready to receive the cargo. Where bulk cargo is to be loaded, and prior to tendering the vessel for loading, cargo battens are to be removed, bilge boards and limber boards are to be in place and made tight against cargo seepage, and rose boxes are to be suitably covered against cargo seepage. Should hand labour ultimately be required to discharge cargo from spaces so protected, cost of same to be for Owner's account, and such discharge to be done at Owner's risk and on Owner's time. Where bagged cargo is to be loaded, cargo battens are to be fitted prior to tendering the vessel for loading.

6. Loading Rate. Cargo to be loaded, stowed, and/or trimmed by spout only by Charterers' stevedores at Charterers' risk and expense, at the average rate of ______ tons of ______ per workable hatch per weather working day of 24 running hours, provided the vessel can load at that rate, Sundays, local and legal holidays excepted, even if used, whether in berth or not, time from noon on Saturday or a day preceding any holiday until 8.00a.m. on

Monday or the day following any holiday not to count as loading time, even if used, whether in berth or not.

7. Discharging Rate: Cargo to be discharged by Charterers' stevedores at Charterers' risk and expense, at the average rate of ______ tons of ______ per workable hatch per weather working day of 24 running hours, provided the vessel can discharge at that rate, Sundays, local and legal holidays excepted, even if used, whether in berth or not, time from noon on Saturday or a day preceding any holiday until 8.00 a.m. on Monday or the day following any holiday not to count as discharging time, even if used, whether in berth or not.

8. Laytime Reversible: Laytime at loading and discharging ports to be reversible.

9. Time Commences: Time at loading/discharging port to commence at 8 a.m. on the working day following the day master has tendered in writing during business hours, to the Charterers or their agents vessel's Notice of readiness to load or discharge. Business hours shall be considered to be 08.00 to 17.00 during weekdays and 08.00 to 12.00 noon on Saturdays. Notice of readiness shall be tendered to ______.

10. Demurrage and Despatch: Charterers are to pay demurrage at the rate of US \$ ______ per day of 24 running hours or pro rata for any part thereof, for all time used in excess of laytime. owners are to pay despatch money at half the demurrage rate per day of 24 running hours or pro rata thereof for laytime saved.

11. Loading and Discharging Berth: The cargo is to be loaded and/or discharged at any wharf, dock or place that Charterers or their agents may direct, provided the vessel can lie always safely afloat, except that Charterers or their agents shall have the privilege of ordering the vessel to load and/or discharge at any wharf, dock or place where it is customary for vessels of similar size to lie not always afloat but safely aground.

12. Privilege of Additional Berths: At loading and discharging port(s) Charterers shall have the option of ordering the vessel to more than one berth, in which case shifting expenses shall be for Owners' account. Time used in shifting shall count as laytime, unless the shift is made during excepted time.

13. Winch and Light Clause: Vessel to supply, at both ends, and at all times free of charge to Charterers, winches, steam and gear in good working condition and full light for night work on deck and in holds if required. unless otherwise specified, the vessel to supply a minimum of two winches and derricks both either forward or aft at each hatch. Winchmen from shore, if required by the regulations or custom of the port, to be Charterers' account. Charterers to have the privilege of working all hatches simultaneously.

14. Seaworthy Trim Clause: If more than one loading and/or discharging port is used, the vessel to be so loaded and/or discharged as to leave her in seaworthy trim for the passage between ports, but if this charter-party be for a part cargo only, Charterers shall have no liability in this respect where other cargo aboard render seaworthy trim between ports beyond the Charterers' control.

15. Deck Cargo: Charterers are to have the privilege of loading cargo on deck at their risk and expense, same to be loaded, stowed and secured to Master's satisfaction.

16. Dues, Wharfage and Taxes: At loading and discharging ports, all dues, and/or wharfage and/or taxes on cargo to be for Charterers' account. All dues and/or wharfage and/or taxes on vessel to be for Owners' account, even when the same are measured by the quantity of cargo aboard _____.

17. Extra Insurance: Any extra insurance or cargo on account of vessel's age, flag, class, size or ownership to be for vessel's account.

