

ΠΑΝΕΠΙΣΤΗΜΙΟ ΠΕΙΡΑΙΩΣ



ΤΜΗΜΑ ΝΑΥΤΙΛΙΑΚΩΝ ΣΠΟΥΔΩΝ
ΠΡΟΓΡΑΜΜΑ ΜΕΤΑΠΤΥΧΙΑΚΩΝ
ΣΠΟΥΔΩΝ στην ΝΑΥΤΙΛΙΑ
ΕΠΙΧΕΙΡΗΣΙΑΚΟ ΣΧΕΔΙΟ ΔΗΜΙΟΥΡΓΙΑΣ
ΝΑΥΤΙΛΙΑΚΗΣ ΕΤΑΙΡΙΑΣ

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Διπλωματική Εργασία

που υποβλήθηκε στο Τμήμα Ναυτιλιακών Σπουδών του Πανεπιστημίου Πειραιώς ως
μέρος των απαιτήσεων για την απόκτηση του Μεταπτυχιακού Διπλώματος Ειδίκευσης
στην Ναυτιλία

Πειραιάς

Νοέμβριος 2010

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Τα μέλη της Επιτροπής ήταν:

- Ελευθέριος Θαλασσινός (Επιβλέπων)
- Ερασμία Βαλμά
- Ευστράτιος Παπαδημητρίου

Η έγκριση της Διπλωματικής Εργασίας από το Τμήμα Ναυτιλιακών Σπουδών του Πανεπιστημίου Πειραιώς δεν υποδηλώνει αποδοχή των γνώμων του συγγραφέα.»

ΠΡΟΛΟΓΟΣ

Οι γνώσεις, οι εμπειρίες και η ενασχόληση μου με τον ναυτιλιακό κλάδο, αυτά τα δύο χρόνια φοίτησης στο ΜΠΣ του Πανεπιστημίου Πειραιώς ολοκληρώνονται με την εκπόνηση της παρούσας εργασίας, που φιλοδοξεί να παρέχει όλα τα απαιτούμενα στοιχεία για την δημιουργία μιας ναυτιλιακής εταιρείας. Για τον σκοπό αυτό επιλέχθηκε η νεοδημιουργηθείσα εταιρεία να δραστηριοποιηθεί στην ναυτιλία μικρών αποστάσεων (short sea shipping), στις περιοχές της Μεσογείου, της Μαύρης και Αζοφικής Θάλασσας καθώς και εντός του ποτάμιου δικτύου της Ευρώπης (Inland Waterways), με δύο πλοία μεταφοράς ξηρού φορτίου χωρητικότητας 5000Dwt έκαστο.

Τα στοιχεία που παρατίθενται, είναι αποτέλεσμα έρευνας και συλλογής πληροφοριών κυρίως από τους ναυτιλιακούς παράγοντες του Πειραιά (ναυλομεσίτες, ναυτιλιακές εταιρείες, ναυτασφαλιστές, εταιρείες ναυτιλιακού management κτλ.), οι οποίοι μου παρείχαν και τις ανάλογες συμβουλές, κατευθύνσεις αλλά και όλα τα δεδομένα ιδιαιτέρως στις τιμές των ναύλων αλλά και τις αξίες των πλοίων. Οι παρούσες αλλά και οι τιμές των ναύλων της τελευταίας τριετίας βρέθηκαν από την εταιρεία Metal Experts (η εν λόγω εταιρεία εκπονεί στοιχεία για την συγκεκριμένη περιοχή, εδρεύει στην Οδησό) όπου κατόπιν επικοινωνίας μου απέστειλε τα στοιχεία ναύλων και φορτίων για την περιοχή ενδιαφέροντος. Είναι χαρακτηριστικό ότι για την εν λόγω εργασία, απαιτήθηκε το μεγαλύτερο μέρος των γνώσεων που έλαβα στο ΜΠΣ, από όλα τα διδαχθέντα μαθήματα.

Η συμβουλή και παρότρυνση του καθηγητή μου και επιβλέποντα κ. Ελευθέριου Θαλασσινού, ήταν να συνταχθεί η εργασία στην αγγλική γλώσσα, όπως και έγινε, με σκοπό να μπορεί να παρουσιαστεί σε διεθνή πανεπιστημιακά συνέδρια. Οφείλω δε να τον ευχαριστήσω για το ειλικρινές ενδιαφέρον και τις κατευθύνσεις που μου έδωσε, καθώς και τις επαφές που μου εξασφάλισε στον τομέα της χρηματοδότησης του επιχειρηματικού μου σχεδίου. Θα ήταν παράλειψη να μην ευχαριστήσω τον συμφοιτητή και φίλο καπετάνιο Διονύση Ρασσιά, η συμβολή του οποίου ήταν καταλυτική στην εκπόνηση της εργασίας.

Ασφαλώς οι άνθρωποι που με ενέπνευσαν και με ώθησαν να ασχοληθώ με την ναυτιλία χαίρουν της εκτίμησής και του σεβασμού μου. Η οικογένειά μου και σε αυτήν την προσπάθειά μου στάθηκε δίπλα μου, πίστεψε, συμπαραστάθηκε και στήριξε δυναμικά την ολοκλήρωση των σπουδών μου. Τους ευχαριστώ για αυτή της τους την αγάπη ελπίζοντας να μην τους απογοητεύσω.

«Αφιερώνεται στην πολυαγαπημένη μου σύζυγο Σοφία και στην λατρεμένη μου κόρη Βασιλεία, για την αγάπη και την συμπαράσταση τους»

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ΠΕΡΙΛΗΨΗ

Η παρούσα Διπλωματική εργασία πραγματεύεται την σύσταση και δραστηριοποίηση μια νέας ναυτιλιακής εταιρείας, στην ναυτιλία μικρών αποστάσεων. Στοχεύει να δραστηριοποιηθεί στην ναυτιλία μικρών αποστάσεων (short sea shipping), στις περιοχές της Μεσογείου, της Μαύρης και Αζοφικής Θάλασσας καθώς και εντός του ποτάμιου δικτύου της Ευρώπης (Inland Waterways), με δύο πλοία μεταφοράς ξηρού φορτίου χωρητικότητας 5000Dwt έκαστο. Για τον σκοπό αυτό εκπονείται ένα επιχειρηματικό σχέδιο, αναλύοντας την προς σύσταση εταιρεία, τους στόχους της καθώς και την συγκεκριμένη ναυτιλιακή αγορά που προσδοκά να δραστηριοποιηθεί.

Αρχικά παρουσιάζονται τα στελέχη που θα επανδρώσουν την εταιρεία, τα χαρακτηριστικά των πλοίων και των συνεργατών της. Ακολούθως παρατίθενται οι στόχοι της που θα μπορέσουν να την κάνουν βιώσιμη και ανταγωνιστική στην αγορά. Το τρίτο μέρος αναλύει όλο το project ενώ για την αξιολόγηση της εταιρείας χρησιμοποιείται η SWOT ανάλυση, αποβλέποντας στην ανάδειξη των θετικών αλλά και αρνητικών στοιχείων που επηρεάζουν την λειτουργία της.

Το επενδυτικό πλάνο και η οικονομική ανάλυση στο πέμπτο και έκτο μέρος αντίστοιχα δίνουν τα ακριβή στοιχεία για τις χρηματικές ροές, τις αποσβέσεις πλοίων, καθώς και άλλα οικονομικά στοιχεία της επένδυσης όπως NPV και IRR. Στο έβδομο μέρος αναλύεται η αγορά της ναυτιλίας μικρών αποστάσεων, τα χαρακτηριστικά της, οι παρούσες τιμές ναύλων, οι τύποι των πλοίων κ.α. Έπεται μια συγκριτική μελέτη μεταξύ των διαφορετικών μεταφορικών μέσων (οδικών, σιδηροδρόμου), αλλά και των δράσεων που αναλαμβάνει η Ε.Ε προς την κατεύθυνση της προώθησης των θαλασσίων μεταφορών έναντι των υπολοίπων μέσων, μέσω του προγράμματος MARCO POLLO II.

Τέλος συμπεραίνονται και επισημαίνονται όλοι οι παράγοντες που δύνανται να δυσχεράνουν την πραγμάτωση του επιχειρηματικού πλάνου, καθώς ακόμη την εξέλιξη και την επιβίωση της νεοσύστατης ναυτιλιακής εταιρείας, συγκεκριμενοποιούνται δε τα απαιτούμενα βήματα για την σύσταση και ενεργοποίηση μιας νέας ναυτιλιακής εταιρείας.

BUSINESS-PROSPECT

**Setting up a shipping company for further trading in
Mediterranean and Azov-Black Sea
(Short Sea Shipping)
(5000 DWT Bulk Carrier project)**

The Project's Initiator – Vakalos Petros

General Director - Rassias Dionnysios

Piraeus

August 2010.

1. DESCRIPTION OF THE BUSINESS

The Project's Target – setting up a shipping company to carry cargoes and return of the financial resources invested and earning profits. To realise the project, two 12-15 years old Bulk Carriers 1 with carrying capacity of 5000 DWT each are planned to acquire, with 1,5 years time charter contract.

The schedule of the vessel acquisition and the beginning of its exploitation is given in the table I “Vessels purchased schedule” (*APPENDIX I “Financial plan”*) In this document the planned period of the shipping company's activity is 10 years.

1.1 GROWTH TRENDS IN THIS BUSINESS

Short Sea Shipping (SSS) is widely widespread in Europe, where in 2007 the share that it corresponded in the marine transports, in the EU of 27, reached the 61%, with small tendencies of increase. The proportion of bulk cargoes in SSS from and to the EU of 27 was roughly the 40% of total tonnage. In the region of Black Sea, Caspian and Azov Sea a lot of transports of bulk cargoes are trafficked in lots of the 3-5000 tons. Indicatively are presented the corresponding marine ways in APPENDIX III.

More specifically, EU aims primarily in the increase of transport cargoes via the marine/river ways, and also in the decongestion of motorways, with parallel reduction of pollutants emissions. In Europe the transports via internal aquatic roads represent only 5.6% (2007) of the total internal transport while the road transports are carried out the 76.5% of cargoes (MARITIME REVIEW 2009 page 117).

Russia possesses the second place of internal river ways network with 102.000 kilometers (2007), transporting 152 million tones of cargoes in 2007, with augmentative tendencies 9.5% per year, when Europe possesses the third relevant place where the 20 of the 27 member states having direct access. During 2007 in Europe, 500 million tons of cargoes were transported using that internal river network of 37.000 kilometers.

It should taken into account, that at the time period of economic crisis, more specifically in the beginnings of 2009 in based elements, (Appendix IV, Source Metal Experts), the freight remained in satisfactory levels, with the transported cargoes remained also to the same quantities.

In our days, Europe increases its efforts for an exit from the economic crisis, which tends to increase the products demand and inevitably to lead in the growth of particular market. The E.U financed program, MARCO POLO II (2007-2013) is expected to help drastically in the growth of relative branch the next years.

The company envisions an entry in the shipping market, with the European Short Sea Shipping looks more accessible, also from an economic and management aspect. Looking also at the present freight rates (Appendix IV, Source Metal Experts), they remain at low levels (all the plan's calculation have been made with the present rates), so every rise of those prices is positive for our plan.

1.2 WORK EXPERIENCE RELATED TO MY INTENDED BUSINESS

“Odysseus Arrow” Maritime Company consists by a Captain of commercial navy, experienced for twenty years in tankers, four of which as a Master and three years experienced in a ship management company. A commercial navy engineer with multiannual experience so much in the sea as in proportional places in shipping management companies, and an Air force pilot/officer, all of them graduated from the Msc Shipping Program of the University of Piraeus, as Shipping Management Experts.

Rassias Dionysios:

Captain of commercial navy, graduated from the Shipping Department of University Piraeus (Bsc), the Msc of Shipping Management Program (University Piraeus), teaching today as a professor in the Naval Academy of Ionian Islands.

Vakalos Petros:

Air force Pilot-Officer, graduated from the Air Force Academy, the Flight Safety and Operational Risk management school and the Msc of Shipping Management Program (University Piraeus).

Kotselis Lazarus:

Engineer of commercial navy, graduated from the National Technical University as a mechanical engineer and the Msc program of it, and also graduated from the Msc of Shipping Management Program (University Piraeus)

1.3 RESOURCE REQUIREMENTS

Communication/Telephones-Fax/Computers-Internet access:

Will be required the purchase of 2 PCs, one Server, a copy/printing machine, a telephone/FAX line, and office furniture's, total budget up to 3,500\$.

1.4 BUSINESS ORGANIZATION

Company's organization follows the Functional organization model and the relevant duties and competences are clarified by the Business chart and Operation Manual (APPENDIX II).

1.5 PROFESSIONAL CONSULTANTS

I feel it is important that my team of professional advisors be in place before I start in business. Here is a list of these professionals:

Lawyer Consultant: Lamnidis Thomas (Vice-president of KLC Law Firm)

Finance Consultant: Damianos Damianos (Businessman, Former Director of IFC in Poland)

1.6 BUSINESS LICENSE AND MANAGEMENT

Company's foundation, is based on Greek law 89/1967 for the Ship Management Companies, and will be realized legally, with the collaboration of the company's Lawyer Consultant. All related legal subjects (e.g. ships transactions) will be totally undertaken by the KLC LAW FIRM, with which also has befallen relative agreement.

Vessels evaluation, will be done by the company's technical managers (D. Rassias and L. Kotselis), who will inspect the bulk carriers and publish the evaluation report. If it is required by the bank/fund that it will grant the loan, will be realized the ship evaluation from an independent estimator of common consent.

Company's Management will be totally undertaken by "VSHIPS Management Company", a 20 years track history management company, covering all the needs of a maritime company (Manning, Insurance, P@I Clubs, Reports, ships records, etc).

“VSHIPS” is one of the most worldwide famous management companies, operating more than 1000 vessels today, succeeding economies of scale thus reducing our vessels OPEX, and gives us the opportunity to get a better management experience. All the details have been discussed and their professional team is ready to work in our plan right after our vessels acquisition. This makes our company ready as soon as financing and ship choice is completed.

1.7 SHIPBROKERS

We have already contacted many shipbrokers in the region of Piraeus, especially Mr. Pagonis Thomas the Vice-President of the Hellenic Ship Broker Union, who guided us to specific charterers of our concern. During these contacts we agreed initially to charter our ship, in a 1.5 years’ time charter contract for trading in the specific area. This agreement gives us the ability to earn standard and long term cash flows.

1.8 OFFICE LOCATION

“Odysseus Arrow” Company intends to install in the region of the Piraeus port, as well as it is closer in its shipping collaborators that reside in the region. For this aim will be required the hire of an office about 80 sq.m, that corresponds our needs.

It is calculated that for rent and functional expenses the cost will not exceed the 1250\$ monthly.

1.9 VESSEL'S CHARACTERISTICS

Vessel's type indented to be bought will have the following characteristics:

Type: Bulk Carrier (Geared)

Deadweight: 5000 dwt

Grain capacity: 6500 cbm

Operational Speed: 12 knots

Summer Draft: 5.0 meters (max 6.0)

Cargo Tanks: 2 Coated, served at least by one or two cranes

Daily Fuel Consumption: 6 MT MGO Main Engine and 0.5 MT MGO. For the port's consumption 0.8 MT/Day.

