

# Chartering

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## I. Introduction

Our country has long and successful tradition in the shipping segment, which is also the heavy industry. Although the economic crisis, that has hit in recent years Europe and especially Greece, has created huge problems in our national economy, has left the shipping sector in general untouched.

This is more readily apparent from the fact that while the Greek economy is almost entirely based on tourism, many times shipping brings more revenue in recent years.

In present paper, the merchant shipping charter sector is presented, so that reader understands its processes and complexity. Then, reference is made to emphasize the role that science can play in the further development and efficiency of the industry.

## II. Chartering

### A. Meaning of Chartering

Chartering is an activity within the shipping industry. In some cases a charterer may own cargo and employ a shipbroker to find a ship to deliver the cargo for a certain price, called freight rate. Freight rates may be on a per-ton basis over a certain route (e.g. for iron ore between Brazil and China), in World scale points (in case of oil tankers) or alternatively may be expressed in terms of a total sum - normally in U.S. dollars - per day for the agreed duration of the charter.

A charterer may also be a party without a cargo who takes a vessel on charter for a specified

period from the owner and then trades the ship to carry cargoes at a profit above the hire rate, or even makes a profit in a rising market by re-letting the ship out to other charterers.

Depending on the type of ship and the type of charter, normally a standard contract form called a charter party is used to record the exact rate, duration and terms agreed between the shipowner and the charterer.

### B. Chartering Participators

#### ➤ Shipowner

A shipowner is the owner of a merchant vessel (commercial ship) and is involved in the shipping industry. In the commercial sense of the term, a shipowner is someone who equips and exploits a ship, usually for delivering cargo at a certain freight rate, either as a per freight rate (given price for the transport of a certain cargo between two given ports) or based on hire (a rate per day). Shipowners typically hire a licensed crew and captain rather than take charge of the vessel in person. Usually the shipowner is organized through a company, but also people and investment funds can be ship owners. If owned by a ship company, the shipowner usually performs technical management of the vessel through the company, though this can also be outsourced or relayed onto the shipper through bareboat charter.

#### ➤ Charterer

Shipping charterers can, for a specific period, hire the ships from the owners of shipping

companies and trade them to be used as a cargo carrier at a rate more than the rate of charter. They can also re-lent the chartered ships to other Shipping charterers in the market to make profit.

#### Kinds of charterers

- Individuals operating small corporations
- Major international trading-houses
- The owner of the goods to be carried.
- The seller or the buyer of a commodity.
- Intermediary between buyer and seller(third party)
- Shipowners/NVOCC/MTO
- Forwarders

#### ➤ Chartering broker

The individuals or corporations who identify supply and demand for ships and cargoes and thereby help the mainplayers to secure cargoes for their ships and ships for their cargoes are called shipbrokers or chartering brokers. The existence of chartering brokers greatly facilitates the speed and efficiency of the chartering process.

The task of the chartering broker is to provide expertise and information at the time these are required by his clients. The expertise takes the form of a knowledge and understanding of ships and trades that enables him to meld the two to the mutual satisfaction of shipowner and charterer. The chartering broker should keep both the shipowner and the charterer continuously informed about the market situation and the market development, about available cargo proposals and shipment possibilities. The chartering broker should in all respects work loyally for his principal and should carry out the task of negotiations and other work connected with the charter scrupulously and skillfully.

The chartering broker should act strictly within given authorities in connection with the negotiations and they have no authority to quote a ship or a cargo, unless duly authorized by their principals. The chartering broker may not withhold any information from his principal or give him wrong information.

#### ➤ Shipper

A shipper is a person who is entrusted with the responsibility of transportation of goods and commodities. In the shipping industry, a

shipper's role is very vital and something that can never be overlooked. The presence of a shipper makes the job of a ship owner easy as the shipper takes the responsibility of ensuring that the cargo reaches its intended destination without any accident or mishap. The shipper also deals with all documents that are necessary to complete the transportation procedure so that no complications arise during the cargo-sending process.

Shippers, in addition to transportation of goods are also responsible for the packaging and tagging of the goods and cargo appropriately. Just like one shipper is engaged in packaging and transporting the goods from one place, there is another shipper who is in charge of the receiving of the cargo at the destination.

#### ➤ Ship Operator

A Ship Operator's job can be as broad as it is deep: these multi-talented individuals are expected to be masters of all trades relating to operations. Responsible for managing vessel performance, bunkers quality and quantity pricing, and ship routing, a good ship operator will have a keen eye on every element of a ship's operations chain. That could also include supervising and monitoring ship insurance, commodity insurance and charterers' liabilities, all the while calculating and monitoring general average, supervising the planning of cargo intakes, liaising with regulatory bodies, maintaining customer contact, negotiating claims, responding to problems and working closely with the financiers.

To be able to meet such wide expectations, ship operators are generally educated to degree level, or have a business-specific qualification. And because of the international nature of the shipping industry, fluency in English is essential and familiarity with other key languages is often desirable. Ship operators also need to understand charter policy, understand ships' specifications and performance, have good knowledge of legal and insurance terms, and preferably knowledge of the cargo that he/she plans to carry.