18. Dunnage: Charterers are to provide all mats, and/or paper and/or wood for dunnage and any separations other than by hold, required. Owners are to allow the use of any such material as may be on board, if required by Charterers. It is further understood that Owners shall not dispose of any such material without first determining whether Charterers require the use of same. On completion of the voyage, Charterers shall have the option of disposing of any dunnage purchased by them at Charterers' risk and expense, and on Charterers' time, or leaving same on board the vessel.

19. Stevedore Charge: When loading and/or discharging is effected by Charterers' stevedores, Charterers shall not be responsible for repairing any stevedore damage unless the master has obtained written acknowledgement of same from the stevedores, or unless a joint survey has been made, attended by representatives of Owners and Charterers.

20. Wireless Clause: The Master is to send a radiogram to Charterers or their agents giving vessel's expected time of arrival 72 hours and again 24 hours before vessel is due at first loading and first discharging port.

21. Lien Clause: Owners shall have a lien on the cargo for freight, deadfreight and demurrage. Charterers shall remain responsible for deadfreight and demurrage incurred at port of loading. Charterers shall also remain responsible for freight and demurrage incurred at port of discharge, but only to such extent as owners have been unable to obtain payment thereof by exercising the lien on the cargo.

22. Bills of Lading: The Captain, owners, or agents to sign Bills of Lading at such rate of freight as presented, without prejudice to this Charter-party, but not at less than the total chartered freight.

23. General Average: General Average to be settled in new York according to York/Antwerp Rules 1950.

24. Agency: At the port(s) of loading and the port(s) of discharge, Charterers are to have the privilege of appointing vessel's agents, Owners paying customary fees.

25. Deviation: The vessel shall have liberty to tow and/or assist vessels in all situations, and also to deviate for the purpose of saving life and/or property.

26. The Charterers to have the right to sublet part or all of this Charter-party, they to remain responsible to the vessel Owner for due fulfilment of the Charter-party.

27. Arbitration: Should any dispute arise between Owners and Charterers, the matter in dispute shall be referred to three persons at New York, one to be appointed by each of the parties

hereto, and the third by the two so chosen; their decision, or that of any two of them, shall be final, and for the purpose of enforcing any award, this agreement may be made a rule of the Court. The Arbitrators shall be commercial men.

28. Description: Flag: ______. Year built: _____. Deadweight: ______. Draft: ______. Oraft: ______. Oraft: ______. Oraft: ______. Oraft: ______. Oraft: ______. Number holds/hatches: _______. Deck arrangement: ______. Engine and bridge placement: ______. Vessel's gear and where located: _____. Unless otherwise specified, vessel's gear shall be capable at each hatch during loading and/or discharging to lift a minimum of 5 long tons per lifting and to handle open and closing of grab buckets.

29. Brokerage: ______ percent brokerage on the gross amount of freight, deadfreight and demurrage earned is due to ______. In case of non-performance of this Charter-party, one-third of the brokerage on the estimated amount of freight and deadfreight to be paid by Owners to the Brokers as indemnity for the latter's expense and work.

30. Special Provisions: Clauses Nos. 31 to 38, inclusive, as set forth on the reverse side of this Charter-party, also typewritten clauses No. _____ to _____ inclusive, as attached hereto, are hereby made part of this Charter-party.

31. Computation of Laytime: **Time lost by reason of any one or more of the following causes shall not be computed in the loading and/or discharging time: act of God; perils of the harbor; war; rebellion; tumults; civil commotion; insurrections; political disturbances; epidemics; quarantine; riots; strikes, lock-outs or other work stoppage of seamen, workmen, railwaymen, lightermen, tugboatmen, bargemen, longshoremen or any hands essential to the working, carriage, delivery from point of origin to shipside, shipment loading or discharge of the said cargo, whether partial or general; accidents at receiver's works or wharf; floods, frosts, fogs, storms or snow or other weather conditions; intervention of sanitary, customs, and/or other constituted authorities; partial or total stoppage on rivers, canals or on railways; congestions of the port, or any other cause of whatsoever nature beyond the control of the Charterers, unless steamer is already on demurrage.**

32. Owners' Responsibility Clause: Owners shall, before and at the beginning of the voyage, exercise due diligence to make the vessel seaworthy and properly manned, equipped and supplied, and to make the holds and all other parts of the vessel in which the cargo is carried, fit and safe for its reception, carriage and preservation. owners shall properly and carefully handle, carry, keep and care for the cargo. Unless elsewhere in this Charter-party it is provided that the loading, stowage and/or discharge of the vessel is to be at Charterers'' risk and expense. Owners shall properly and carefully load, stow and discharge the cargo.