For the Vessel's final choice will be taken into account the details listed below:

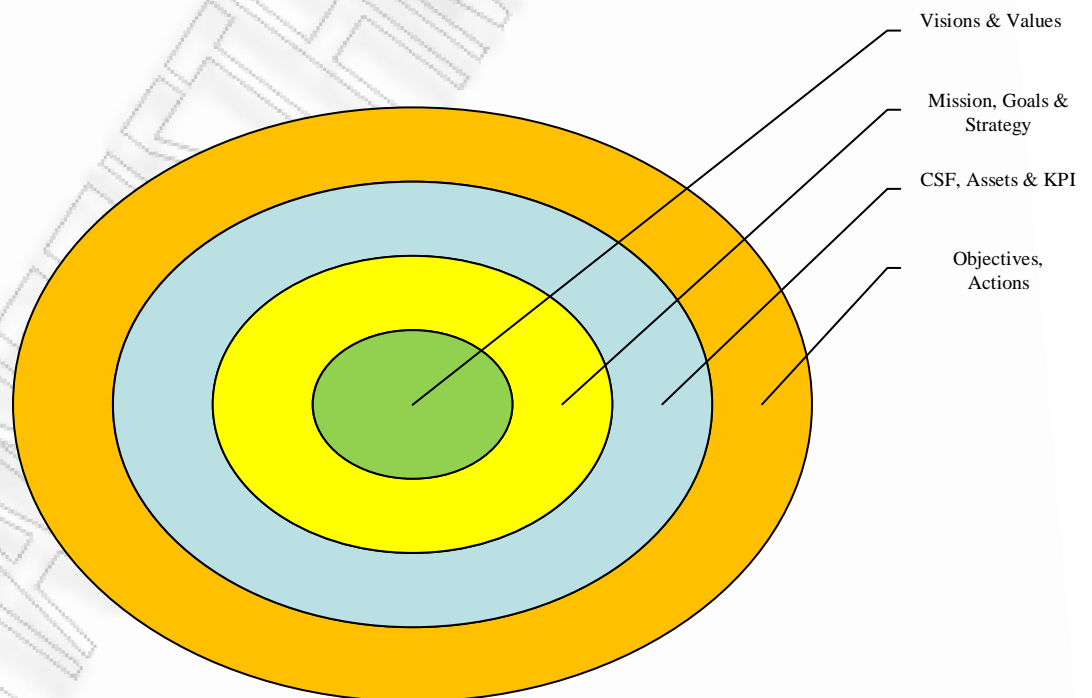
- Vessel's Draft should be smaller than 6.0 meters, that makes it accessible into the most ports especially the river ports where exist the most restrictions.
- The Ship should have one or two charging/discharging cranes, making it capable to operate in ports where there are no such facilities
- The selected Ship will have at least two holds so it can carry two different cargoes.
- Ship should be between 12-15 years old, so it will have at least 10years for commercial exploitation.
- Ship's general condition should be in a satisfactory level.

2. BUSINESS CONFIGURATION

In order to analyse the profile of the company we are going to use a business configuration. The scope of this part is to give information about the company, the future goals and how they are going to be achieved. The business configuration is going to be divided in four decision cycles.

Decision cycles

- i) XL decision cycle: Visions and Values
- ii) Large decision cycle: Mission, Goals and Strategy
- iii) Medium decision cycle: Critical Success Factors (CSF), Assets and Key Performance Indicators (KPI)
- iv) Small decision cycle: Objectives, Actions



2.1 XL DECISION CYCLE: VISIONS AND VALUES

The visions and the values of the company are fundamental elements. Both of them are in the extra large decision cycle of the business configuration and it is very difficult to change them during the operation of the company. The visions and values are fundamental cornerstones of a company's culture. Visions and values of Odysseus Arrow Maritime Company are:

- To become a reliable and competitive shipping company in the short sea shipping industry providing high quality services.
- Trust among employees
- Serve the needs of the clients
- Use the Japanese model of doing business “trust, respect and patience”

2.2 LARGE DECISION CYCLE: MISSION, GOALS AND STRATEGY

Mission is the destination of the company. Mission describes the target that the management team has to achieve. Mission of the company is to deliver world-class transportation using trained and committed professionals to achieve customer satisfaction ensuring safe and environmental excellence. The company has also to operate in a way friendly to the environment and obey the global rules of the protection of the environment. This is expected to be done absolutely and in a perfect way from the “V. SHIPS” management company.

Goals of the company must be a measurable and achievable target in a specific timing (ex. 2 years -5 years).

Goal of the company is to increase the CFD index by 20%.

CFD is cash flow to debt

CFD= CASH FLOW FROM THE OPERATION

TOTAL DEBT

CFD= NET INCOME +DEPRECIATION

TOTAL DEBT

This index is very important in finance. Due to statistics that have been done in this index it shows that companies that had negative this index faced the possibility of 92% of bankruptcy in the next 2 years. If this index is positive there is no such problem for the company. In our occasion we would try not only to have positive this index but also to increase it by 20%. The time planning for this goal is 4 years. (Current CFD =0.24)

Current CFD	0.24
CFD IN 4 YEARS	0.89

Strategies are statements that describe principle approaches and actions that are going to help the company to achieve the goals.

Strategies of Odysseus Arrow Mar.Co:

➤ Charter in a time charter so the company is going to have the ability to earn standard and long term cash flows.

➤ To buy after 4 years two more bulk carriers, chartering them in a time charter contract for trading in the same region, creating a small fleet of the specific type of vessels.

➤ The above two strategies are the core stones of the business plan of Odysseus Arrow Maritime Company. In order to achieve the goals there is going to be a business plan during this project divided in two sectors: finance, operation

2.3 MEDIUM DECISION CYCLE: CRITICAL SUCCESS FACTORS (CSF), ASSETS AND KEY PERFORMANCE INDICATORS (KPI)

Critical Success Factors (CSF) are number of areas in which results will ensure competitive performance of the company such as, totally and precise application of the budget program, as it was agreed with the management company and the relevant details of it. If we succeed in these we can understand that “things are going right”. This means that the company has a higher possibility to achieve the goals of the large decision cycle (mission, goals and strategies).

Assets are customers, capital, buildings, equipment etc. When we use the word asset we mean the levers the company can use in order to achieve her plans.

Assets of Odysseus Arrow

- i) Existing fleet
- ii) Head offices in Piraeus.

Key Performance Indicators (KPI)

KPI is one of the most important steps during the business configuration. Target of the KPI is the ability to measure all the above issues. KPI is important because it gives the opportunity to the company to understand how good the operation part is and also to use a feed-back in order to improve some of the issues that are weak.

KPIs of the company:

- i) Cost Performance Index (CPI)
- ii) Budgeted Cost of Work Performed

These two KPIs are going to help the company control and reduce the cost.

- iii) Schedule Variance (CV)

Schedule variance is a KPI that is going to measure the time planning of the company and it is helpful for the critical success factors and the goals of the company.

2.4 SMALL DECISION CYCLE: OBJECTIVES

2.4.1) *FINANCE*

- i) Identify the current financial condition of the economy
- ii) What are the events that occur the last years that had as a result the economic crisis?
- iii) Why the maritime industry is infected from the general economic crisis?
- iv) How does a shipping cycle occurs –operates?
- v) Financial tools-ways to evaluate the ship's purchase and ways to measure the profitability of it.

2.4.2) *LAW*

- i) The benefits of the Law 89/1967
- ii) Introduction to charter parties
- iii) The benefits of time charter party for shipping industry
- iv) The importance of Bill of Lading

2.4.3) SHIPBOARD OPERATIONS:

- i) Identify the intended routes and major points of interest
- ii) A detailed voyage plan
- iii) Procedures for loading and discharging product as well as while out at sea.

2.4.4.) INSURANCE:

- i) Process of vessels' evaluation and decision for the appropriate insurance company
- ii) Hull insurance
- iii) Protection and Indemnity (P&I clubs)
- iv) Other marine insurances

3. THE RESUME OF THE PROJECT

The project's target – setting up the work of a cargo transporting shipping company and the return of the means invested in acquiring vessels and receiving profits.

Two 12-15 years old 5000 DWT vessels are planned to be acquired for realizing the project within this year. The beginning of the exploitation of the first vessel is planned for January 2011 and the second's vessel in April 2011.

The cost of a 12-15 years old 5000 DWT carrying capacity vessel – 1,500 thousand USD.

Total investment – 3,114 thousand dollars. (Including the technical support and the working capital investments).

For the ship's good operational condition will be done periodically maintenances as follows:

- Technical maintenance every 2.5 years, calculated cost of 100,000USD for both ships and 130,000USD for the next years (the 8th and the last year) due to ships age. So the total cost comes up to 360,000 USD for the whole period of the ships exploitation.
- Special survey and dry-docking each 5 years, total cost 260,000 USD for both ships. This will be the total dry-docking cost for the 10 years exploitation because afterwards the ships are going to be sold.

The maintenance and dry-docking schedule with the relevant costs are depicted in *Appendix I Table 2 «Investment Plan»*.

In this document the planned period of working of a shipping company is 10 years. The Company will forward different cargoes from the ports of the Azov-Black Sea and Mediterranean Sea.

3.1 PLANNED FIGURES OF THE OPERATIONAL ACTIVITIES OF THE NEW COMPANY

The approximate total cargo turnover – 316 thousand tons a year for both vessels.

The daily profit minus the broker's commission (the Net-freight) for the first year (time charter) is 2,238 USD.

The income from the vessel exploitation is 3,045/925/1,404 thousand USD (coal/steel/grain) a year depending on the transported cargo (coal/steel/grain freight rates based on data of August 2010)

One vessel's income will be 4,500 USD a day, for 1.5 years time charter contract.

Earnings before interest, taxes, depreciation, and amortization (EBITDA)– 969 thousand USD the first year.

The company's net profit is 849 thousand USD the first year without loan interests.

The company's business profitability for the 10 years of exploitation comes up to 22.5 %, which is normal for shipping business.

To finance the project a loan of 3,114 thousand USD is planned to be raised to fund investments in vessel acquiring (3,114 thousand USD) and to invest in the working capitals of the Bulk carrier vessel (114 thousand USD.).

Loan conditions:

- Getting a loan – within the 1st year
- The loan re-payment period – 6 years
- The loan interest – 7 % annually;
- The interest accrument – annually from 1st year of the project during 6 years;

Loan schedule and interest calculation (amounts in USD)

Interest % =	7,0						
ballon =	-300000						
Indicator	Total	year1	year2	year3	year4	year5	year6
Borrowed capital:	3114000	3114000					
Interest paid for current period	-854192,2831	-217980	-190443,02	-160978,46	-129451,37	-95717,393	-59622,034
Payment for the principal of the loan	-2814000	-393385,38	-420922,36	-450386,92	-481914,01	-515647,99	-551743,35
interest & payment for the principal	-3668192,283	-611365,38	-611365,38	-611365,38	-611365,38	-611365,38	-611365,38
interest & payment for the principal +ballon	-3968192,283	-611365,38	-611365,38	-611365,38	-611365,38	-611365,38	-911365,38
borrowed capital /open balance by beg.of the period/		-3356826,9	-2745461,5	-2134096,1	-1522730,8	-911365,38	0

Planned figures of the investment evaluation

Payback period (PP) – 6 years

Internal rate of Return (IRR) – 20.8 %

Net Present Value (NPV) - 7,463 thousand USD

3.2 THE ATTRACTIVENESS OF INVESTING IN SHIPPING ASSETS

- i) The business's high profitability now and in mid-term perspective.
- ii) The absence of political risks in countries
- iii) The possibility to manage the assets from anywhere in the world
- iv) Diversified industry risks (the independence from the conjunctures in particular raw material markets due to the possibility of using the shipping assets practically for all types of dry cargoes).
- v) The absence of taxation
- vi) The high liquidity of shipping assets (the possibility to sell vessels quickly at the market prices).

4. SWOT-ANALYSIS

Strengths	Weaknesses
Acceptable profitability of investments (even without possible further increase of rates)	Bunker prices making a considerable part of variable costs depends directly on world oil prices
Diversification i.e. possibility to employ the vessel on all types of dry bulk cargoes, on any destinations worldwide	Likely increase of oil (Bunkers) above the price of 750 USD/[MT] influences the profitability of company, if is going to exploit in the spot market.
Absence of legal and political risks	Difficulty in funding especially from Hellenic Banks
Company's executives are young persons with vision, experienced in shipping, holders of Msc in Shipping	
The collaboration with valid, recognized and achieved collaborators in shipping industry strengthens the reliability and the company's objectives.	
Company's size, makes feasible the reduction of functional cost in minimal possible.	
Short Sea Shipping in Europe, Mediterranean and Azov-Black Sea is expected to demonstrate appreciable capacity the next years, under the E.U. protection, which constitutes powerful and positive element for the viability and growth of the company.	

Opportunities	Threats
<p>Current low freight rates and trends of increasing, over the last few months and forecasts of further increase due to tonnage deficit in the region</p>	<p>As a result of freight market increase , a considerable investment in shipping have to be noted and the new building orders on all types of vessels including bulkers of handy size may keep the freights at low levels</p>
<p>The expected growth of world economy and foreign trade in general and growth of import/export figures in Russia in particular, as well as other countries</p>	<p>Necessity to keep the current level of export- import activities in the region which also depends on current oil prices.</p>
<p>The current deficit of coastal tonnage with restricted draft up to 4 meters in Azov and Black sea basin which in foreseen future will hardly be compensated</p>	<p>An entry of many companies in SSS, exploiting the occasions that are given, fatal will intensify the competition with proportional results rendering imposed the reevaluation and hierarchy of our objectives.</p>
<p>The occasions that are presented are many, mainly the supporting drawing MARCO POLO II from the EU, that forecasts the intensifying of transported charges via this roads. The sensitivity of EU in environmental subjects as the reduction of gases emissions encourages and supports shipping transports, which are also friendliest to the environment than road transport. Thus it is expected to improve the infrastructure in the EU the following years, to profit and aid SSS.</p>	<p>Potential weakness of financing in next stages, with the recession in the world economy to be maintained in long time, likely deprive from the company the necessary economic resources and the desirable surge of pecuniary flows.</p>

5. THE INVESTMENT PLAN

A calculation of the investments is in *table 2 «The Investment Plan» (Appendix I «The Financial Plan»)*.

The cost of a project for two vessels of 5000 carrying capacity DWT each – 3000 thousand USD.

Investments in purchasing two vessels are 3000 thousand USD within a year.

The sum mentioned includes all the corresponding payments connected with the vessel's purchase and is enough to start to exploiting them.

To keep vessel in working condition planned technical maintenance services are essential that are regulated by the ship exploitation rules.

The schedule of technical maintenance (is ruled by the requirements of exploitation order) and costs involved are as follows:

- One technical maintenance in 5 years for both ships - 260thousand USD;
- Last technical maintenance in 10 years when the ship is planned to be sold.

Total investments in the vessel's technical maintenance will be – 620 thousand USD (throughout all planned period).

To ensure the vessels performance during the first days a stock of 114 thousand USD to cover the cost of running for 30 days is planned.

Thus the investments in the working capital will be 114 thousand USD.

Investments all 3114thousand USD.

The first year of investment – 3000 investments in vessels purchase and investments in working capital 114 thousand USD).

5.1 CARGO TURNOVER / EARNINGS AND EXPENSES

A cargo turnover calculation of the company, earnings and expenses from carrying cargo voyages, is given in *table 3 « Cargo turnover / earnings and expenses » (Appendix I «Financial Plan»)*.

5.1.1 CARGO TURNOVER

The planned company will be carrying different cargoes. The list of which is given in the department “Bulker cargo routes of Azov-Black Sea Basin”. In this document a calculation is given based on three types of cargoes that have the largest share in the export through the ports of Azov-Black Sea Basin (APPENDIX I Table 3 “Cargo Turnover”).

A vessel’s carrying capacity is determined by the type of cargo in question.

A voyage’s duration is regarded as the time in the voyage plus the time for loading/discharging that, in their turn, depend on the type of the cargo (here also the time lost on repairs and technical maintenance is included).

The total cargo turnover will be approximately (when adding different types of cargoes) 316 thousand tons a year for two vessels.

5.1.2 EARNINGS FROM CARGO TURNOVER

The current rates have been used to calculate the earnings from cargo shipping..

Earnings for one year (freight) – 1680 thousand USD minus 2.5% of the broker’s commission (Net-freight) - 1638 thousand USD a year (on the example of coal freight).

One voyage earnings at it will be 80 thousand USD (on the example of coal freight).

5.2 VARIABLE COSTS ON VOYAGES (VOYAGE COSTS)

Variable costs on a voyage include:

- i) Fuel costs (taking into account the time in voyage with cargo to and in back ballast from)
- ii) Post dues (taking into account payments at loading and discharging ports as well as channel dues)

5.3 OPERATIONAL ACTIVITY

A calculation of the net profit from the operational activity is presented in *table 5 «Cargo turnover / earnings and expenses» (Appendix 1 «The Financial Plan»)*.