#### ➤ Shipping Agents

A shipping agency or shipping agent is the designated person or agency held responsible for handling shipments and cargo, and the general interests of its customers, at ports and

harbors worldwide, on behalf of ship owners, managers, and charterers. In some parts of the world, these agents are referred to as port agents or cargo brokers. There are several categories of shipping agents such as: port agents, liner agents, and own agencies, each rendering specific services depending on the shipping company they represent.

In other words, a ship agent is any person or company that carries out the functions of an agent, irrespective of whether they are in business as a ship agent, or they perform such functions as an adjunct to, or conjunction with, other activities such as ship owning or operating, providing cargo handling or similar. Shipping agents will usually take care of all the regular routine tasks of a shipping company quickly and efficiently. They ensure that essential supplies, crew transfers, customs documentation, and waste declarations are all arranged with the port authorities without delay. Quite often, they also provide the shipping company with updates and reports on activities at the destination port so that shipping companies have real-time information available to them while goods are in transit.

### *C. Ship management companies*

When a ship is purchased for importing and exporting goods, a ship management team is required to maintain and operate the vessels. The function of the management team is to provide the owner with support throughout the occupancy or charter of the vessel. Vessels can range in sizes and function.

Most management companies provide the owner or operator with crew on board. When the ship comes out of the shipyard (where the ship is built) the management company takes it over providing technical support to the owner. Most Management companies also offer other services like inspection prior to purchase, supervision during building, crew management and supply and ship lay-up solutions.

Some of the most important is:

- BIMCO (BALTIC & INTERNATIONAL MARITIME COUNCIL)
- BALTIC EXCHANGE
- LLOYDS OF LONDON

### *D. Charter Party*

i) is a document containing the written terms of a charter agreement between a shipowner and a charterer, who are usually respectively referred to in the text in the plural, i.e. as “Owners” and “Charterers”.

ii) defines the obligations, rights and liabilities of the shipowner and charterer.

iii) is usually drawn up by the broker representing the charterers following negotiation and agreement of terms between both parties.

iv) is usually based on a particular edition of a recognized standard form (e.g. GENCON, BALTIME, NYPE).

v) is sometimes based on a specified charter party already performed by another vessel at an earlier date, in order to save effort and time in negotiating many of the terms.

vi) usually comprises a set of standard clauses on a printed form, with additional typed rider clauses appended if the standard clauses fail to cover all aspects of the parties’ agreement. Where there is a conflict between standard and rider terms, the rider clauses override the standard clauses.

vii) may have many amendments to the standard clauses, as agreed by the parties. Generally, the more amendments there are, the more scope for legal disputes, and it is preferable to have as few amendments as possible.

viii) may be in a modern “boxed” layout, with plain wording of clauses (as with BIMCO-designed forms), or in a more traditional style with (sometimes) rather archaic wording.

ix) may contain annexes dealing with special arrangements.

x) may have sensitive clauses in an addendum and/or side letter. Side letters are legally not so important as addenda.

xi) should be signed by a broker representing

each party to the contract, unless their principals sign instead.

xiii) should ideally be balanced so that it does not favour one party to the disadvantage of the other.

Some types of charter party are:

➤ Voyage Charter Party.

This is a charter party for the carriage of a full cargo, not for a period of time, but at a stipulated rate per ton, for one voyage only, between named ports to be named on arrival in a given area. It is a frequently used charter party of which there are many varieties, and most commodities and trades have a particular type to suit their purposes. Shippers of large quantities of bulk cargo such as phosphate, coal, grain, etc., have charter parties with special titles such as "Fosfo", "Americanized Welch Coal Charter Party", "Baltimore Grain Charter Party", etc. In a voyage charter party the charterer assumes no responsibility for the operation of the vessel but generally pays stevedoring expenses in and out. The master is particularly concerned with voyage charter parties because of the laytime, dispatch and demurrage clauses and the necessity of tendering the Notice of Readiness to load or discharge. In this type of charter the charterer contracts to provide a cargo at given rate per day. The charter is generally for bulk cargo, stipulated in tons or cubic feet, for all or part of the carrying capacity of the vessel.

➤ Time Charter Party

A Time Charter Party typically has the following key characteristics:

- The shipowner is responsible for providing a seaworthy ship with valid classification, and a master and crew, so that the ship can be sailed safely to its final destination.
- The charterer is responsible for loading, stowing, and discharging cargo safely.
- The charterer is responsible for giving the master effective orders and instructions with regard to when and where the cargo should be shipped.
- The charterer is responsible for providing fuel for the vessel.

Various forms of Time Charter Party exist, but the two most commonly used for dry cargo are the Baltimore and the New York Produce Exchange (NYPE) Charter Parties. The Baltimore is often considered to favour shipowners, while the NYPE is considered more advantageous for charterers. Charter Parties for tankers have the same main characteristics.

➤ Bareboat Charter Party.

By this type of charter, the shipowner leases his entire vessel and the charterer has the responsibility of operating it as though it were his own vessel. As the implies, the bare vessel is chartered. The shipowner has, for the period covered by the charter party, lost control of his vessel. The charterer pays all expenses: fuel, stores, provisions, harbor dues, pilotage, etc. and employs and pays the crew. There may, however, be a clause in the charter party that the master and the chief engineer must be approved by the shipowner. The charterer is responsible for the upkeep, preservation and safety of the vessel. Before delivery to the charterer the vessel is surveyed by representatives of both parties and the same is done on redelivery. The charter party will stipulate that the must be redelivered in the same good order and condition as when delivered, ordinary wear and tear excepted. On redelivery the owner's representatives, usually the port captain and port engineer, may check the logbooks for information pertaining to groundings, striking objects and collisions.