Neither Owners nor the vessel shall be liable for loss of or damage to the cargo arising or resulting from: unseaworthiness, unless caused by want of due diligence on the part of the Owners to make the vessel seaworthy, and to secure that the vessel is properly manned, equipped and supplied, and to make the holds and other parts of the vessel in which the cargo is carried, fit and safe for the reception, carriage and preservation; act, neglect or default of the master, mariner, pilot, or the servants of the Owners in the navigation or in the management of the vessel; fire, unless caused by the actual fault or privity of the Owners; perils, dangers or accidents of the sea or other navigable waters; act of God; act of war; act of public enemies, arrest or restraint of princes, rulers or people, or seizure under legal process; quarantine

restrictions; acts or omissions of Charterers or of the shippers or owners of the goods, their agents or representatives; strikes, lock-outs or stoppage or restraint of labour from whatever cause, whether partial or general (provided that nothing herein contained shall be construed to relieve Owners from responsibility for their own acts); riots and civil commotions; saving or attempting to save life or property at sea; wastage in bulk or weight or any other loss or damage arising from inherent defect, quality or vice of the goods; insufficiency of packing; insufficiency or inadequacy of marks; latent effects not discoverable by due diligence; any other cause arising without the actual fault or privity of the Owners or without the fault of the agents or servants of the Owners, but the burden of proof shall be on the Owners or other person claiming the benefit of this exception to show that neither the actual fault or privity of the Owners nor the fault or neglect of the agents or servants of the Owners contributed to the damage.

33. General Ice Clause - Loading Port: (a). In the event of the loading port being inaccessible by reason of ice when vessel is ready to proceed from her last port or at any time during the voyage or on vessel's arrival or in case frost sets in after vessel's arrival, the Captain for fear of being frozen in is at liberty to leave without cargo, and this Charter shall be null and void.

(b). If during loading the Captain, for fear of vessel being frozen in deems it advisable to leave, he has liberty to do so with what cargo he has on board and to proceed to any other port or ports with option of completing cargo for Owners' benefit for any port or ports including port of discharge. Any part cargo this loaded under this Charter to be forwarded to destination at vessel's expense but against payment of freight, provided that no extra expenses be thereby caused to the Receivers, freight being paid on quantity delivered (in proportion if lump sum), all other conditions as per Charter.

(c). In case of more than one loading port, and if one or more of the ports are closed by ice, the Captain or owners to be at liberty wither to load the part cargo at the open port and fill up elsewhere for their own account as under Section (b) or to declare the Charter null and void unless Charterers agree to load full cargo at the open port.

(d). This ice clause not to apply in the Spring.

Discharging Port. (a). Should ice (except in the Spring) prevent vessel from reaching port of discharge, Receivers shall have the option of keeping vessel waiting until the reopening of navigation and paying demurrage, or of ordering the vessel to a safe and immediately accessible port where she can safely discharge without risk of detention by ice. Such orders to be given within 48 hours after Captain or owners have given notice to Charterers of the impossibility of reaching port of destination.

(b) If during discharging, the Captain for fear of vessel being frozen in deems it advisable to leave, he has liberty to do so with what cargo he has on board and to proceed to the nearest accessible port where she can safely discharge.

(c). On the delivery of the cargo at such port, all conditions of this charter shall apply and vessel shall receive the same freight as is she had discharged at the original port of destination except that if the distance of the substituted port exceeds 100 nautical miles, the freight on the cargo delivered at the substitute port to be increased in proportion.

34. New Jason Clause: In the event of accident, danger, damage or disaster before or after

commencement of the voyage resulting from any cause whatsoever, whether due to negligence or not, for which or for the consequences of which, the carrier is not responsible, by statute, contract or otherwise, the goods, shippers, consignees, or owners of the goods shall contribute with the carrier in the general average to the payment of any sacrifices, losses, or expenses of a general average nature that may be incurred, and shall pay salvage and special charges incurred in respect of the gods.