5.4 PROFITS FROM EXPLOITING VESSELS

Profits from exploiting vessels (the time-charter equivalent) are determined as earnings (Net-freight) minus variable costs for a voyage.

The profits mentioned are the marginal profit of a shipping company that is directed to cover fixed costs (OPEX).

Profits from exploiting the vessels will be – 631 thousand USD for the first year and becoming 1233 thousand USD from the 7th until the last year.

At that, one voyage's profits will be 80 thousand USD (on the example of coal freight)

One day's profit will be 2238 USD during the time charter period.

5.5 OPERATIONAL EXPENSES

(OPEX) include:

- Crew wages (47 %);
- Expenses on the crew's work, including victuals and fresh water (12 %);
- Communication's expenses (1 %);
- Expenses on technical maintenance and repairs (5 %)
- Insurance payments (13 %);
- Expenses on current repair works and technical services (7 %);
- Administrative and other expenses (15%).

The total amount of the expenses mentioned – 2350 USD per day

6. THE FINANCIAL PLAN

The company's financial plan is presented in *table 6 «Financial plan» (Appendix I «Financial plan»)*.

Investment activity cash flow include investments in buying vessel, its technical maintenance, and in working capital

All investments - 3114 thousand USD,

Investment activity cash flow includes net profit and amortization and is corrected by the sum of interest paid for the loan that has lessened the net profit.

Financial activity cash includes getting and paying back loans and interest paid off.

A loan of 3114 thousand USD is being planned to receive for financing the project to invest in buying the vessels (3000 thousand USD) and to invest in working capitals (114 thousand USD).

A plan of financing is presented in *table 6 «Financial plan and evaluation» (Appendix I «The Financial Plan»)*.

6.1 THE INVESTMENT EVALUATION

The investment evaluation figures are presented in *table 6 «Financial plan and evaluation» (Appendix I «The Financial Plan»)*.

The project's current cash flow in the planned period (the result of the cash flows from investment and operational activities) reflects the balance of financial means by the end of the periods within the 10 forecast years.

Thus, the summary cash flow (FCF) – 8324 thousand USD

Internal rate of Return (IRR) – 20.8 %

The Internal rate of Return shows the maximal cost of the borrowed means at which a projects remains with a positive total cash flow.

Net Present Value (NPV) - 7463,44 thousand USD

7. THE SEA FREIGHT CHARACTERISTICS OF FORWARDING SERVICES THROUGH THE SHORT SEA SHIPPING IN MEDITERRANEAN, AZOV-BLACK SEA AND INLAND WATERWAYS

7.1 THE CHARACTERISTICS OF THE SEA TRANSPORT INDUSTRY IN GENERAL

According to an IMO (International maritime organization) review 90 per cents of the world export and cargo turnover are more or less related with the sea or river forwarding. The situation is not being forecast to change in the visible future. According to The Norwegian Trade Council the share of the transport cost in the price of the average exported good on the CIF condition is about 20%, with the sea share being no less than 12%.

What follows are aggregate figures in accordance with the latest open review by the UNCTAD - Review of Maritime Transport (A UN Commission on Trade and Development) «on the development of sea transport for 2009»

Development of international seaborne trade, selected years

(millions of tons loaded)

Year	Oil	Main Bulks a	Other dry cargo	Total (all cargoes)
1970	1442	448	676	2566
1980	1871	796	1037	3704
1990	1755	968	1285	4008
2000	2163	1288	2533	5984
2006	2648	1888	3009	7545

2007	2705	2013	3164	7882
2008	2749	2097	3322	8168

Source: Estimated by the UNCTAD secretariat, on the basis of data supplied by reporting countries, ports and specialized sources. Data have been updated to the most recent available.

a: Iron ore, grain, coal, bauxite/alumina and phosphate

b: Preliminary

7.2 THE CHARACTERISTICS OF THE SEA TRANSPORT INDUSTRY OF THE AZOV-BLACK SEA. THE BULKER CARGO ROUTES OF THE AZOV-BLACK SEA

Historically the main export cargoes (except the liquid ones) going through Ukrainian and Russian ports are:

- Metal products and sheets to main directions (Italadriatk, Italy West coast, Marmara Turkey, Turk-black Sea, Greece);
- Timber (Syria, Egypt, Marmara Turkey, Black Sea Turkey, Mediterranean Sea Turkey),
- Coal (Turk-black Sea. Marmara Turkey, Italy, East Mediterranean);
- Metal scrap (Italadriatk, Marmara Turkey, Back Sea Turkey, Nemrut);
- Grain cargoes (all directions as well as Israel);

Import through Black Sea and Azov ports of Ukraine and Russia is also well-developed as well as “en route”. Import cargo routes are mainly presented by the general cargoes in containers.

7.3 THE HISTORIC DYNAMICS IN THE FREIGHT RATES IN THE BULKER MARKET

1995-2000 fluctuations in the bulker market freight have been influenced in the Azov-Black Sea Basin mainly by the seasonal factors, vessel fuel price fluctuations as well as that of export sales of concrete export cargoes (mainly grain and metal scrap).

The rates are traditionally higher in winter due to higher disbursement accounts for ice breaking and the general seasonal increase in the shipowner's expenses from October-March (in average no more than 2-3 USD, maximum 5 USD) to get back to the original figures in April-May.

What on APPENDIX IV are the representatively freight rates for some of the most general cargoes in the region (source METAL EXPERTS). The rates are given on the example of metal products and on the base of one port of loading (Black or Azov Sea) and one port of re-loading (Italadriatk) ¹, i.e. one of the most remote directions in the region .

Yet, in early 2010 the freight rates in the bulker market in the world in general and in the Azov-Black Sea in particular have begun going up. This rise goes on till the present time and, according to pundits, will go on in the mid-term perspective (within 3-4 years).

The main factors of the rise in freight rates:

- The general trend in rising of demand on raw materials;
- In particular, the continued rise in demand on raw materials by China;
- Rises in prices and export volumes from Russia of metal products and scrap;
- Rise on coal export volumes to Europe;
- A stable rise in the agricultural production in Russian and Kazakhstan and, subsequently, a rise in grain export from these countries.

The general level of freight rates in the Azov-Black Sea due to a specific trade structure (the dominance of the middle and little trader companies in raw material bulker cargoes) is mainly determined by the demand on "river-sea" type vessels up to 5000 DWT. Practically all those vessels were built in the Soviet Union in the *period* of the late 70's till early 80s (at the peak of tonnage building). In 90's and till now the cargo tonnage is not being increased. At that the average period of planned depreciation of the type of the vessels mentioned is 22-25 years.

Consequently, from the beginning of 90s the deficit in tonnage cargoes in bulker shipping in the Black Sea and Mediterranean has coincided with the general increase in the bulker market. That caused an unprecedented rise in freight rates in the region.

Most of the grain, timber, coal, metal and scrap traders faced the problem of exporting raw materials in spite of favourable price conjuncture on the corresponding world markets. Many of the traders, especially in timber and scrap, went on to build their own fleets to ensure an uninterrupted exporting activity in late 90s.

7.3.1 SPOT BULKER MARKET FREIGHT RATES

What follows are spot bulker market freight rates on directions and different types of cargoes. (APPENDIX IV)

Rates as of today (\$)

Direction	Metal	Metal scrap (SF 52)	Timber	Coal (SF 48-52)	Wheat (48 SF)
Turkblack Sea	N/a	27	17	15 (12/14)	22
Marmara	24	30	17	17 (13/14)	23
Nemrut	27	34	19	N/a	25
EC GREECE	27	N/a	18	N/a	24
Italadriatik (Egypt)*	32	38	22,5	N/a	27/28

(source METAL EXPERTS)

7.3.2 FLEET

The types of cargo routes in the Azov-Black Sea Basin mentioned above are mainly carried by vessels with carrying facilities up to 25000 DWT. This has to do with limits on draft in most of the Russian, Ukrainian, Turkish, and Greece ports, as well as with traditional sizes of export lots and the presence of a large number of small and middle-sized trader companies. Conditionally these vessels can be divided into two main groups:

1. River-Sea type vessels with carrying capacities from 1500 to 5000 DWT with restricting draft till 4 metres and class from MSP till II SP. The deficit in vessels of this

type in the recent 4-5 years has reached a critical point and in the visible future this situation will only worsen.

2. Unlimited navigation type vessels with carrying capacities from 6000 to 15000 DWT, mainly owned by small Greek, Turkish, Bulgarian, and Ukrainian ship-owners working from 2 to 10-15 units of fleet. Russian ship-owners in this region practically have no similar tonnage in considerable numbers.

7.4 MOTORWAYS OF THE SEA, EUROPEAN INLAND WATERWAYS AND SHORT SEA SHIPPING

7.4.1 MOTORWAYS OF THE SEA

Motorways of the Sea form an integral part of the European transport infrastructure network. This realization led the European Union to incorporate Motorways of the Sea expressly in the 2004 Community Guidelines for the development of the Trans European transport network. Motorways of the Sea have two clearly defined objectives: concentration of freight flows on sea-based logistical routes to reduce road congestion and/or improve access to peripheral and island regions and states. The objectives of improving transport logistics and of cohesion are clear. The first objective has only gained in importance with endemic congestion now affecting nodes in every single Member State. The overriding climate goal of the European Union to achieve 20% less greenhouse gas emissions and the subsidiary goal of saving 20% of energy consumption by 2020 make the achievement of the first objective of the Motorways of the Sea more urgent.

The importance of Motorways of the Sea and the need to realize them needs no further explanation. However, the concept of Motorways of the Sea suffers from a lack of clarity among the players in the sector. This could explain in part why the results with their implementation so far are at best mitigated. For this reason the Commission entrusted the coordination of the project to a European coordinator. The results aim to describe the main factors that influence the sea leg of the transport chain in the European Union and its neighboring countries. It tries to set out the likely developments affecting this part of the EU transport chain. It equally attempts at providing clarity in the concept of Motorways of the Sea. Finally, the European coordinator addresses a number of key recommendations to the European Commission on the manner in which

to ensure optimal development of Motorways of the Sea in the existing EU and national frameworks.

7.4.2 LUBRICATION OF THE LOGISTICS CHAIN

Transporters will only choose a sea borne leg in their logistics chain if the maritime option is just as good as or better than the other modes. Competing with road is a tall order under the current circumstances, as road has the advantages of being flexible, at low cost compared to other modes and enabling door-to-door delivery. However, its environmental performance and endemic congestion on parts of European roads start to erode its competitive advantage.

Maritime transport intra EU and the other modes will only be really competitive if they are more environmentally friendly, quicker, more reliable, economically more attractive or safer. Apart from the cost and the environmental factors, the others do not depend on the sea leg of the transport chain. The interlocutors in the sector have assured the coordinator that 'the sea' is not the problem. The problems arise at the so-called 'breaking points' of the cargo: in ports, with documentation treatment, in forwarding cargo on either by road, rail or inland waterway or by pipeline.

Fundamental improvements in the efficiency and availability of other modes (maritime, inland waterways, railways, pipelines) are necessary to speed up the change from an unbalance of 75% road transport in the EU to a more balanced distribution between modes. A number of conditions have to be met to enable this change, such as equitable infrastructure charging, incorporation of the 'polluter pays' principle, incentives to choose other modes and regulatory changes. One of the most pressing changes necessary to enable a shift from road to other modes seems to be a change in the mindset of all players in the transport logistics chain – railway companies, inland waterway transporters, road hauliers, forwarders, port management, shipping companies, Member States' different authorities and so forth – the realization that there is no other option for future logistics, but the option for co-modality.

Co-modality necessitates a transparent, no frills, easy to access and fully reliable informatics system. This e-system gathers and relays information from all operators in the logistics chain, such as customs, terminals, barge operators, rail operators, road hauliers, shippers, depots, inspection authorities, forwarders, insurance agents and port authority. Conditions for enrolling in the e-system should enable all logistics operators

to participate. Such systems already exist in some places, these should be generalized and improved upon and enable inclusion of options of tracking and tracing of cargo.

7.4.3 EFFICIENCY INDICATORS– BENCHMARKING

As far as maritime is concerned, the relative attractiveness of ports is a crucial part in the decision of transporters to choose for a sea borne leg. This goes both for the efficiency of ports and ports services themselves and for the fluidity of the hinterland connections. Not all shippers are confronted with the same problems; oil tankers, ro-ro vessels, ro-pax vessels, container vessels, general cargo and bulk carriers all have their specific characteristics warranting some form of special treatment. However, the problems they all have in common concern port efficiency and hinterland connections. Objective and transparent efficiency indicators for ports and for the hinterland connections have to be used in order to enable rational choices of freight destination. These indicators or benchmarks are equally necessary for the decision to give a Motorway of the Sea quality label or 'blue flag' to a shipping line or a port. A whole range of benchmarking instruments already exists, for instance ISO, EFQM. Some quick thought should be given to a hierarchy of benchmarking instruments and choosing the most objective and practicable among these, at least for part of the indicators. It should be revised at regular intervals in order for developments in the market to be taken into account. Concerning efficiency of ports and ports' services themselves, they will range from turnaround time of ships, electronic treatment of port approach and further handling, customs' treatment, safety and security in ports, 'gate to gate' time, Teu/ha, Teu/meter of quay length, revenues/ha, costs/ha, existence of 'harbor master' figure, organization of terminal operation/management, ease of procedures concerning pier/terminal expansion, existence of concessions for terminals, degree of independence of port management from the state (ownership structure), waiting times in port, distinction between EU and non EU cargo, flexible charging system - distinction in harbor charges between deep sea vessels and ro-ro and other smaller vessels, possibilities of tracking and tracing cargo.

Special emphasis should be placed in this respect on the degree of independence of ports and whether or not parts of ports operations have been privatized. Privatized management and operation of terminals and different port services, have a demonstrable positive effect on efficiency. This allows maritime to better compete with road

transport. All industry players in the sector agree that concessions in ports should be stimulated as it is the best tool to increase productivity. The right balance between privatization, safeguarding of fair competition and safeguarding of public interests, needs however to be fully ensured by the Member States in the interest of the long term economic and environmental interests of the European Union.

For Motorways of the Sea special attention should be given to the port's policy regarding vessels for short sea shipping serving the needs of Motorways of the Sea like ro-ro, ro-pax and feeding vessels. Ports always prioritize deep sea vessels over short sea vessels. For feeding activities, short sea vessels or barges sometimes need to maneuver beside a deep sea vessel for two, three or more times, as deep sea vessels will always get priority for docking, space being at a premium. For this reason it is important to include in the indicators determining port's eligibility for a Motorways of the Sea quality label indicators on the policy of ports in relation to short sea activities. For instance: do ports reserve dedicated (parts of) quays for Motorways of the Sea traffic, do they have dedicated terminals or space for short sea activities, is there a distinction in harbor duties between deep sea and other vessels.

A last crucial indicator for Motorways of the Sea is the environmental performance of the vessels that are being deployed for its service. Allowances have to be made for the start-up time of a line, as no shipper will use its newest ships for a line that is just being developed. However, minimum criteria should be met also in the start-up time. Depending on the commercial success of the line, and therefore on the question whether a line retains its Motorways of the Sea status after the start-up period, better environmental performance should be guaranteed.

The Port of Rotterdam traditionally gives out concessions for 25 to 30 years. Its concession policy changed radically over the last years. Now future concessionaires have to live up to commitments they make, not only in terms productivity, but equally in modal shift percentages to be attained. The Port has integrated a "bonus/malus" system in its concession activities concerning modal shift – if a concessionaire improves on its stated modal shift goals it gets a reduction on the price, if it undershoots its targets it has to pay extra. This example should be replicated throughout the EU.