Fuel oil in the vessel on delivery is paid for by the charterer - at the current price at the port at that time, and on redelivery, the shipowner pays for the fuel in the vessel at the current price in the port at the time.

➤ Laydays.

When the vessel on a voyage chart is in port, the expenses of the shipowner continue. At the same time loading or discharging is controlled by the charterer, who if not held to a definite number of days to complete this work, can make the stay in port long and expensive for the shipowner. For this reason, the charter party will specify a definite number of days for loading or discharging cargo; or it may specify a certain number of tons per day to be loaded or discharged.

The days are called laydays (or laytime) and are stipulated in the charter party as working days, weather working days, running days and excepted days.

If the charterer loads or discharges his cargo in less time than the number of laydays allowed, he earns dispatch money at much a day or part of a day saved. If he takes longer to load or than the number of laydays allowed, he must pay demurrage at so much a day. Both dispatch and demurrage may be the cause of much disagreement and argument in which the vessel's logbook can play an important part.

#### ➤ Demurrage.

An equally important clause is the demurrage clause which states that if the charterer does not complete loading or discharging in the laydays allowed by the charter party, he must pay for the delay at the stipulated sum per day. Unless otherwise provided in the charter party, demurrage starts from the time loading discharging should have been completed. All days are counted, whether or not cargo is worked, including Sundays, holidays and days not worked due to bad weather or other reasons. Once a vessel is on demurrage, it runs consecutively unless otherwise provided in the charter party.

### III. Types of Chartering

#### A. Voyage Chartering

##### ➤ Meaning

□ The voyage chartering means that the shipowner promises to carry on board a specific ship a particular cargo for a single voyage from one or more loading ports to one or more discharging ports.

□ The payment is called freight and the contract is called a voyage charter party. Voyage charters are concluded between the shipowner or disponent owner and the charterer. The person who charters the ship is known as voyage charterer. The person who charters out his ship is known as shipowner or disponent owner.

□ Usually this form of contract is selected when the charterer has no experience in the

operation of ship or he has just one consignment of cargo needed to be transported from one place to the other.

##### ➤ Costs

□ Under a voyage charter, the shipowner retains the operational control of the vessel and is responsible for all the operating expenses such as port charges, bunkers, vessel's insurance, taxes, etc.

□ The charterer's costs are usually costs and charges relating to the cargo.

□ Loading and discharging costs are divided between the ship-owner and the charterer in accordance with the agreement from case to case.

##### ➤ Contents

A voyage charter party shall mainly contain the names of the parties, the name and nationality of the ship, its deadweight and bale or grain capacity, description of the goods to be loaded, port of loading and discharge, laydays, time for loading and discharge, payment of freight, demurrage, despatch and other relevant matters.

##### ➤ Forms

□ There are more standard forms of voyage charter party than any other form of contract of carriage.

□ The Uniform General Charter code name GENCON

is the most popular and widely used general purpose voyage charter party on a global basis for all kinds of trades and for numerous types of cargoes.

□ When used these forms are likely to have several additional clauses attached to cover eventualities not covered by the printed clauses.

##### ➤ Manners of Voyage Chartering

- Single Voyage Chartering
- Return Voyage Chartering
- Consecutive Single Voyage Chartering
- Consecutive Return Voyage Chartering

##### ➤ Characteristics of Voyage Chartering

- Specific vessel, specific cargo, specific port and specific route.
- Rights, duties and responsibilities of ship-owners and charterers are determined by the charter party.

- The charterer should be responsible for the arrangement of the cargo, payment of freight calculated according to the quantity of the cargo loaded or carried and other expenses concerned.
- The shipowner possesses and controls the vessel and takes charge of the operation of the vessel and the manning and management of crew.
- The shipowner should bear the operational expenses of the vessel.
- The payment by the charterer to the shipowner for chartered vessel is usually called freight instead of hire.
- The ship-owner charters out the whole vessel or part of her space to the charterer.
- There are the provisions for the laytime, demurrage and dispatch.

## *B. Time Chartering*

### ➤ Meaning

The time chartering means that the ship-owner provides a designated manned ship to the charterer, and the charterer employs the ship for a specific period against payment of hire instead of for a certain number of voyages or trips.

Time charter generally does not include loading and unloading costs in the charter rate.

### ➤ Period

A single voyage

Several months or years

### ➤ Reasons for time charter

The time charterer may be a shipowner who for a time needs to enlarge his fleet or a cargo owner with a continuous need for transport, who does not want to invest money in a ship but wants to have the control of the commercial operation of the vessel. The charterer may be a speculator taking a position in anticipation of a change in the market.

### ➤ Costs

The charterer is liable for costs directly connected with the use of the vessel, for example, bunker costs and port charges and pays for the loading and discharging. Under a time charter the crew is employed by the shipowner, who is also responsible for the

nautical operation and maintenance of the vessel and supervision of the cargo.