If a salving ship is owned or operated by the carrier, salvage shall be paid for as fully as if such salving ship or ships belonged to strangers. Such deposit as the carrier or his agents may deem sufficient to cover the estimated contribution of the goods and any salvage and special charges thereon shall, if required, be made by the goods, shippers, consignees or owners of the goods to the carrier before delivery.

35. Both to Blame Collision Clause: If the liability for any collision in which the vessel is involved while performing this bill of lading, falls to be determined in accordance with the laws of the United States of America, the following clause shall apply:

If the ship comes into collision with another ship as a result of negligence of the other ship and any act, neglect or default of the master, mariner, pilot or the servants of the Carrier in the navigation or in the management of the ship, the owners of the goods carried hereunder will indemnify the carrier against all loss or liability to the other or non-carrying ship or her owners insofar as such loss or liability represents loss of, damage to, or any claim whatsoever of the owners of said goods, paid or payable by the other or non-carrying ship or her owners to the owners of said goods and set off, recouped or recovered by the other or non-carrying ship or her owners as part of their claim against the carrying ship or Carrier.

36. USA Clause Paramount: This bill of lading shall have effect subject to the provisions of the Carriage of Goods by Sea Act of the United States, approved April 16, 1936, which shall be deemed to be incorporated herein, and nothing herein contained shall be deemed a surrender by the carrier of any of its rights or immunities or an increase of any of its responsibilities or liabilities under said Act. If any terms of this bill of lading be repugnant to said act to any extent, such terms shall be void to the extent but no further.

37. Chamber of Shipping War Risk Clauses: 1. No bills of lading to be signed for any blockaded port and if the port of discharge be declared blockaded after bills of lading have been signed, or if the port to which the ship has been ordered to discharge either on signing bills of lading or thereafter to one which the ship is or shall be prohibited form going by the Government of the Nation under whose flag the ship sails or by the other Government, the owner shall discharge the cargo at any other port covered by the Charter-party as ordered by the Charterers (provided such other port is not a blockaded or prohibited port as above mentioned) and shall be entitled to freight as if the ship had discharged at the port or ports of discharge to which she was originally ordered.

2. The ship shall have the liberty to comply with any orders or directions as to departure, arrival, routes, ports of call, stoppages, destination, delivery or otherwise howsoever given by the Government of the Nation under whose flag the vessel sails or any department thereof, or any person acting or purporting to act with the authority of such Government or any department thereof, or by any committee or person having, under the terms of the War Risks Insurance on the ship, the right to give such orders or directions and if by reason of and in compliance with any such orders or directions anything is done or is not done, the same shall

not be deemed a deviation, and delivery in accordance with such orders or directions shall be a fulfilment of the contract voyage and the freight shall be payable accordingly. Annex II

Annex III

SELECTED SHIPPING TERMS

1. Bale capacity Refers to the maximum amount of space, in cubic meters, of a ship available for carrying cargo in bales, cases, casks, etc.

2. Ballast To ensure stability of the ship, when there is no or insufficient cargo in its holds, heavy material (the ballast) may have to be placed in the ship.

3. Deadweight capacity The deadweight capacity is the total weight of cargo, bunker (fuel), stores and spare parts, provisions, water, etc., which a vessel can carry.

4. Demurrage A voyage charter-party usually includes a provision that in case the loading and/or discharge of cargo is not completed within a specified number of days, the shipowner will be entitled to demurrage (compensation for delay), for each day of delay, at the rate specified therein.

5. Despatch Is the opposite of demurrage (see 4 above). If the loading and/or unloading is completed in less than the number of days specified in the charter-party, the charterer is rewarded by the shipowner for each day saved at a rate as specified in the charter-party.

6. Free in and out A contract of affreightment including these terms implies that the responsibility for cargo loading/unloading (and the associated costs) is that of the shipper/consignee/ charterer and not of the vessel owner.

7. Hatch The rectangular opening in the ship's deck (providing access to cargo holds) which are closed by covers when not in use.

8. Hold

Compartments in a ship's hull to enable different cargoes to be segregated and/or to prevent the cargo from shifting and thereby providing stability to the ship.

Actual shell or body frame of a

9. Hull ship.

10. Liner term Also referred to as "berth terms", implies loading and discharging expenses will be to shipowner's account as is the case with liner shipping where the freight rates are inclusive of these charges.

Annex IV

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