Regarding hinterland connections such indicators will vary from travel time to main destination areas, availability of railway slots, existence of dedicated freight corridors, and hierarchy of connections (road, railways and inland waterways), connection to and location of logistics platforms, exploitation and openness to third

parties of logistics platforms. Sensitive commercial information will not be made available through such a benchmarking exercise. The goal is to arrive at an objective picture of ports' performance and hinterland connections. Sensitive cost/revenues information will always be aggregated and used to arrive at certain orders of magnitude in the comparison between ports. Benchmarking is a moving target and should thus be a dynamic exercise. After a first impulse at EU level for benchmarking for the purposes of Motorways of the Sea, benchmarking should be completely handed over to the appropriate independent benchmarking authorities.

7.4.4 RELATIVE ATTRACTIVENESS OF PORTS

With the coarsest of generalizations, and of course plenty of individual exceptions, a difference between the North and South of Europe in port and hinterland efficiency exists, according to all interlocutors. Port management and port services are generally found to be more efficient and reliable in the North than in the South. The degrees of privatization and proneness to labor unrest also differ between North and South. Whereas all European ports need to improve efficiency and need better hinterland connections, according to all interlocutors the coordinator has met, the situation is particularly acute in Southern Europe. There is also a big difference between big and secondary ports. Most of the growth and development perspectives are now at secondary ports, since the big ports suffer from congestion in relative terms and thus from loss of efficiency.

Member States in the south with plenty of development opportunities should fully exploit this competitive advantage for their secondary ports and equally improve the position of their big ports, by rendering port services and hinterland connections more efficient. The better port efficiency and better hinterland connections in the North of continental Europe, especially good road infrastructure, absence of restrictions to use roads during parts of the week, good railway freight services and efficient use of inland waterways for shipping freight from roughly Antwerp, Rotterdam, Hamburg to final destinations, eternize the lopsided freight movements from the North to Central and South of Europe. For example, cargo from China often sails through Suez, the Mediterranean and the Atlantic to be transported from North European ports by inland transport to final destination in Central and Eastern Europe, Northern Italy and Turkey. This is now the best and quickest way of organizing transport in Europe; however,

looking at the map of the world it does not make a lot of sense. In the Mediterranean there is at least place for four big (transshipment) ports –Piraeus/Thessaloniki, a cluster of ports in the North Adriatic (Trieste, Koper, Rijeka, Monfalcone and Venice), Genoa/Marseille and a Spanish group of ports (Barcelona, Valencia Algeciras). Also in the South of Europe, the port of Sines can be developed into transshipment port. The ports of Goya Tauro and Marsaxlokk already mainly serve as transshipment ports. However in general, such big efficient ports do not yet exist in the Mediterranean. Enabling the development of such efficient ports has the advantage of avoiding a five day delay of ships having to sail through the Mediterranean to Northern European ports, with the ensuing loss of 5 days worth of bunker oil and the negative environmental and economic consequences.

European ports lagging behind in efficiency will only realize the opportunities the current climate offers them, if the Member States and the sector players concerned make haste with the realization of better hinterland connections and with more efficient management of (operations in) ports.

7.4.5 COOPERATION BETWEEN PORTS

Just as important is the realization that ports will have to cooperate on a number of issues, as they only stand to gain from cooperation. This is especially true for cooperation on infrastructure (connections to hinterland, to logistics platforms and choice of location of logistic platforms) and safety and security. It is too expensive for each port to develop its own hinterland connections, railway connections being a case in point. Cooperation on infrastructure and safety and security issues does not imply specialization of ports. Competition between ports is of the essence, the market will decide where to direct what kind of cargo.

However, given the relentless increase in the size of ships, cooperation and some form of specialization will naturally develop. Some ports have natural draught of 18 meters, some ports can increase draught at rather limited costs, and other ports can only accommodate smaller vessels without having to engage in expensive infrastructural works. For other ports deciding upon increasing draught is only interesting if there are very convincing economic reasons for it, like increasing draught in Kavala or Alexandroupolis to accommodate bigger oil tankers.

7.4.6 INFRASTRUCTURE CHARGING

Equitable infrastructure charging is a priority. Equitable infrastructure charging and internalization of external costs is a precondition for arriving at a European logistics chain that is economically sensible and environmentally responsible. The current infrastructure charging gives road transport a competitive advantage, of which the further logistics chain and the environment bear the negative consequences. In some Member States this is more obvious than in others. In the absence of an equitable infrastructure charging system, other measures to enable a more balanced European transport system are necessary. These range from incentives to use other modes than road to more regulatory measures, such as interdictions to transport certain types of goods by road or to restrict driving hours on certain roads. Innovative thinking on the involvement of concessionaires of motorways in promoting modal shift would help, as would optimum use of the possibilities created under the Euro-vignette Directive, currently under revision.

As example on how governments can incite greening of transport, the Slovenian government has recently reached an agreement with the truckers' associations on a package of tax facilities to speed up the phasing in of Euro V and VI trucks. Slovenia will also introduce a German style GPS guided tolling system, which will make equitable infrastructure charging easier to implement.

7.4.7 ARTICULATION OF MOTORWAYS OF THE SEA WITH OTHER MODES

Apart from the fact that all players in all transport modes need to be flexible and active in accommodating co-modal transport logistics as it is the only possible way forward for EU transport. Some further findings on the different modes are added, gathered in the last six months.

7.5 RAILWAYS

In large parts of Europe, rail keeps losing ground to other modes, especially road. Rail is losing out on major volumes of cargo for a whole host of different reasons, ranging from lack of investments and lack of flexibility to practices that amount to

active discouragement of considering the railway option. In addition, nearly everywhere in Europe passenger traffic is seen as a priority, both because of understandable public service reasons and in many Member States also because passenger traffic under the current circumstances is not a loss making activity, whereas cargo is. This picture cannot be generalized, even within Member States situations sometimes differ from region to region.

Freight forwarders and managers of logistics chains seek the maximum amount of flexibility in the slots they need to book to satisfy their clients. Railway companies, confronted with high fixed costs, seek commitments from their clients and need to be able to programme train movements with months in advance. These two positions are not easy to bring together. Only the development of an integrated logistics chain in Europe will gradually marry the need for flexibility of transporters with the need for security of revenues from the rail infrastructure managers. Here again full informatics treatment and timely information of the involved players is of the essence.

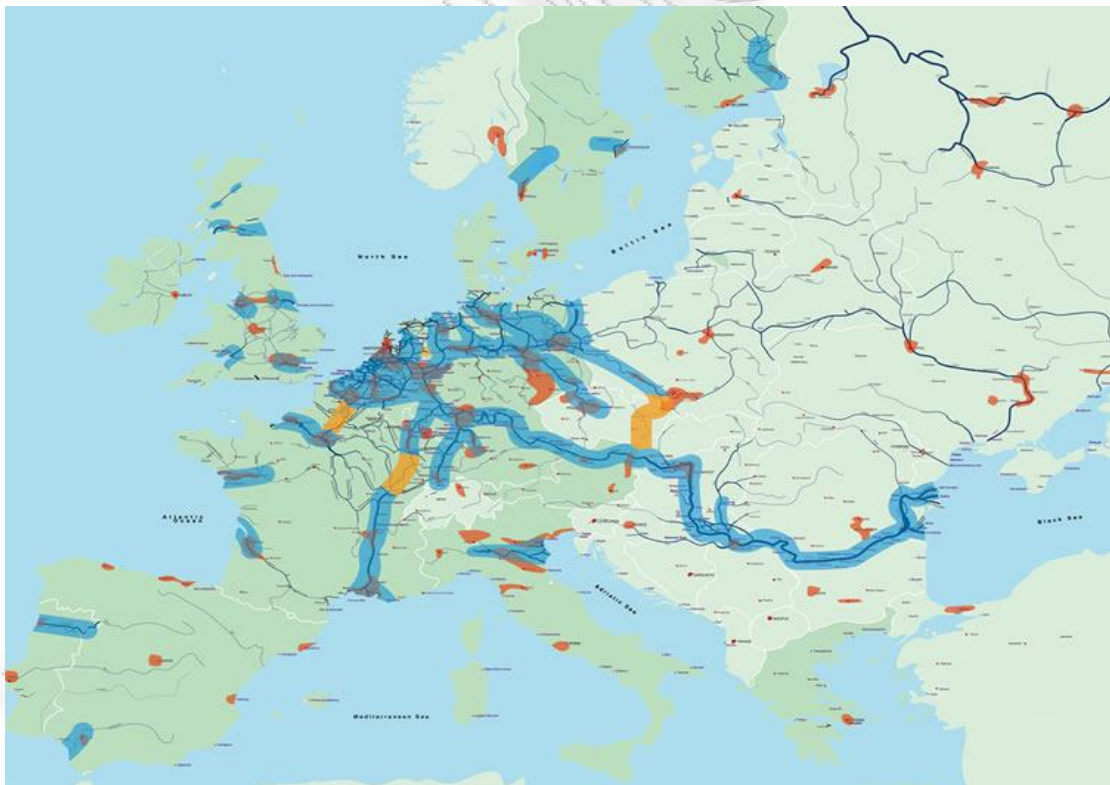
An example from Friuli Venezia Giulia may illustrate how active involvement of the Region, the port authority, the railways, shipping lines and other transporters can create an intelligent way of organising traffic; in this case traffic from Turkey to Trieste to Central Europe and back. The different transporters have set up shipping lines from Turkish ports to Trieste using ro-ro vessels. After loading their trucks, the truckers fly to Trieste in time to meet their trucks at the vessel and charge them on board a block train, where the truckers have a dedicated carriage. The block train arrives at Salzburg and the cargo moves on either by rail or by road to its final destination. The Region confronted with endemic congestion and insecurity on its roads decided to fund 30% of the costs for this service. The benefits for the region are the development of Trieste port, benefits to the fragile environment and less insecurity on its roads. The benefits for the truckers are better working conditions.

7.6 INLAND WATERWAYS

Apart from the fact that all interlocutors stressed the need to quickly improve the situation on priority projects Seine-Schelde and the Danube, the coordinator was told that much better use can be made of inland waterways. Main conditions are up scaling of the sector, increase in the size of barges and modernization of the logistics system

that gets cargo from deep sea vessels into barges and to final destination. This is linked to general computerization of the logistics chain in Europe.

The Port of Rotterdam, where 40% of arriving cargo is transported further to destinations in the Netherlands and Europe by inland waterways, claims that inland waterway transport could be seven times more effective than it currently is. For the development of the Western Balkans and transport possibilities from and to the Black Sea and Central Europe, the navigability of some parts along the river Danube and the Sava River need addressing. The environmental sensitivities concerning works on some stretches of inland waterways, for instance on the Danube, mean that some improvements can be made quicker than others.



(E.U Inland Waterways map)

7.7 ROAD TRANSPORT

Road transport is the competition for short sea shipping and for most other modes. As stated under the previous chapter, competing with road is a tall order. It makes short sea shipping into a sector with margins that are just as low as those in road transport. Roads' competitive advantage is starting to fray at the edges, because of its bad environmental performance and endemic congestion on parts of European roads. The competitive advantage of road has increased over the last years by the last two enlargements of the European Union when qualified and cheaper labour has been added to the trucking personnel pool. Even though this is a transitional advantage, it is a reality for the other modes and further eats away at their margins.

Whereas some ports still need dedicated exits from motorways, or better road access in general, the coordinator does not believe there is place for European co-funding for such projects, apart from the ones possibly already earmarked for co-financing under the new Operational Programmes for 2007-2013. Where support is warranted for the road sector, it is for better informatics treatment of the whole logistics chain, including the road leg as described above.

7.8 OIL PIPELINES

Consideration must be given to pipeline infrastructure. Transporting oil by road, where this is not necessary, unnecessarily adds to pollution and insecurity on roads. Pipeline infrastructure should be able to accommodate Europe's demand for oil to the maximum possible, avoiding pollution and congestion by road transport.

7.9 ENSURING FAIR COMPETITION

Some parts of the sector and some Member States are rather wary of the competition distorting effects of choosing a shipping line as Motorway of the Sea, or choosing a port as Head of a Motorway of the Sea. This is a risk that is not imaginary and this consequence of the Motorways of the Sea deployment should be avoided.

It is not more than fair, however, to realize that this will always be somewhat difficult. No market functions in a vacuum and its functioning is to a lesser or greater extent determined by conditions that were or are created by some form of intervention

or another. Roads have been constructed, ports and railways built without a second thought being given to fair competition.

The European Union seeks to prevent or combat any distortion of competition. This does not mean that under duly justified circumstances and without causing undue distortion of the internal market, Member States can choose to provide funding for vessels or for transport services or for port development, providing the State Aid rules are complied with. To err on the side of caution, the European coordinator has gradually come to believe that Motorway of the Sea status and TEN-T or Marco Polo funds should possibly not be coupled.

7.10 SOCIAL ASPECTS

Maritime transport in the European Union can only keep growing, or in some cases start growing again, when the right social framework conditions are in place. The importance of constructive social dialogue cannot be overestimated in this respect. Some flexibility is necessary to ensure the interests of both workers and employers; their interests will only be fully understood and room will be made for accommodating them if constructive and open social dialogue is possible at all levels.

To start with the employers: there are some very good examples of shippers and other employers in the maritime trade that are able to attract and keep good personnel, because of the good primary and secondary working conditions they offer. Among the secondary working conditions one can cite: growth perspectives, including different career choices possible within the same company or same sector, taking into account the fact that for a number of people in a certain age group the combination of family life and life at sea is impossible, continuous training possibilities for personnel, specialization possibilities, possibility to find a job on shore after a career at sea and possibility to go back to sea after a stint on shore. Where possible, these practices should be emulated by other employers.

Seafaring careers are not very appealing to job seekers at this moment. A serious recruitment problem therefore exists in many parts of the EU. Good pay is the only way to attract high quality seafaring personnel. High quality personnel are the best guarantee for efficiency, safety and security of maritime transport. The EU fleet will never become a cheap flag fleet, nor can it make a distinction in salary on board for similar jobs based on EU or non EU nationality, as this endangers social cohesion on board, and

with that efficiency and security of operations. The maximum use has to be made of the different possibilities that exist under, for instance State Aid regimes, where seafaring personnel can under certain conditions be exonerated from income tax.

Equally on the side of employees some show of flexibility and solidarity with future colleagues might be necessary. This holds especially for employees in monopoly services, where these exist, such as crane drivers, dockers, pilots, personnel operating locks. If EU shipping with its respect for working conditions both at sea and at land is to keep competing in the future, some changes are necessary. These might be painful, but losing employment to employees from third countries is even more so.

7.11 TRAINING

The importance of training, apart from training facilitated by employers, should also be underlined here. Good training opportunities exist, but in many Member States the needs are not completely or not at all in line with the needs of employers. The development from a segments approach to transport to a whole logistics chain approach has not found its translation in many of the curricula. Even though sectoral training is essential, developments in transport render it necessary to accommodate the needs for training in co-modality and general training into logistics and transport flow management.

Here again, good examples exist of players in the sector actively engaging with schools and helping in setting up curricula that respond better to the need of current practices. Some streamlining in schooling should also happen, the existence of four medium performance major schools in a Member State might be considered an unnecessary luxury were two well performing to schools exist that deliver graduates that can be put to work in the sector straight away. Involvement of the sector and a public relations exercise from their part to explain the job and growth opportunities in the sector would be helpful in raising the image of the sector among future job seekers.

7.12 ENVIRONMENTAL ASPECTS

Environmental aspects, apart from the environmental performance of vessels themselves, have only very briefly been touched upon in the discussions so far. This is however a crucial part for the development prospects of Motorways of the Sea and

shipping in general. Close cooperation with DG ENV, on issues like the Habitats Directives, the Water Framework Directive and environmental rules agreed upon in the framework of the International Maritime Organization is necessary. The possibilities of vessels having access to charging points for electricity to make their approach and leaving of ports less damaging to the people and environment in the immediate vicinity of ports should be evaluated. Possible incentive measures to speed up the deployment of these charging points need to be considered in close cooperation between TREN – MARE and TAXUD.

Possibly a link might be made with the work of Commissioner Piebalgs in his efforts to create a performing off shore network to transport electricity from renewable generation points at sea, primarily off shore wind, to shore. Opportunities for the involvement of the shipping industry into the development of this grid, and possibilities to let shipping benefit from this green source of electricity might be looked into.