### ➤ Forms

□ Although considerably fewer in number than the wide choice available for voyage chartering, there is an adequate number of time forms for use in the time chartering business.

□ The two major forms are NYPE and BALTIME.

When used these forms are likely to have several additional clauses attached to cover eventualities not covered by the printed clauses.

□ By far the largest number of time chartering are fixed on the basis of the NYPE Charter Party.

### ➤ Characteristics of Time Chartering

- The shipowner should be responsible for the manning of crew and bears the wages and provisions thereof.
- The master shall be under the orders and directions of the charterer as regards employment and agency. If the charterer shall have reasonable cause to be dissatisfied with the conduct of the master or officers, the shipowner shall on receiving the complaint make a change in the appointments, if necessary.
- The charterer should be responsible for the operation of the vessel and bear the variable operational costs such as bunkers, port charges, handling charge and canal tolls etc.
- The shipowner should bear the fixed operational costs such as costs relating to the vessel capital, ship's maintenance and stores, insurance premium and so on.
- The ship is chartered as a whole/part and the hire is calculated and collected according to the duration of chartering and the agreed hire rate.
- There are the provisions for the delivery/redelivery of vessel.

## *C. Time Charter on Trip Basis (TCT)*

□ TCT means that the charterers employ vessels on a time charter basis for the period of a specific voyage and for the carriage of a specific cargo and this practice has given rise to the term time charter on trip basis: TCT.

□ TCT is similar to voyage chartering with regard to the fact that the intention of the parties is to employ the vessel for one or two voyages. The period of TCT is depend on the voyage and not fixed as time chartering.

There the similarity ends and the roles of charterer and ship-owner are identical to those assumed for time charter.

□ There are no charter party forms designed purely for trip charters, and trip chartering is negotiated and basis on standard time charter forms and adapted slightly where appropriate.

□ The important feature of the time charter is still there, the charterer has to pay hire according to the time spent in performance of the voyage.

□ A time charter on trip basis is the simplest form of time charter. During the time the vessel is on charter the owner is paid an agreed daily rate, for example \$20,000 a day. The vessel is directed by the charterer, who tells it where to load cargo, and where to discharge it. The advantage of the TCT is that it allows the charterer to provide greater flexibility than a voyage charter under which the contract involves the transport of a specific cargo.

#### *D. Contract of Affreightment (COA)*

##### ➤ Meaning

□ Contract of affreightment is a generic term which covers all contracts for the carriage of goods by sea ( both charter parties and bills of lading are contracts of affreightment).

□ It is also used in a more limited sense when it means a contract, by which the shipowner promises to satisfy the charterer's need for transport capacity over a certain period of time, often one year or several years.

##### ➤ Advantages

□ The advantage of such a contract to the shipowner is that security of employment is obtained for his vessel for duration of the contract, especially valuable if the shipowner considers that freight rates are about to fall.

□ But the charterers may also be able to obtain financial advantage (security of transportation) in the event that market freight rates rise once they have committed shipowner or operator on the contract.

##### ➤ Characteristics of Contract of Affreightment

- Contract of affreightment can often be related to voyage charter.
- The length of the chartering period lies on the total quantity of cargo to be transported
- Cargoes carried under COA are usually bulky dry/liquid cargoes
- The risk of delay in sailing should be borne by the shipowner
- The freight should be calculated based on the quantity of cargo
- The partition of cost of loading and/or discharge is usually as same as that of voyage chartering.

##### ➤ Difference

□ At first glance a consecutive voyage contract and a contract of affreightment may appear to be almost identical but the vital difference is that the first is based around a named vessel whereas the latter is based around the cargo.

□ Should the named vessel become a total loss the contract would end because the contract become frustrated and the shipowner would not be under any further obligation to the charterer. In the second case it may be that the shipowner had intended to carry the cargo in his own vessel even though he had the option to use any vessel. If his vessel becomes a total loss he could not terminate the contract and would be obliged to charter in tonnage to fulfil his contract with the charterer.

#### *E. Bareboat Chartering*

##### ➤ Meaning

□ The bareboat chartering is a charter of a different type. This contract amounts to a lease of the ship from the shipowner to the charterer.

□ The bareboat chartering ordinarily means that the vessel is put at the disposal of the charterer for a long period employment without any crew.

□ The charterer thus will take over almost all of the shipowner's functions except for the payment of capital cost. This means that the charterer will have the commercial as well as the technical responsibility for the vessel and will pay for maintenance, crew costs and insurance, etc.

##### ➤ Reason

□ Bareboat chartering is less common than other types of contract.

□ It is sometimes used where a shipowner or ship operator wishes to operate ships or to supplement his fleet for a period of time without incurring the financial commitments of actual ownership, but at the same time requires to have full control of the chartered vessel, including control of its navigation and management.

□ Further, bareboat chartering is sometime employed in connection with the financial arrangements for purchase of the vessel on installment terms. The bareboat charter then serves as a hire/purchase contract, by which the shipowner/seller retains formal ownership and thereby security in the vessel until the full purchase price is paid.

➤ Form

□ There is only one standard form of bareboat charter party used to any great extent and that is the BARECON form designed by BIMCO.

□ A close examination of this form will show up the fact that there are a number of clauses, which are commonly found in time charter parties. In particular the clauses relating to delivery, canceling, trading limits, surveys, inspections, hire, redelivery, general average, war, commission and law and arbitration would be equally effective if used in a time charter party.