7.13 SAFETY AND SECURITY

Safety and security at sea is an issue that is being dealt with in the appropriate fora. Safety issues surrounding the Channel and other narrower straits or difficult waters like the Gulf of Biscay, have not been mentioned by any of the interlocutors as a real obstacle to the growth of maritime transport. The Channel with its mounting and descending ramp has plenty of capacity to accommodate more traffic. The crux is good policing of compliance with the rules by the competent authorities.

Of greatest interest for the Motorways of the Sea project are questions related to safety and security of transported cargo. This goes for the whole logistics chain from charging of cargo to final destination and is therefore not limited to the sea leg of the transport chain. Here again, informatics treatment of cargo is crucial.

The coordinator advocates the generalization of the harbor master figure. The harbor master is responsible for nautical safety and security in port approach and leaving. It administers pilot, tucking and mooring services and clearance for entering port once a quay, depot or terminal has capacity to receive the vessel. Capacity constraints in ports or at other parts of the logistics chain are aggravated by poor communication between (too many) involved players, when such a central figure does not exist.

The Vessel Traffic Services (VTS) would normally fall under the responsibility of the harbor master. As the name suggests, presently it focuses only on the traffic management operations of the vessels, it does not directly support the management of cargo operations or track cargo. Therefore, great care should be taken of the interface between VTS and the future tracking and tracing of individual cargo, both at sea and on land. Some shippers (Evergreen, for example) are running pilot projects with Radio Frequency Identification (RFID) systems to enable it to track and trace every individual cargo, every individual container, and different cargoes inside one container. Furthermore, the potential shown by the new VTMIS (Vessel Traffic Management and Information Services) systems, for tracking and tracing cargoes and to reconcile ships and their cargoes has not yet been sufficiently exploited

Some rudimentary form of tracking and tracing of individual cargo already exists in the form of tracing by container number. This is not always 100% accurate though. Customs only trace cargo by document number. Every badge of cargo from a particular transport company receives a document number. It does not distinguish between cargoes. In the near future, the European Union transporters should dispose of a watertight satellite system of tracking and tracing their cargo. For the moment, the GPS system will be used. The coordinator would advise to ask DG TREN's services to consider prioritizing such a European or worldwide system as one of the applications for Galileo which can be developed in partnership with the industry.

7.14 SIMPLIFICATION

E-maritime and a common maritime space as indicated in Commission Communication on a European Ports Policy are clearly the way forward for maritime transport. The competent services of the Commission are working on this. A one-stop-shop or 'guichet unique' for administrative and customs procedures is necessary to reduce the disproportionate administrative burden imposed on transport by water. Especially since short sea shipping competes with road transport, the administrative procedures should resemble those applicable to road transport.

In this respect it is important to set up a watertight system to distinguish EU containers from non-EU containers. The system needs to be watertight since counterfeiting of goods such as medication makes it impossible to relax customs

procedures and checks for containers. Just vessel control is not enough, containers need to be checked.

For the deployment of the Motorway of the Sea project it would furthermore be helpful if ports would make the distinction between Schengen and non-Schengen traffic, like air and road traffic do. Swifter customs treatment for Motorway of the Sea cargo would also help. Decision 70/2008/EC of 15 January 2008 on a paperless environment for customs and trade should provide the answer to speeding up customs treatment for, among others, maritime transport. The Decision leads to an interoperable e-customs system by 2013. The system will gradually be introduced with technical preparatory work underway. Single windows for customs treatment are an important part of the system.

In relation to simplification of funding procedures, it would seem advisable to ask for advice on a kind of streamlining of interstate cooperation or proposing a new framework for interstate cooperation on Motorways of the Sea projects. The fact that two or more Member States give state aid to the same project often necessitates a bilateral treaty and thus parliamentary approval in two or more Member States with the ensuing delays. In addition a special body needs to be designated to deal with resolution of disputes. For the limited amounts of state aid now talked about by the Member States this seems a disproportionate burden.

7.15 IMPACT OF GLOBAL DEVELOPMENTS ON THE SEA LEG OF MOTORWAYS OF THE SEA

The current climate of increasing competition for scarce resources and the negative environmental impact of the use of most energy sources makes increasing efficiency on all fronts more urgent than ever. Maritime traffic from South Asia, North or South America to Europe and vice-versa via anything but the shortest route might be a luxury the global community will find very costly to bear in the medium to long term. The economic and environmental costs associated with such inefficiencies in the logistics chain will start to weigh heavily on the world economy. To resolve one of the most obvious inefficiencies in environmental terms – detour of cargo from the Mediterranean to North continental Europe to be transported back over land - transshipment ports need to be developed in the southern part of Europe, and

environmentally efficient onwards land transport. This will help European transport infrastructure coping with the doubling of the Suez and the Panama Canal.

The expected increase in traffic generated by their doubling will need to be accommodated in Europe, where it makes most economic sense to receive it, i.e. as close as possible to final destination. Connections should be provided with the most important container route, known as the 'round the world trip' from Singapore-Suez-Panama to Singapore.

The European spatial planning framework might need reviewing in the light of origin and destination of freight. Choices must be made concerning the development of inland waterways, railways, pipeline infrastructure and road infrastructure based on the ways that can most efficiently and most environmentally friendly transport imports from ports to destination in Europe and exports to European ports, bearing in mind that 90% of freight in and out of Europe is moved through ports. For this reason a step by step study into the origin and destination of freight is necessary. DG TREN, supported by an advisory council consisting of Eurostat, some research institutes, EPSO, ECSA and independent experts from academia, should start this process soonest.

On top of the doubling of the Canals, comes the relentless increase in the size of ships which makes infrastructural works necessary in many ports, if they do not want to loose out on most of the deep sea traffic of the future. The seemingly relentless increase in energy prices as a result of (at least a perceived) scarcity of resources makes action unavoidable. Losing 5 days of bunker for a detour to efficiently run ports with good hinterland connections should be reason for immediate action by Member States in the Mediterranean.

Shippers are not waiting and already start developing ports in third countries along the Mediterranean where conditions can be offered that can never be matched by Member States. The legal framework in third countries surrounding for instance working conditions and environmental protection is less strict, and makes it easier for operators to make profits. More acute realization of the implication of this development seems indicated. Seeking protection from unfair competition is logical. It is a fact that this constitutes unfair competition to European ports, and some form of protection might perhaps be warranted.

However, erecting protection barriers is not the right answer. It is a stop gap measure that will not alter the fact that without urgent necessary investments in ports and hinterland connections, Member States bordering the Mediterranean will keep

losing out on economic development opportunities. The coordinator is of the opinion that European investment support for infrastructure or shipping lines should not be extended to third Mediterranean countries at this moment. He does feel that the European Union only stands to gain from better qualified personnel in all logistics services in the countries it trades with as this increases safety and security of operations in the Union as well. Extension of European financial support for training in some areas would therefore be welcome.

The current downturn in the economy already affects global shipping. Especially traffic to the United States, as the rate of the dollar and its poor economic performance has sized its imports down considerably. Global demand for ships is slowing, with an exception for short sea vessels. It is not clear how long this exception for short sea shipping vessels can last. All this makes it all the more urgent to invest in Research and Development into new and cleaner ways of propelling vessels, and fuelling the transport sector in general.

7.16 FINANCING MOTORWAYS OF THE SEA

As for all infrastructural and other transport projects, the bulk of the financing for Motorways of the Sea related investments will have to come from the private sector. Community funding provides leverage for projects which might otherwise not quickly be realized by the private sector alone. For all forms of public funding to projects related to Motorways of the Sea, no funding should of course be given out without cast iron guarantees concerning the feasibility of the project, the market research that has preceded it and the formal engagement of enough players to secure a successful project. There should always be a possibility of reclaiming money if partners do not live up to their commitments.

Among the players in the sector and among Member States' authorities some confusion reigns as to the articulation of the different kinds of European funding for Motorways of the Sea project. Under Marco Polo and the Trans European Networks funding, different conditions apply. This is compounded by the fact that under the Community Guidelines on State Aid for maritime transport still other conditions apply. The current situation can be broadly summarized as follows:

	Marco Polo II 2007-2013	TEN-T funding 2007-2013	State Aid Guidelines 2004
Fundable	Operation/Services	Investment in infrastructure	Investment in infrastructure and Operation/Services
Aid Intensity	35%	30%	30%
Aid Duration	5 Years		Depending on individual case decision. In principle degressive
Budget	450 m€	310 m€	Not relevant

¹ Start-up aid for operations /services is possible in special cases

² The Marco Polo II budget is spread out over yearly calls. No funding has been earmarked for Motorways of the Sea projects. The amount of funding going to Motorways of the Sea projects depends on the quality of the projects.

³ The funding for Motorways of the Sea is spread out over yearly calls for proposals. The budget is divided in the following manner: 2007 – 20 m€, 2008 – 30 m€, 2009 – 85 m€, 2010 – 100 m, 2011 – 50 m€, 2012 – 25 m€. The first call will be published on 23 April 2008.

More transparency and ease in the handling of the different EU funding possibilities has been recognized as an important issue. The issue is especially important for Member States' authorities and for smaller and medium sized enterprises. Duration and intensity of aid could be harmonized to some extent. As regards subsidies for services, all interlocutors have indicated that they accept the idea of digressively of support. This could also be made to apply to support for services under Marco Polo or, if considered eligible for funding, under TEN-T.

The limited amounts of funding available under Marco Polo and TEN-T for Motorways of the Sea projects will to some extent limit the use of this funding to seeding money. It is in the sector's and in the common interest to make sure that the seeds are sowed in fertile ground. Improvement of infrastructure both in ports and hinterland connections seem the best way to spend TEN-T funding. For Marco Polo special priority should be given to subsidizing services in the common interest, such as improvement of efficiency of services in ports and of personnel in ports and at sea. Funding of vessels should only be considered for the part of the necessary investment to

improve the environmental performance of shipping. Here, close cooperation with DG RTD under the 7th Framework Program is indicated, especially as regards the application of innovative technology in vessels or on land to make operations run with less harmful emissions.

Should start-up aid be given to new lines, this support should be digressive and given to the one deciding on the modal choice for the cargo: the cargo owner. One of the criticisms of TEN-T and Marco Polo funding is that it risks being spread out over a host of small projects of a very different nature. An idea to focus the yearly calls under TEN-T and Marco Polo on specific subjects could be considered. For instance the development of logistical platforms for TEN-T in a given year and training under Marco Polo. All yearly calls could have a specific subject. This would focus the minds of applicants, make it easier to apply and gives the European Commission additional leverage on the direction it wants to steer its efforts in.

All players in the sector have spoken highly of the Italian Ecobonus system. This is a direct subsidy of 100€ to a transporter which, instead of choosing the road to final destination of its cargo, chooses to take a vessel for (part of) its trip. This reduces congestion on the clogged Italian roads, reduces air pollution and gives the incentive to the players that directly influence the balance between the transport modes by the choices they make. In some ways it resembles the incentive of a 30% subsidy given by the Region of Friuli Venezia Giulia for train transport.

This system merits to be considered taken as best practice example that could be integrated by other Member States. Especially by the Member States that profit from the Italian subsidy as it also relieves congestion on their roads. He therefore recommends an evaluation of the possibilities of expanding the system to a cooperation effort by 2 or 3 Member States. Should such an approach be successful, it could be generalized throughout Europe, taking into account national and regional specificities.

In order to speed up investment in new vessels and therefore increasing the environmental performance of shipping, the coordinator would welcome initiatives by Member States that would allow for quicker depreciation times of vessels. There are a host of other national tax possibilities that can be brought to bear when promoting modal shift and increasing the environmental performance. Important is that the sector and the Member States engage in a constructive dialogue on how to redistribute income from taxes and excises to enable these goals.

In this context it would be useful to remind the Member States that under the Structural Funds they should make full use of the available financing to enable modal shift. Some Member States have access to significant amounts of funding under the Cohesion Fund. However, all Member States can use money from the Structural funds for training activities, for reconversion of industrial areas in decline, for cross border cooperation and for other activities that could be used to speed up the transition to a European co-modal transport infrastructure.

In conclusion the TEN-T funding should only be destined to projects of common interest to the European Union, be it for reasons related to the environment, European competitiveness or cohesion.

Where duly substantiated reasons exist for a Member State or a region to fund the development of a given port or service, without this clearly serving the common interest, such funding should be considered under the State Aid rules, as it is done in other sectors. Member States need to be encouraged to make the best use of the Community and national funding possibilities at their disposal to improve the position of their maritime sector and make the most of the environmental imperative of promoting modal shift in favour of less polluting modes

7.17 CLARIFYING THE CONCEPT OF MOTORWAYS OF THE SEA

The Transport White Paper of 2001 introduced the concept of Motorways of the Sea as high quality transport services based on short sea shipping. Not many are really clear as to what the concept entails or as to what sort of activities would form part of a Motorways of the Sea project. The Transport White Paper gives an adequate description and that further definition is unnecessary. More important than a definition of Motorways of the Sea, is clarity on what the conditions are for enabling fluidity of the logistics chain in direct connection to the maritime part of the chain. He believes that the realization of these conditions can form part of a Motorway of the Sea project.

Defining a Motorway of the Sea line or a Head of a Motorway of the Sea line will inevitably cause problems in countries with many ports, in countries with a decentralized structure and in countries which are liberalized and fear competition distortion. For this reason the 'flag' for a port or for a shipping line, based on objective indicators, serves as quality stamp of approval. All ports or shipping lines meeting the benchmarks should receive such a quality stamp. This does not mean that they will all

receive support. It is recognition of excellence. Just like beaches can lose their flag every year, so should the dynamic benchmarking of Motorways of the Sea lines and ports lead to new flags being given out. Lines or ports that do not meet the benchmarks anymore should lose their quality stamp.

- Reliability is the most important success factor. Transporters need to be sure of the conditions under which their cargo will be transported over sea; they need to be sure their cargo will reach the agreed destination at the agreed time. Reliability depends on all the efficiency issues described in the report, concerning services, ports and hinterland connections;

- Frequency of the line comes next. There is no standard frequency for a Motorway of the Sea line, it cannot be said that frequency should be determined as 1 or 2, 3, 4 or 5 or 7 times a week. One sailing a week is the minimum, but it would go too far to decree at EU level that frequency should be at least 3 or 5 times a week. It very much depends on the line and on the cargo that is being transported. A new line will take time to get to full capacity, even considerable time as many experiences in the short sea shipping field show. Upping frequency requires enormous investment and can only be done when the line has found its feet. Where frequency cannot be decreed, fixed departure times are essential;

- Ease of access and use for the clients - good informatics support to enhance transparency;

- Close contacts with potential clients and continuous exploration of the market;

- Marketing of the concept among transport companies and getting these to change their way of doing business and changing their traditional investment patterns, for instance for an equal amount of trailers to trucks, to more trailers than trucks for unaccompanied transport.

This would lead to the following list of quality criteria for Motorway of the Sea status:

- Hinterland connections of ports
- Port internal network
- Characteristics of ro-ro terminal or container terminal
- Characteristics of ro-ro ramps or container platforms
- Loading, unloading operations
- Time and procedures necessary for departure, arrival of vessels
- Berthing of vessels

- Vessel characteristics
- Maritime services characteristics
- Indicative prices of maritime services
- Administrative procedures

The basic thought underlying, is that a success will only be made of Motorways of the Sea when all involved actors – the European Union, the Member States and all their levels of administration, all the players in the transport chain from shippers, to ports, to terminal operators, railway companies, truckers' organizations, motorway concessionaires, down to individual clients of transport and to consumers at large – cooperate on the realization of the most important objective underpinning the European Union's Trans European Networks policy.

7.18 ACTIONS LISTED IN THE ON-GOING ACTION PLAN FOR THE PROMOTION OF SHORT SEA SHIPPING

(Source. Eurostat)

A number of obstacles hinder the optimal development of Short Sea Shipping:

1. It has not yet reached full integration in the door-to-door supply chain;
2. It involves complex administrative procedures;
3. It requires higher port efficiency and good hinterland accessibility.

The 2003 Program for the Short Sea Shipping Promotion set out 14 actions with the objective to improve the efficiency of the mode and overcome obstacles to its development.

7.18.1 DIRECTIVE ON CERTAIN REPORTING FORMALITIES FOR SHIPS (IMO FAL)

With the adoption of directive 2002/6/EC relating to formalities for vessels at arrival to departure from ports, the Community adopted forms in line with the IMO Convention on Facilitation of International Maritime Traffic (IMO FAL Convention). The Commission has actively advocated to non-EU countries the example that the EU has now set in accepting internationally agreed IMO FAL. The Commission proposed on 21st January 2009 a recast of the directive COM (2009)11 in order to rationalize the

use of different forms and generalize the use of electronic forms in year 2013 at the latest.

7.18.2 THE MARCO POLO PROGRAMME

The subvention program Marco Polo I became operational in 2003 and Marco Polo II in 2007. In the first selection rounds, approximately half of the accepted projects involved starting up new lines of Short Sea Shipping. The new programme identifies Motorways of the Sea as a specific new action. This action should decrease road traffic over time on a given corridor by shifting goods from road to Short Sea Shipping operating on Motorways of the Sea. Work will continue to ensure the utilization of Marco Polo to the benefit of Short Sea Shipping until 2010 and beyond.

7.18.3 MOTORWAYS OF THE SEA

Motorways of the Sea are an important instrument for promoting Short Sea Shipping. The revision of the Community Guidelines on the development of the trans-European transport network (TEN-T) in April 2004 contains a priority project with four Motorways of the Sea areas. In February 2005, the Commission developed a Vademecum facilitating the practical application of the legal framework. Implementing Motorways of the Sea requires partnership and co-operation. This is vital to accomplish the concentration of freight flows that is imperative for Motorways of the Sea to become viable.

Motorways of the Sea are proposed by at least two Member States, they should involve both the public and private sectors, and should include short-sea links. Motorways of the Sea are also about quality of services (frequency, punctuality, liability, perenniality), as well as quality infrastructure and superstructure in ports and hinterlands connections, and efficient administrative procedures.

A European coordinator for Motorways of the sea was appointed in 2007. The first Motorways of the sea are put into place within the TEN-T and the Marco Polo programs. The Commission adopted guidelines on Motorways of the sea funding by Member States and the EU in December 2009.

7.18.4 ENVIRONMENTAL PERFORMANCE OF SHORT SEA SHIPPING

Maritime transport has higher energy-efficiency than other modes of transport and is, in general, less harmful to the environment. Increased use of Short Sea Shipping would be in line with the Union's environmental policies and CO2 targets.

Nevertheless, environmental improvements are needed in shipping, in particular in the areas of SOx, NOx and particulates. Measures to reduce those pollutants through the modification of the Annex VI of the MARPOL Convention been agreed in IMO in October 2009. The Commission endeavors to find a right balance between the necessity to continuously reduce the noxious emissions and greenhouse gases emissions by Short Sea Shipping versus the modal backshift which would be induced by an excessive increase of compliance costs for new standards.

7.18.5 GUIDE TO CUSTOMS PROCEDURES FOR SHORT SEA SHIPPING

The Commission presented, in 2004, a Working Document on "Authorized Regular Shipping Service" which is a service authorized by the Customs to carry Community goods between two Member States with the minimum of formalities. With the concept of European maritime transport space without barriers, the Commission proposes to extend this facilitation to all vessels involved in intra-Community trade and sailing between European ports.

7.18.6 IDENTIFICATION AND ELIMINATION OF OBSTACLES TO SHORT SEA SHIPPING

Finding solutions to identified bottlenecks in door-to-door Short Sea Shipping has produced tangible results since 1999. The exercise was re-launched in April 2005. Work continues to tackle the remaining bottlenecks. The Commission feels that it is necessary to focus efforts on the port sector so as to enhance the role of ports as nodal points in the logistics chain. The Commission launched in 2006 a wider bottleneck exercise, which encompasses all transport and logistics sector. It reflexes to other tools to collect more bottlenecks, solve those which can be addressed and disseminate best practices.

7.18.7 SIMPLIFICATION OF COMMUNITY CUSTOMS PROCEDURES

As a first step towards e-Customs, the New Computerized Transit System (NCTS) has been operational since mid-2003. In this system electronic messages replace the earlier paper procedure relating to the transport of goods under the single administrative document (SAD). In February 2008, the Council and the Parliament adopted the Decision N° 70/2008/EC on a paperless environment for customs and trade which gives the objective of year 2013, for the implementation of paperless administrative customs procedures.

In the communication and action plan with a view to establishing a European maritime transport space without barriers, the commission announced measures in view of the deployment of e-maritime services in year 2013. These systems will provide advanced and interoperable communication systems for business to administration applications as well as fir business to business purposes.

7.18.8 RESEARCH AND TECHNOLOGICAL DEVELOPMENT

A number of research actions are taking place within the Community Research Framework Program with relevance to Short Sea Shipping. These relate, *inter alia*, to lowering ship emissions, new ships types, engines and port equipment. Work will continue to follow up the results under Research Program, secure good results and carry out effective dissemination. Short Sea Shipping, as part of the waterborne platform needs to be a priority.

7.18.9 ONE-STOP ADMINISTRATIVE SHOPS

The Decision N° 70/2008/EC on a paperless environment for customs and trade launched preparatory works with all stakeholders in view of the creation of single windows for all procedures related to goods. The proposal for a directive on reporting formalities for ships arriving in and/or departing from ports of the Member States of the Community and repealing Directive 2002/6/EC adopted on 21 January 2009 stipulated that Member States should install at the latest in 2013 national single windows for all

vessel related administrative procedures. These national single windows should be interoperable with the customs single window.

7.18.10 SHORT SEA SHIPPING FOCAL POINTS

Short Sea Shipping Focal Points are representatives of national maritime administrations and responsible for Short Sea Shipping in their administrations. The Commission has continued to highlight their vital role in short-sea policy and has organized regular meetings with them to exchange information, discuss Motorways of the Sea, and solve obstacles to the development of Short Sea Shipping. Work continued with half-yearly meetings of the Focal Points and to secure the flow of information and achievement of results, including Motorways of the Sea.

7.18.11 *SHORTSEA PROMOTION CENTRES*

There are currently 22 Short Sea Promotion Centers (SPCs) operating in Europe. These Centers are driven by business interests and offer neutral, impartial advice on the use of Short Sea Shipping to meet the needs of transport users. They are essentially independent from specific interest groups and work in line with the European promotion policy. The national Centers are networked in the European Short Sea Network (ESN) which offers a common, virtual tool for European promotion. The Commission strongly supports these Centers, their work and their networking and expects this support to be matched at national level. The Commission is currently examining ways to promote a wider concept of multimodality based on the existing structures. Work continues to ensure good functioning of and guidance to the SPCs. Efforts to secure at least medium-term financial security for the SPCs are a priority.

7.18.12 IMAGE OF SHORT SEA SHIPPING

Based on information received from the maritime industries and through the European Short Sea Network, efforts to improve the overall image of Short Sea Shipping have been successful. However, full integration of Short Sea Shipping in

logistics chains still remains to be improved. Consequently, efforts on promoting the image of the mode should now focus on this targeted segment that can also help Motorways of the Sea. Shippers, cargo owners, forwarders and hauliers should continue to be important targets for promotion and so should attracting young people to the profession. The Commission launched in 2006 the PROPS project in view to enhance the image of Short Sea Shipping, notably through a pan European promotion campaign. The project is led in cooperation with the SPC.

7.18.13 STATISTICS

The Council Directive on Maritime Statistics that came into full effect in 2000 will gradually become the main source of short-sea data when it will be able to provide sufficient data series, in tonne-kilometres, to analyze trends. The Commission has instituted a working group of national statisticians in view to improve the quality of statistics and allow coherent comparisons between modes by converting the tone-based short-sea data into tonne-kilometres used in other modes. The Commission continues to work towards a single, reliable statistical source for Short Sea Shipping. It is now important to get more detailed data on the different types of Short Sea Shipping (ferries, transport of containers, bulks, feeding services...), in order to assess the performance and need for all of them.

8. CONCLUSIONS

Setting up new shipping company it's risky, enhancing a lot of business dangers. A business plan, based in real data and reliable economic analysis with experienced persons who are going to set up the company and the collaboration with reliable and well know personalities of shipping reduce that high risk, and set the basis for the right start.

Although today the global economic crisis, affects a lot the shipping industry, the specific shipping market- short sea shipping- shows signs of a faster return in wealthier times. The difficulties are focused primary at the bank loans, were shipping financing, and especially in Greek banks, are stopped. So it's important to look in foreign bank financing, as a first step to find the required funds. It's obvious that private equity will be necessary to start a business, but the amount is relevant to the loan that will be taken.

So as a conclusion I believe that for a new company we need:

- An analysis for the chosen area of exploitation
- Experienced management team or a management company
- Long term time charter (at least 1,5 years)
- Reliable collaborators, especially charterers
- A detailed business plan

The opportunities and knowledge been given from the Msc in Shipping of the University of Piraeus, with an experienced team, such as a captain and an engineer of Commercial Navy, are basic elements which can lead to a successful ship management company. First steps are always the most difficult part of a business, but doing them in the right way can provide the desirable result.

APPENDIXES
APPENDIX I.
THE FINANCIAL PLAN

Table 1. Vessels purchased schedule

Indicator	Unit	Indicator value	1 st year	2 nd	3 rd	4 th	5 th	6 th	7 th	8 th	9 th	10 th
Number of vessels	Unit	2										
DWT	Tons	5000										
Financial year	Days	360										
The quarter of vessel purchased												
Vessel 1	Quarter		1 st quarter									
Vessel 2	Quarter		2 nd quarter									
Number in the year of vessel trade commencement												
Vessel 1	Quarter		1 st quarter									
Vessel 2	Quarter		2 nd quarter									
Number of trading vessel in the year												
Vessel 1	Number/year		0.85	1	1	1	1	1	1	1	1	1
Vessel 2	Number/year		0.65	1	1	1	1	1	1	1	1	1
Total number of vessels trading in the year	Number/year		1.50	2	2	2	2	2	2	2	2	2

Table 2. Investment plan

Indicator	Unit	total	1 st year	2 nd	3 rd	4 th	5 th	6 th	7 th	8 th	9 th	10 th
Number of vessels to be purchased	Unit	2	2									
Investment in vessel purchase	Thousands \$	3000	3000									
Technical maintenance (1 time per 2,5years)	Thousands \$	360			100					130		130
Special survey/dry docking (1 time per 5 years)	Thousands \$	260					260					
Total Technical maintenance	Thousands \$	620			100		260			130		130
Investment in WCR	Thousands \$	114	114									
Total investment required	Thousands \$	3734	3114		100		260			130		130
Investment in main asset	Thousands \$	3620	3000		100		260			130		130
The main asset value	Thousands	3620	3000		3100		3360			3490		3620

	\$										
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Table 3. Cargo turnover

Type of cargo	Unit	One vessel's carrying capacity on cargoes	A voyage's duration	Cargo employment share *	The cargo turnover of two vessels in one year
Coal (Kerch-Sea of Marmara - 530nm)	Thousand tons	5,0 thousand tons	9.7 days (3.7days round trip + 4 days loading/unloading +2 days delays)	30 %	105 thousand tons
Metal (Odessa-sea of Marmara- 430nm)	Thousand tons	5,0 thousand tons	9,0 days (3.0 days round trip + 4 days loading/unloading +2 days delays)	40 %	151 thousand tons
Grain (Odessa-Italy, Adriatic coast – 1530 nm)	Thousand tons	4,9 thousand tons	16,6 days (10.6 days round trip + 4 days loading/unloading +2 days delays)	30 %	60 thousand tons
Total all cargoes					316 thousand tons

* - Cargo employment share in types of cargo

** - Received amount of a vessel' exploitation a year – 340 days

***- Vessel's expected speed 12,0 knots

**Table 4 Loan schedule and interest calculation
(amounts in USD)**

Indicator	Total	year1	year2	year3	year4	year5	year6
Interest % =	7,0						
ballon =	-300000						
Borrowed capital:	3114000	3114000					
Interest paid for current period	-854192,2831	-217980	-190443,02	-160978,46	-129451,37	-95717,393	-59622,034
Payment for the principal of the loan	-2814000	-393385,38	-420922,36	-450386,92	-481914,01	-515647,99	-551743,35
interest & payment for the principal	-3668192,283	-611365,38	-611365,38	-611365,38	-611365,38	-611365,38	-611365,38
interest & payment for the principal +ballon	-3968192,283	-611365,38	-611365,38	-611365,38	-611365,38	-611365,38	-911365,38
borrowed capital /open balance by beg.of the period/		-3356826,9	-2745461,5	-2134096,1	-1522730,8	-911365,38	0
			63				

Table 5 Profit / Loss and Operational profitability

Indicator	Unit	Basis 1 vessel / voyage	1year	2year	3year	4year	5year	6year	7year	8year	9year	10year
Total number of vessels trading in the current year	number/year		1.5	2	2	2	2	2	2	2	2	2
<i>Vessel's deadweight</i>	mts	5000										
<i>Operational days per annum</i>	days	340										
Share of cargo in total turnover												
Coal	%				30	30	30	30	30	30	30	30
Metal	%				40	40	40	40	40	40	40	40
Grains	%				30	30	30	30	30	30	30	30
Total	%				100	100	100	100	100	100	100	100
Destinations		Voyage duration										
Coal (Kerch-Sea of Marmara)	9,7 Days	thousands mts	5		105	105	105	98	105	105	105	105
Steel (Odessa-sea of Marmara)	9,0 Days	thousands mts	5		151	151	151	144	151	151	151	151
Grain(Odessa-Ravenna)	16,6 Days	thousands mts	4.9		60	60	60	56	60	60	60	60
Gross freight												
Coal 16\$/mt	\$ thousands	80			1680	1680	1680	1568	1680	1680	1680	1680
Steel 16%/mt	\$ thousands	80			2416	2416	2416	2304	2416	2416	2416	2416
Grain 26\$/mt	\$ thousands	127.4			1560	1560	1560	1456	1560	1560	1560	1560
Total	\$ thousands	287.4			5656	5656	5656	5328	5656	5656	5656	5656
Total from T/C (4500\$/D * 340days)			2295	3060								
Broker commission 2.5%	\$ thousands	1257	57	77	141	141	141	133	141	141	141	141
Net freight earnings	\$ thousands				5515	5515	5515	5195	5515	5515	5515	5515
Coal	\$ thousands				1638	1638	1638	1529	1638	1638	1638	1638
Steel	\$ thousands				2356	2356	2356	2246	2356	2356	2356	2356
Grain	\$ thousands				1521	1521	1521	1420	1521	1521	1521	1521
Total Net freight earnings	\$ thousands				5515	5515	5515	5195	5515	5515	5515	5515
Variable cost (bunkers+port dues)	\$ thousands											
Coal (6.8 \$/ton)	\$ thousands	34			714	714	714	666	714	714	714	714
Steel (6.3\$/mt)	\$ thousands	31.5			951.3	951.3	951.3	907.2	951.3	951.3	951.3	951.3
Grain(13.4\$/mt)	\$ thousands	65.6			804	804	804	750.4	804	804	804	804
Total	\$ thousands				2469	2469	2469	2324	2469	2469	2469	2469
Vessel income from trading	\$ thousands				3045	3045	3045	2871	3045	3045	3045	3045
Coal (9.2 \$/ton)	\$ thousands				924	924	924	862	924	924	924	924
Steel (9.7 \$/mt)	\$ thousands				1404	1404	1404	1339	1404	1404	1404	1404
Grain(12.6 \$/mt)	\$ thousands				717	717	717	669	717	717	717	717
Total (TCE)	\$ thousands		2238	2984	3045	3045	3045	2871	3045	3045	3045	3045
OPEX per vessel 2350\$/day	\$ thousands		1269	1692	1692	1692	1692	1692	1692	1692	1692	1692
EBITDA	\$ thousands		969	1292	1353	1353	1353	1179	1353	1353	1353	1353
Depreciation	\$ thousands		120	120	120	120	120	120	120	120	120	120
EBIT	\$ thousands		849	1172	1233	1233	1233	1059	1233	1233	1233	1233
Interest on capital paid	\$ thousands		218	190	161	129	96	59	0	0	0	0
Net profit	\$ thousands		631	982	1072	1104	1137	1000	1233	1233	1233	1233
ROS	%		27.5	32.1	19.0	19.5	20.1	18.8	21.8	21.8	21.8	21.8

* Port expenses calculated basis 5500 USD per call.