## IV. Chartering Software

Fixing ships was a very challenging task 30 years ago when, due to very limited communication possibilities, an owner with a ship looking for cargo in an area far away from his traditional market, could only see 20-30 possible cargoes from that area and he had to choose the best out of them, without knowing that in the market there were much more cargoes available and even better paying.

Shipbrokers have been crunching numbers comparing voyage estimates, customizing standard charter party forms and calculating demurrage and despatch from laytime statements for centuries. Until quite recently all of this was done without any form of electronic assistance but brokers were quick to recognize

the advantages of computers at a very early stage in their development.

With the advent of Internet-based business-to-business (B2B) electronic markets, real opportunities for online transactions have opened up. The Maritime industry has started to recognize the importance of internet and of the electronic markets. Lower costs and less response time are some of the benefits when compared to the traditional procedures operated by humans. However, the most promising Internet-based electronic markets, in Maritime are found in the B2B environment where they act as or intermediaries (middlemen) between ships and cargoes. The agent technology can provide a new way of analyzing, designing, and implementing such electronic markets. The use of software agents has mostly been directed towards applications that support business-to-consumer (B2C) transactions.

Development of e-chartering has been seen as a blessing by many ship brokers, since with only on click their open positions and open cargoes could be sent to hundreds of brokers.

These applications are the following:

- Voyage Estimator
- Cargo Matching
- Contract Management

### A. Voyage Estimator

The Voyage Estimate module is a versatile, single interface voyage calculator, able to perform an unlimited number of quick, accurate, simple or complex charter party calculations (or estimates). The module allows for the calculation and automatic analysis of potential revenues and cost for any combinations of for example vessels, cargoes (or parcels), ports, loads, discharges, terms, freight rates, relents, etc.

Designed to support all types of calculations associated to a Voyage Estimation. including a large and extensible port distances data base, the system permits on-line checking of more than one vessel for the same job, permits "What if" suppositions by interactive variation of all associated figures when modifying one of the estimation parameters. All necessary terms are already included in the system and easily retrieved.

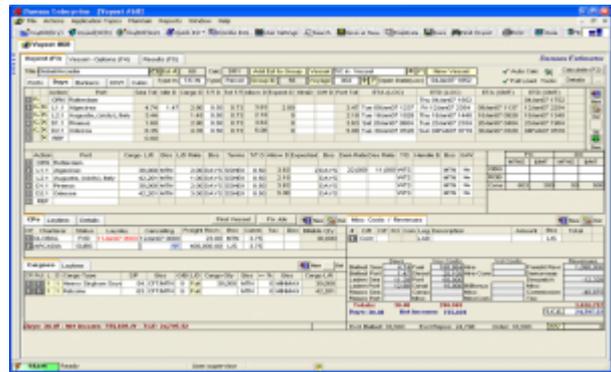
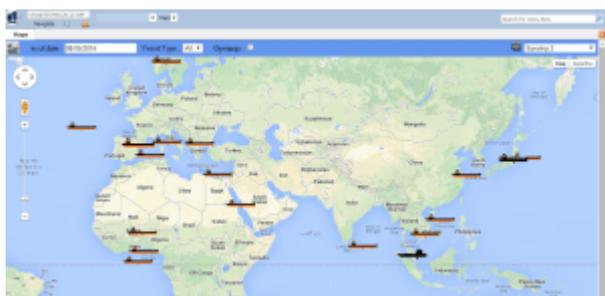
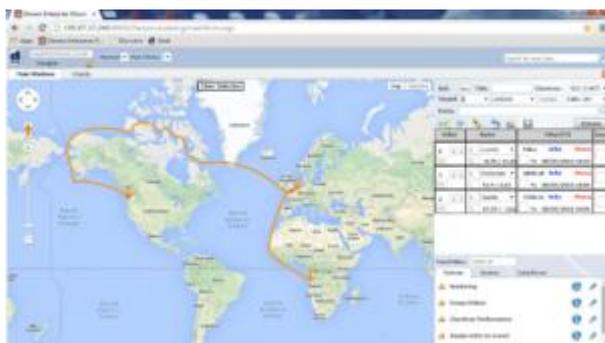
The Voyage Estimation Software is the ultimate decision making tool for the chartering manager. It is designed for all types of vessels and hence per ton, World scale, time charter, lumpsum freight and other industry standard arrangements are supported.

Various scenarios can be handled for the same vessel. Multiple employment alternatives can be evaluated and sensitive analysis on each one of them give decision guidance.

- Features of the Voyage Estimator :
  - Interactive calculations
  - Vessel-employment matching
  - Continuous restriction check
  - Parcel liner support
  - Sensitivity analysis
- Reporting in the Voyage estimation Software :
  - Voyage analysis
  - Extensive job-vessel matching
  - Breakdown Analysis
  - Profit and loss statements Parcel cargo list contribution

Some known voyage estimators used by shipping companies are:

1. Danaos Voyage Estimation/Chartering



Equipped with a brand new distance calculation engine, the Voyage Estimation Module not only calculates distances from point to point, point to port, through SECA, piracy, high risk zones, etc., but also optimizes the route, bunker requirements expensive low-sulfur consumption constraints, cargo and bunkers intake and storage for best trim and performance.