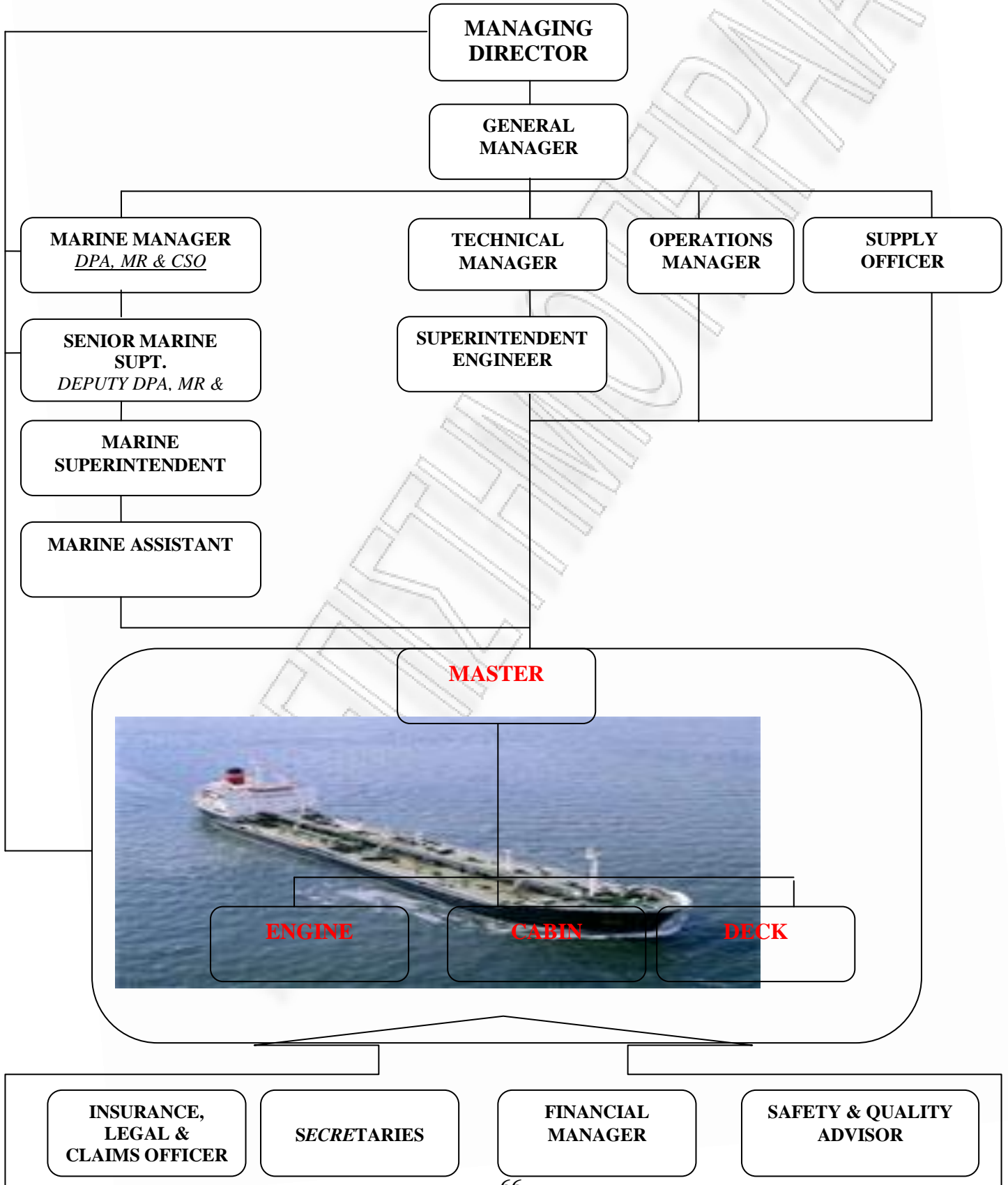
*The price of Gas Oil for M/E , D/G, and Boiler calculated basis 710 usd/Mt.

Table 6 Financial plan and evaluation

Indicator	Unit	Total	1year	2year	3year	4year	5year	6year	7year	8year	9year	10year
Investment Plan												
Investment in vessel purchase	thousands \$		-3000									
Investment in technical maintenance	thousands \$				-100		-260			-130		-130
Investment in WCR	thousands \$		-114									
Investment cash flow	thousands \$	-3734	-3114	0	-100	0	-260	0	0	-130	0	-130
Operations activity												
Net profit	thousands \$	10858	631	982	1072	1104	1137	1000	1233	1233	1233	1233
Depreciation	thousands \$	1200	120	120	120	120	120	120	120	120	120	120
Interest paid	thousands \$	853	218	190	161	129	96	59				
Operation activity cashflow	thousands \$	12911	969	1292	1353	1353	1353	1179	1353	1353	1353	1353
Financial activity cashflow												
Borrowed capital	thousands \$	3114	3114	0	0	0	0	0	0	0	0	0
Loan repayment	thousands \$	-3114	-393	-421	-450	-482	-516	-852	0	0	0	0
Interest paid	thousands \$	-853	-218	-190	-161	-129	-96	-59	0	0	0	0
Cash flow from financial activities	thousands \$	-853	2503	-611	-611	-611	-612	-911	0	0	0	0
Project total Cash flow	thousands \$	8324	358	681	642	742	481	268	1353	1223	1353	1223
Project cummulative Cash flow	thousands \$		358	1039	1681	2423	2904	3172	4525	5748	7101	8324
Project total Cash flow with sale of assets	thousands \$		358	681	642	742	481	268	1353	1223	1353	3423
Terminal value of the ships	thousands \$	2200										2200
Cost of capital	%	5										
NPV	thousands \$	7463.44										
IRR	%	20.80%										