Voyage Estimation and Chartering Module provides user with a quick and direct way of entering a Voyage. The user just enters the MINIMUM information required to execute a Voyage.

The execution of the voyage is a streamlined process and message boxes or validations are kept to a minimum. User calculates the daily net revenue – TCE and performs “what if” scenarios to find what freight rates are required to achieve TCE/day results.

Characteristics :

- > Evaluation and Analysis
- > Negotiation
- > Fixture
- > Vessel Nomination
- > Cargo Nomination (COA)
- > Multiple Cargoes
- > Parceling
- > Sensitivity Analysis
- > Hire in / Voyage in Calculation
- > Round Voyage calculation
- > Optimum Speed
- > Laytime calculation
- > Quick Voyage Estimation
- > Combine Voyage Estimates
- > Voyages Group Comparison

- > Fully Load Cargoes
- > Auto Stem Bunkers
- > Optimize Loading Bunkering
- > BP, Netpas and Danaos Distances/ Routing/Map
- > Voyages Options Comparison
- > Historical data retrieval
- > COA Management

## 2. Shipnet Voyage Estimator

Estimate - Bulk				Estimate - Bulk				Estimate - Bulk				
Group	Estimate	Status	Currency	IVSL	3939 P	USD	IVSL	3849 P	USD	IVSL	3848 P	USD
<b>Vessel Information</b>												
Type	Vessel	DWT	DRY	JULIET	56 560	DRY	JULIET	56 560	DRY	JULIET	56 560	DRY
Speed B	L	Consum. B	L	14,00	13,00	20,00	20,00	14,00	13,00	20,00	20,00	14,00
Port Man	Aux	Gear	Work	Main	Aux	2,20	0,50	5,00	0,50	2,20	0,50	5,00
Bunker Exp.	Running Cost/Day			13 000	0,00	13 000	0,00	13 000	0,00	13 000	0,00	0,00
Ball Status	Addr.	Comm.	%									
<b>Cargo Information</b>												
Charterer	Commodity	Quantity	TT	FIRST COAL	32 500,000 M	COAL COMPANY	31 750,000 M	COAL TRADING	31 000,000 M			
Rate	Type	Comm. %	Amst	14,00 M	2,50	11 375	14,75 M	3,75	17 562	15,00 M	2,50	11 625
Load/Load	Disch/Disch			DURBAN	ROTTERDAM	CAPE TOWN	ANTWERP	PORT ELIZABETH	HAMBURG			
Terms	Load	Discharge			2000DNC	20%	0MC	0MC	0MC	0MC		
Port Exp.	Load	Discharge			0,00	0,00	0,00	0,00	0,00	0,00		
Bunker Comp.	Other Income			0,00	0,00	0,00	0,00	0,00	0,00			
Demurrage	Dispatch			0,00	0,00	0,00	0,00	0,00	0,00			
<b>Itinerary</b>												
Ballast Port	Start Date			RICHARDS BAY	07-06-2011 01:53	RICHARDS BAY	07-06-2011 01:53	RICHARDS BAY	07-06-2011 01:53			
Load Port(s)	Disch. Port(s)	Compl. Date			DURBAN	ROTTERDAM	03-07-2011 12:14	CAPE TOWN	ANTWERP	PORT ELIZABETH	HAMBURG	04-07-2011 06:41
Reposition Port	Arrival Date			RICHARDS BAY (B)	23,20(2,00(0,00(2,00)-26,32	RICHARDS BAY (B)	23,20(2,00(0,00(2,00)-26,32	RICHARDS BAY (B)	23,20(2,00(0,00(2,00)-27,20			
Extra Itinerary Info												
SAUCE=1	Add 5f Port			0%	0,00%	0%	0,00%	0%	0,00%			
Port Exp.	Canal Exp.			0	0	0	0	0	0			
<b>Financial Summary</b>												
Gross Income			450 000	450 313	450 000							
Net Income			443 625	442 751	442 375							
Other Expenses			5 000	5 000	5 000							
Total Voyage Expenses			16 375	22 562	16 625							
Voyage Result			436 625	419 751	444 375							
TCE			16 503	18 326	16 484							
Net Monthly			504 408	512 131	501 450							
Running Cost			342 880	342 160	351 600							
Profit/Loss			93 728	103 951	93 728							

- Configurable bunker price retrieval with four methods supported including FIFO from ShipNet Operations Module
- Alerting when a charterer has overdue invoices
- TC IN estimates for vessels under hiring consideration
- Ballast bonus cost and address commission for TC IN vessels and Reposition Port
- See the full financial picture with the Continue Voyage and Tag Estimate functions, building consolidated results merging profitable voyages with potentially costly backhauls

## B. Cargo Matching

Cargo Matching presents a consolidated view of all vessel and cargo options, based on the latest operational data. Schedulers have a clear visual picture of current commitments and opportunities. They can quickly see vessel open dates and ports, sea days, and waiting times, helping them understand the impact of each decision on total business performance.