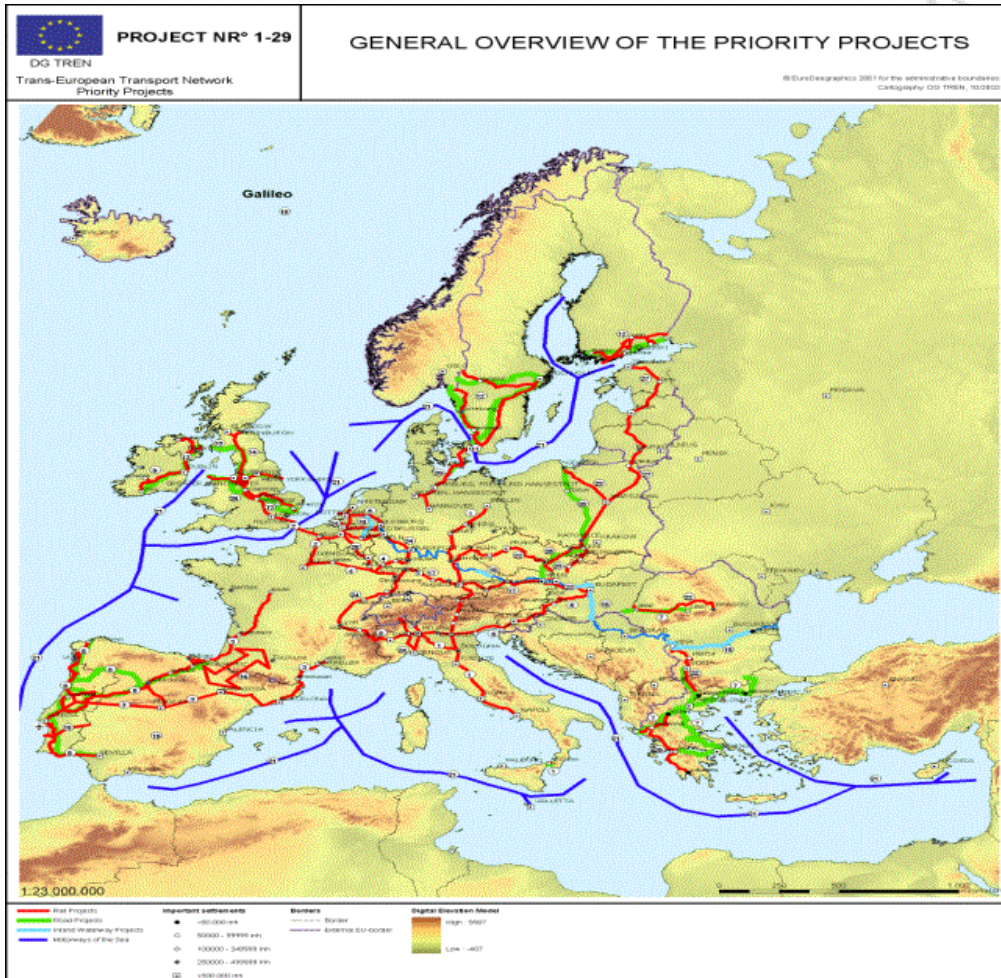
APPENDIX II

COMPANY'S ORGANIZATION CHART

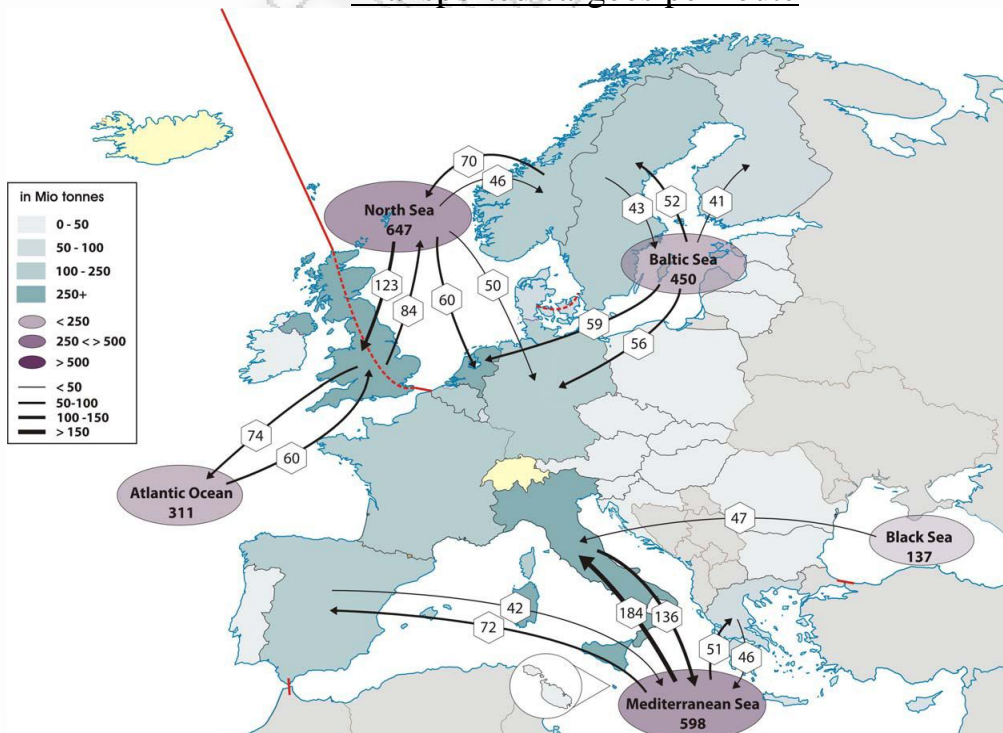


APPENDIX III

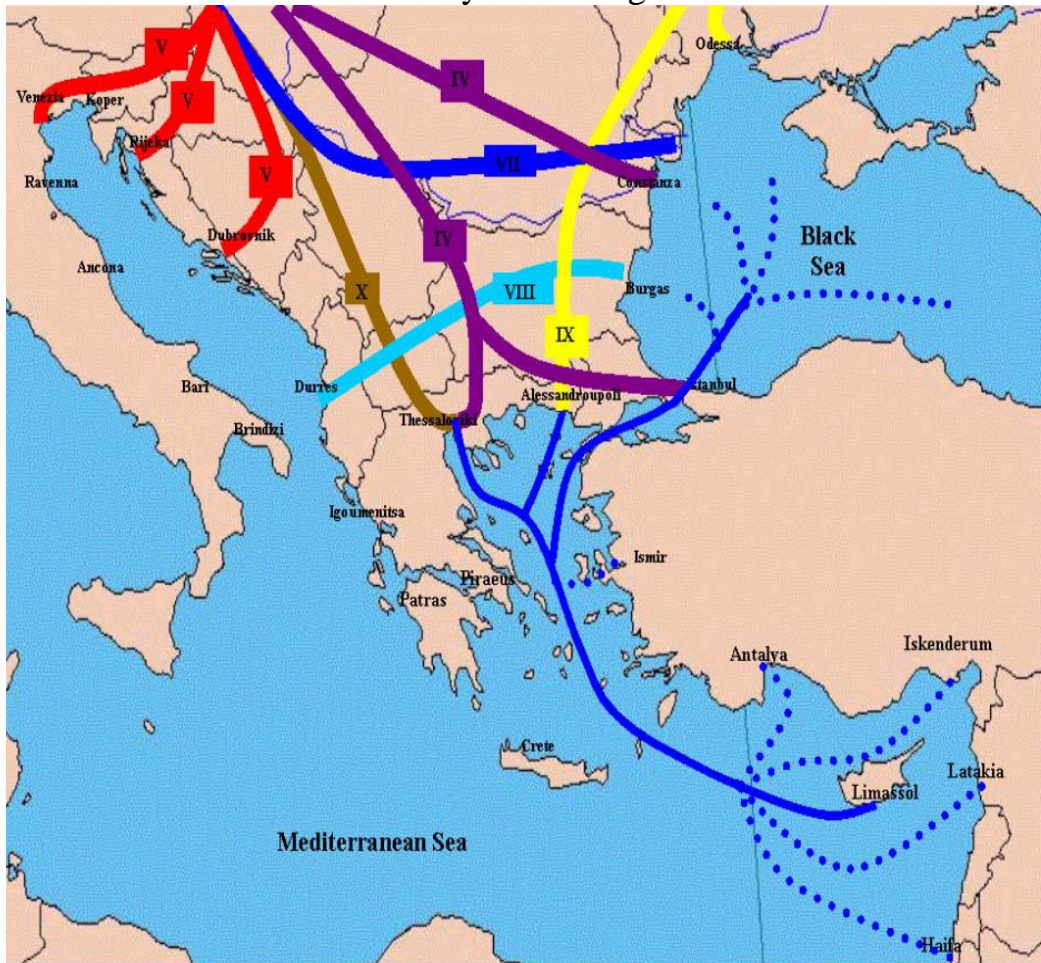
SHORT SEA SHIPPING ROUTES



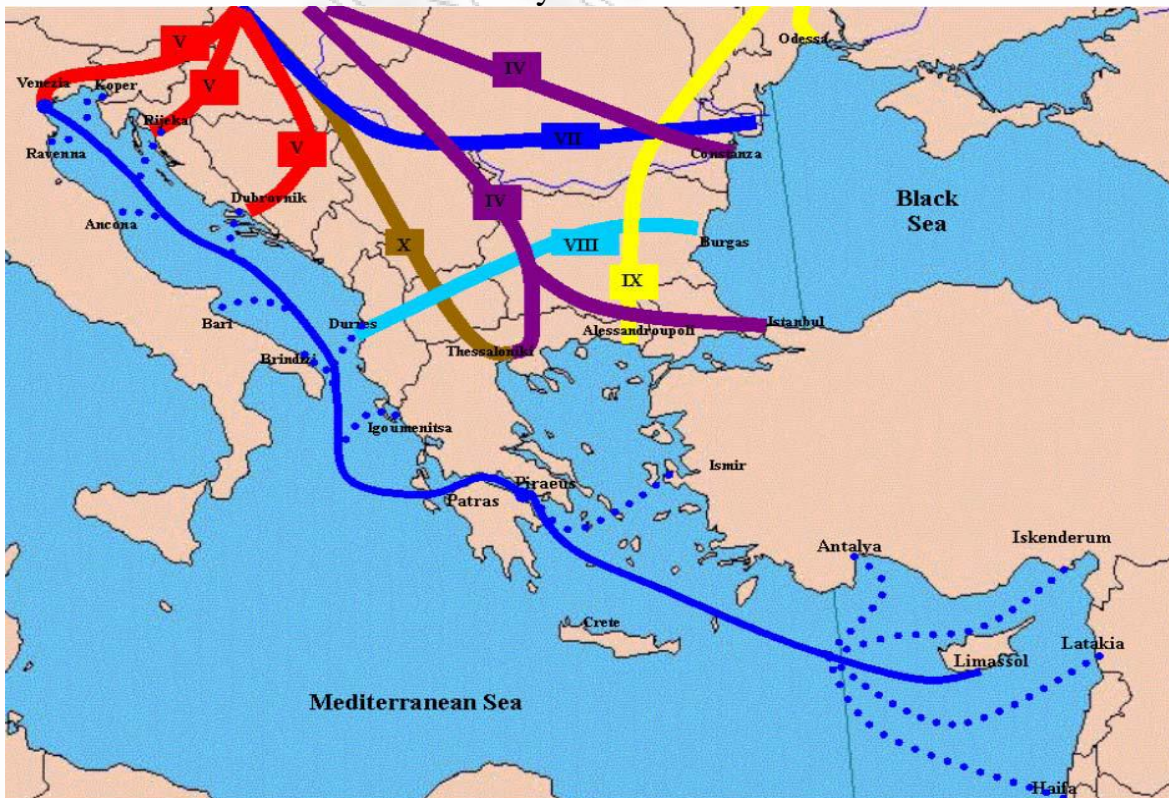
Transported cargoes per route



The Sea Motorway of the Aegean-Black Sea



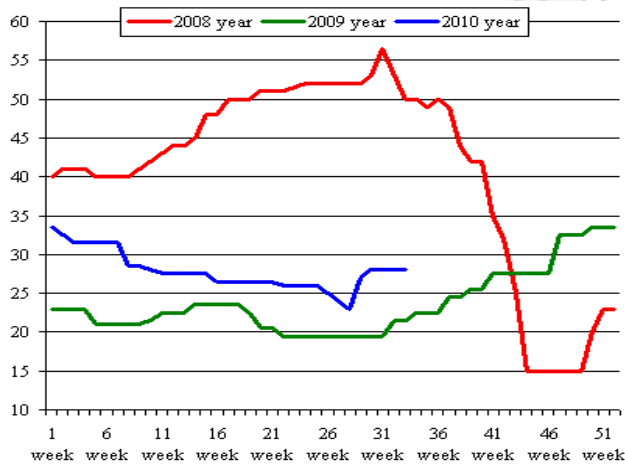
Potential Sea Motorway of the Adriatic-Ionian Sea



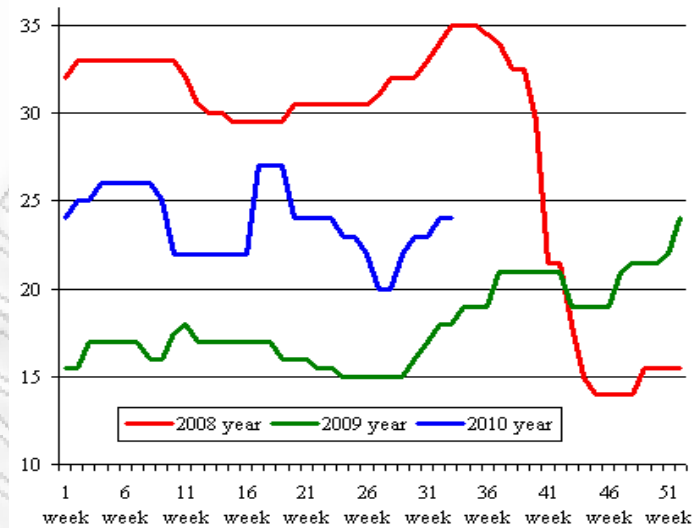
APPENDIX IV

Freight rates of general cargoes in Azov-Mediterranean and Black Sea

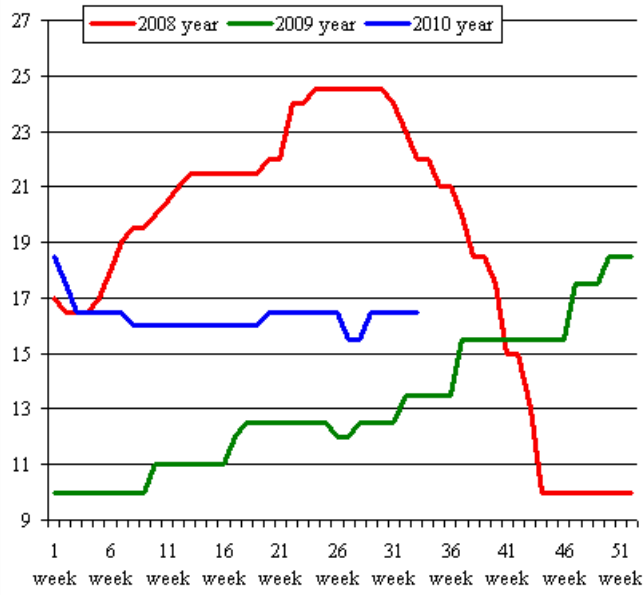
Grain, 5,000t, Odessa - Italy, Adriatic Sea, \$/t



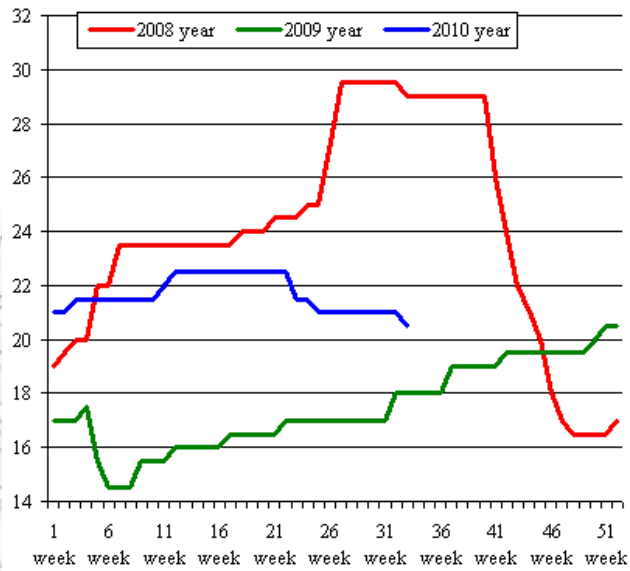
Coal, 3-5,000t, Azov port - the Sea of Marmara, \$/t



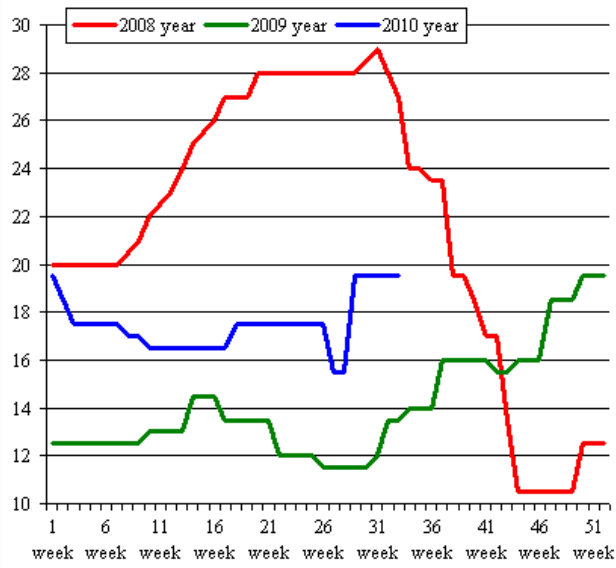
Coal, 5,000t, Kerch - the Sea of Marmara, \$/t



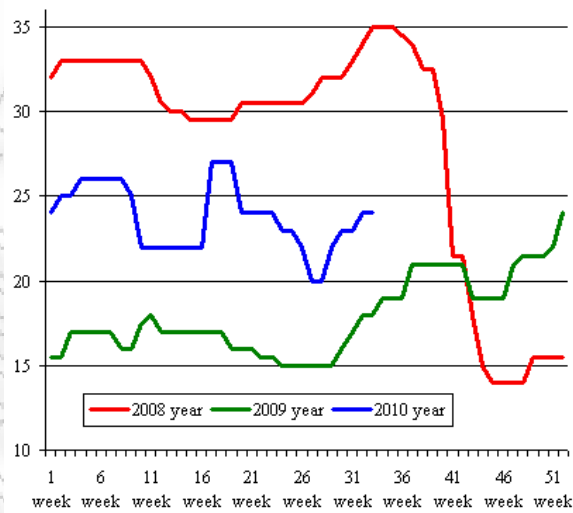
Aluminium, 5,000t, Vanino - Yokohama, \$/t



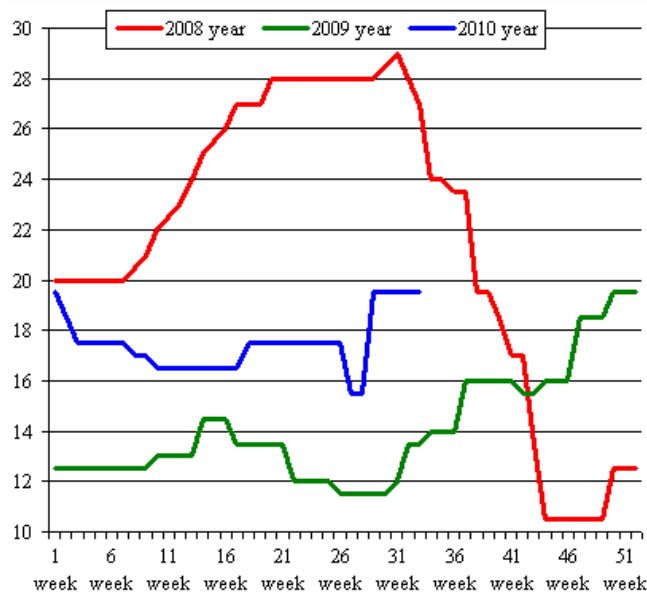
Steel, 5,000t, Odessa - the Sea of Marmara, \$/t



Coal, 3-5,000t, Azov port - the Sea of Marmara, \$/t



Steel, 5,000t, Odessa - Marmara Sea ports, \$/t



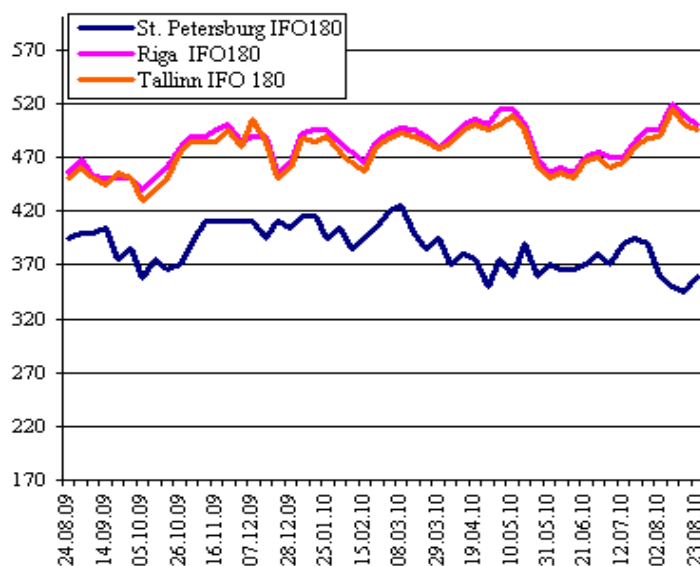
Time-charter rates for sea-going and sea-river vessels

Type of ship	Rate, \$/day
Black sea	
STK	1900-2000
Sormovsky	2500-3000
Volga	3200-4200
Azov sea	
STK	3100-3400
Sormovsky	4300-4400
Volgo-Don	4800-5000
Volga	5000-5700
Mediterranean sea	
STK	1600-1900
3000 DWT	2700-3000
5000 DWT	4300-4500
6-7000 DWT	5700-6000
Baltic Sea	
Sormovsky	1800-2000
Volgo-Balt	1900-2100

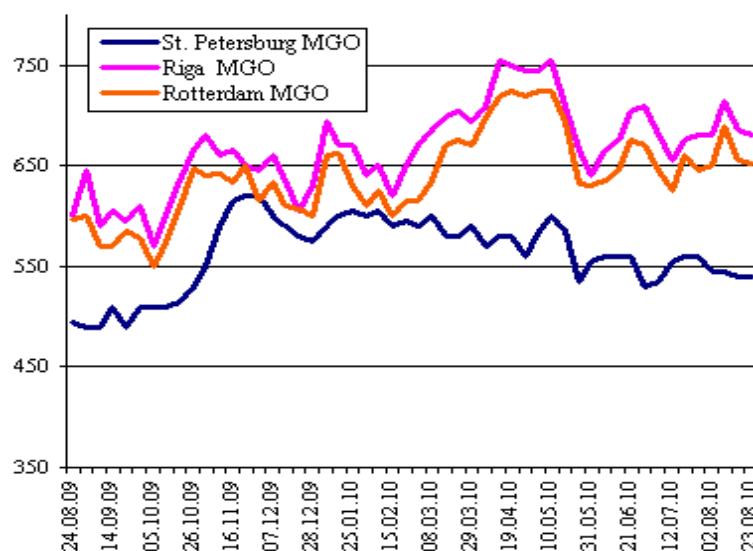
5-6000 DWT	2900-3100
Caspian Sea	
Sormovsky	1900-2100
Far East	
Dmitriy Donskoy	8000-8200
Pioner	3900-4100
Sormovsky	2600-2800

Changes in fuel prices

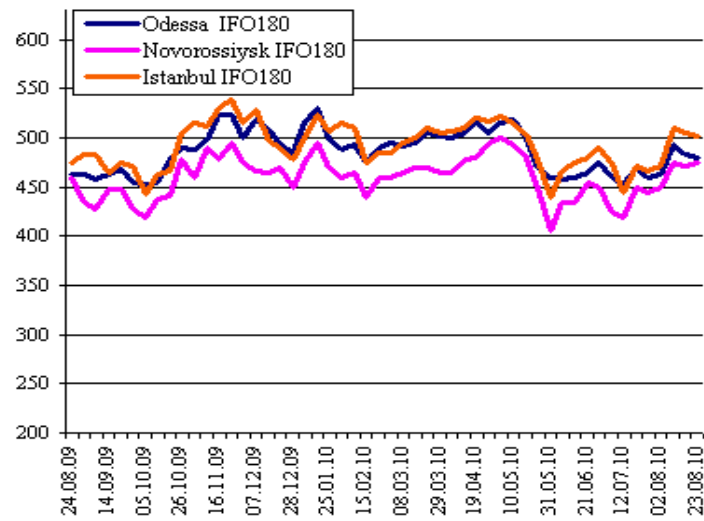
Dynamics of average mazut prices in the Northern region, \$/tonne



Dynamics of average diesel fuel prices in the Northern region, \$/tonn



Dynamics of average mazut prices in the Southern region, \$/tonne



ΒΙΒΛΙΟΓΡΑΦΙΑ

- Οικονομική Μοντελοποίηση-Systematic Strategic Planning (Ελ. Θαλασσινός)
- www.eustatistics.gov.uk
- http://europa.eu.int/comm/transport/maritime/sss/index_en.htm
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- http://europa.eu.int/comm/energy_transport/en/lb_en.html
- www.metalexerts.com

РАНЕЕЗНАМО ПЕРПАА