Some known application used by shipping companies are:

### 1. OpenSea.pro

Step 1. Create account

Step 2: Fill in your Profile

Characteristics :

- Rapidly model different cargo and vessel combinations, applying different usage scenarios and seeing likely commercial outcome
- Quick estimates with multiple estimate stacking facility for easy evaluation/comparison plus the ability to move between quick and detailed/full estimate views
- Group estimates and search across ones already built
- Analyse projected financial performance of groups of estimates

### Step 3. Add Position

### Step 7. Feedback

## 2. IMOS -Veson Nautical

IMOS Cargo Matching allows you to test, analyze, and modify assumptions about existing or proposed contracts, voyages, vessels, and fleets.

Developed with input from some of the world's leading commercial marine schedulers and charterers, this module matches cargoes to ships with drag-and-drop convenience, generating a pro forma vessel schedule and P&L. The Cargo Matching tool is tightly integrated with the position book and all the Integrated Maritime Operations System (IMOS) modules. Cargoes can be drawn from a COA contract stored in the database.

This level of planning can dramatically improve team productivity and decision-making performance; maximize fleet utilization through reduced ballast and waiting days; ensure that laytime commitments are met; and help minimize bunker and other voyage expenses.

### Step 4. Send an offer

### Step 5. Negotiation process

### Step 6. Fix the position

Contract ID: CCOA15005	Start: 07/27/15 00:00	End: 08/27/15 00:00
Mst Contract:	COA Qty/Units: 600,000 MT	Option %: 10.00 MOLOO
Charterer: CSA	Min/Max Qty: 540,000 660,000	Firm CP Liftings: 10
Company/LOB: VESON OPR	Optional CP Liftings: 2   Charterer	Qty/Lifting: 50,000
Department: PANAMAX	Op Date: / /	
Trade Area:		
CP Date/Form: 07/27/2015		
CP Place:		
Demurrage Via:		

Itinerary/Options	Pricing	Linked Liftings	Exposure	Rev/Exp	Rebill Settings
F	Port	Quantity	Berth	L/D Rate	Rate Us
L	HOUSTON	50,000		8,000.00 PD	

## V. Chartering Software Development Proposal

The shipping costing process essentially involves the flow of all forms of shipping costs through the productive segments of shipping companies where the cost unit is the unique point of reference (Travel Charges: Tone or Miles / Day of Travel, Travel mileage / Cargo tonnage, Time charter: Concession day, Bareboat charter: Concession day).

In the presented Chartering research model, an estimate of cost elements is also attempted outside the revenue calculation, in order to assist management's decision-making process about the chartering.

In the application interface for the various chartering segments, the Voyage estimator and Cargo matching are incorporated. The parameters of the shipping company that must be included are:

Vessel Code	Vessel Name	Open Voy Num	Company Code	Open Date	June
FRTN	MV FORTUNA	1506	VESON	6/1/2015 09:00	
DPHN	MV DAPHNE	1505	VESON	6/9/2015 22:36	Voyage 1505 to...
GALA	MV GALATEA	1522	VESON	6/15/2015 22:08	Voyage 1522 - Duration 28.19...
MVREA	MV RHEA	1512	VESON	6/17/2015 09:23	
BEUJ	MV BELIZMA	1521	VESON	6/24/2015 01:04	Voyage 1521 - Duration...
FRTN	MV FORTUNA	1507	VESON	6/24/2015 10:09	Voyage 1507 to... Voyage 1508 to...
AKTA	MV AKTABA	1541	VESON	6/30/2015 06:55	

Car...	Buy or...	Cargo	Grade	CP Qty	CP Unit	CP Qty/Unit	SA	June
214	Sell	RCCE	RCCE	74,000.00	MT	74000	MT	6/1-15
215	Sell	RCCE	RCCE	74,000.00	MT	74000	MT	6/1-15
219	Sell	WHEAT	WHEAT	30,000.00	MT	30000	MT	05-15
220	Sell	WHEAT	WHEAT	30,000.00	MT	30000	MT	10-20
222	Sell	WHEAT	WHEAT	30,000.00	MT	30000	MT	10-20
224	Sell	WHEAT	WHEAT	30,000.00	MT	30000	MT	05-15
227	Sell	WHEAT	WHEAT	30,000.00	MT	30000	MT	05-15
228	Sell	WHEAT	WHEAT	30,000.00	MT	30000	MT	05-15

- Chartering Department
  - Travel / Route / Port Expenses
  - Loading costs
  - Load elements
  - Other conditions
  - Duration of the charter
- Technical Department
  - Fuels
  - Lubricants
- Operations Department
  - Ship operating costs
  - Docking and special inspection costs
- Sales Department
  - Supplies
  - Management costs
- HR & Training Department
  - Salaries of Administrative Staff
  - Training Costs
- Crewing Department
  - Crew Salaries
  - Crew expenses
  - Costs of Manning Agents
  - Miscellaneous expenses
- Accounting Department
  - General Costs

Estimate ID	GRD-000266	GRD-000267	GRD-000268
Intended	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vessel:	MY GALATEA	MY GALATEA	MY GALATEA
Dly Cost/Addr	16,000.00 0.00	16,000.00 0.00	16,000.00 0.00
Spd Ball/Laden	14.00 13.50	14.00 13.50	14.00 13.50
Ballast Bonus:	0	0	0
Ballast Port:	VANCOUVER (CANADA)	VANCOUVER (CANADA)	VANCOUVER (CANADA)
Commence Date:	07/05/15 21:39	07/05/15 21:39	07/05/15 21:39
IFO/LSF Ft/MT:	600.00 675.00	600.00 675.00	600.00 675.00
MGO/LSG Ft/MT:	854.00 900.00	854.00 900.00	854.00 900.00
Cargo:	LUMBER	LUMBER	LUMBER
Charterer:	CSA	CSA	KS
Quantity/Unit:	40,000 MT	40,000 MT	40,000 MT
Min/Max Qty:	40,000 40,000	40,000 40,000	40,000 40,000
Laycan From/To:	07/01/15 00:00 07/11/15 00:00	07/06/15 00:00 07/16/15 00:00	07/04/15 00:00 07/14/15 00:00
Load Port(s):	VANCOUVER (CANADA)	VANCOUVER (CANADA)	VANCOUVER (CANADA)
Disch Port(s):	SINGAPORE	LAGOS (NIGERIA)	HAMBURG

### C. Contract Management

Contract Management manages the pricing, terms, and exposure of contracts in one integrated system. The team can quickly capture the details for all of their contracts including Cargo, Cargo COA, Voyage Charter In, Time Charter In, Time Charter Out, and then use these details to drive operations and invoicing.

- Capital Expenses

For the operation of the application, the actions followed in turn are as follows:

- The Chartering department enters the load parameters.
- Recover from a Database of available vessels that meet load parameter conditions.
- The Chartering department selects a desired available boat from a configured list.
- Automatic input of fuel / lubricant consumption data, other voyage costs of selected vessel.
- Introduction of Travel / Route / Ports by Chartering department.
- Calculation of the results of the proposed charter (Profit, Vessel days).
- Analyzing and presenting the results of the charter proposed in the company management interface in multiple ways so that safe conclusions can be drawn both for the particular charter and its impact on the macroeconomic data of the company.
- Lessons learned in order to modify - improve the application.

## **VI. Steps towards a global e-Chartering Platform**

A global e-chartering platform has to be managed by a credible independent organisation to ensure that no company has an advantage over other competitors. In order to be successful the platform has to start with basic features and to grow step by step based on clients requirements, as it is hard to believe that large organisations will leave aside their own operational and financial applications to use the online tools.

At first, the web based system should give users the same freedom they have when they send away messages with open cargoes and positions and the main goal should be to reduce the number of e-mails send and received. Instead of sending out e-mails users can set up various groups and give permissions to see

open cargoes and open positions. In this way the other users will not need to read hundreds of e-mail, but they will have the information available and they can use the search capabilities of the platform and find what they need. One other shortcoming of many e-chartering platforms is that various ship brokers quote the same cargo with different commission structures which will make the result of the search confusing and this should be avoided by viewing the cargo only once and users can thereafter decide if they want to see who else is quoting that cargo.

Sending indications or firm offers should be easier as there should be standard forms with fields, check boxes and drop down list boxes. Port agents may contribute to a central port costs database as well as parameters of a specific cargo will also flow directly into an online quick voyage estimator with integrated distance tables, so users can evaluate a business much quicker. Negotiations can be recorded in a secure log file with possibilities of sending out copies to e-mail system and with automated recapitulation of all terms agreed.

One important issue will be the charging for the service, as it is obvious that developing and maintain-ing a first class service would need considerable funding. At this moment there is no free e-chartering platform available, all know platforms either use a subscription fee or a transaction fee. A transaction fee would be more appropriate, but the administrators of the site have no control over the activities performed on the site by the users and have to count on users correctness. The main problem of most web based providers was that they had no funds to sustain the website for enough time to allow it to generate income itself and they imposed some subscription fees which in turn made more and more clients to run away. Since the website can and will also be used by shipowners and charterers it appears that a lot of other service providers (agents, insurers, shipyards etc.) would be interested to target the audience and they would be ready to pay for advertising, which should become that main source of funding.

European Union is studying if bulk shipping market needs to be regulated in order to avoid monopolistic practices of many shipowners and ship operators forming pools and establishing a common price strategy. An online trading

environment can help industry become even more transparent and competitive than today. After completion of each voyage, charterers and owners can have the opportunity to give a rating, evaluating the performance of the counter part. After many such fixtures, the average rating will become quite representative. In fact it will be a better tool to judge the standing and performance of an owner or charterer than the biased opinion of a broker, who's prime interest is to fix that piece of business.

## VII. Conclusion

The main objectives a shipping company must satisfy are, in principle, to seek the full employment of its ship, and at the same time collecting the maximum possible fare. At the same time, however, must achieve the most favorable cost rates, combined with the shortest possible delays in ship's voyage to destination. The decisions are based on the implementation of structured strategy and technical marketing. The modern ship manager keeps track of markets and in combination with his experience he aims to prevent future developments with proper timing. The shipowner is manager and is interested in return of his investments and profitability, in order to create a positive image of his business outward.

The computing power offered by modern information systems makes it possible to immediately make available and exploit all the necessary information taken into account during the negotiation process of the persons involved in the charter and the examination of all the possible long-term loading scenarios and not just for a cargo transport, as it is so far without using any software. This enables the company to choose the solution that is optimal for each optimization criterion for a long time or locally for a single load.

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