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The Capital Markets as a Source of Finance for Shipping and the Feasibility of a Merchant Shipping Company Listing in the Athens Stock Exchange.

by

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ABSTRACT

A description of the Capital Markets as a source of shipping finance is presented. The reason why shipowners have not widely accepted Stock Exchanges as fund raising sources for their projects is also presented. The main areas of concern, major problems and future potential of this type of financing were discussed. The determining factors which shape the shipowners' and investors' attitude towards shipping stocks and bonds were also assessed, as major shipping finance restructuring depends directly on them. The profiles of already listed shipping companies were studied and conclusions were drawn about the characteristics which make the shares of such companies attractive. These conclusions were substantiated by developing an econometric model based on regression analysis, whose purpose was to identify these very characteristics necessary for good stock price performance. Moreover, the model was useful in finding how sensitive stock prices are to changes in these characteristics as well as changes in shipping market conditions. Finally, all of the above concepts and conclusions, as they apply to US and Oslo listed shipping companies, were combined with the legal framework and current economic conditions of the Athens Stock Exchange in order to study the feasibility of a merchant shipping company listing on this Exchange.

Thesis Supervisor : Ernst G. Frankel

Title : Professor of Management

To My Father

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Chapter 1

Introduction

Shipping finance has received great attention over the last few years as it is a well accepted fact that some four hundred billion dollars are required to meet the shipping industry needs[1], most of which will be used toward building between three thousand and four thousand ships[2] by the end of this century. However, it seems that the traditional methods of financing shipping, i.e. bank loans and owners' funds, will not be enough for the large scale renewal that is needed. The large losses which banks incurred during the eighties, coupled with the new capital adequacy rules, create a need for alternative ways of financing shipping. Such an alternate method of financing is by raising equity and/or debt through the capital markets.

It is the goal of this work to discuss and support the feasibility of this method in applying it to the shipping industry. Here it should be recognized that other shipping financing methods, such as leasing and mezzanine financing have also become attractive alternatives to typical bank term loans, at least temporarily. Moreover, the importance of shipbuilding subsidies has also increased mostly due to the new Chapter XI Regulations. These Regulations have again made it possible for U.S. shipyards to build and repair vessels for foreign country shipping companies after thirty five years. However, these methods will not be addressed here since they produce a small fraction of possible funds compared to the capital markets.

Several shipping companies have been successful in raising capital in the stock exchange, but it has to be noted that the choice of exchange is very important since different exchanges have very different characteristics when

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[1] Lloyds List, Tuesday, August 24, 1993, "Shipping needs $400 BN to avert 'unprecedented crisis'".

[2] Strengthening America's Shipyards. A Plan For Competing In The International Market, U.S. Presidential Commission, October 1, 1993.

it pertains to shipping stocks. For example, the New York Stock Exchange is relatively active in the shipping sector, whereas in the London Stock Exchange this sector has been absorbed by the transportation sector. On the other hand the Oslo Stock Exchange is very active in this sector due to tax advantages which allowed shipowners to incorporate their companies in Norway, although this is not an incentive anymore. Regarding the Athens Stock Exchange (ASE), many merchant shipping companies have considered for a long time to incorporate their companies in Greece. In 1994, a passenger shipping company, STRINZIS lines, was allowed for the first time to enter the ASE. The successful listing of this passenger shipping company paved the way for possible merchant shipping company incorporations in the future.

Even though coastal shipping is very different than merchant shipping, some similarities between those two sectors do exist, a more elaborate discussion of which will be in part of **Section 8.3**. An analysis of the performance of some already listed merchant shipping companies worldwide and the determinants of their shipping price performance will be studied using an econometric model. The investor's view is also going to be a major part of this work since it is the investor who will ultimately determine whether a listing is successful or not.

Since this work concentrates on Greek shipowners[3], a discussion of what characterizes the way Greeks do business transactions will be necessary in order to understand what characteristics are important for Greeks that may be irrelevant for business in other parts of the world. The opinion presented in this work was formed partly from the author's personal involvement with Greek business and mainly by various interviews conducted with members of the Greek banking and shipping community, various brokerage firm representatives, investment consultants and people who in one way or another influence or have a valid opinion on the subject of shipping finance and the stockmarket.

[3]Throughout this thesis, Greek shipowners are defined as any shipowners whose nationality is Greek regardless of where their office base is and where their ships are registered.

Moreover, in this work, the debt offering market for shipping firms will be evaluated and this type of financing will be compared to the traditional term loans which banks have been offering for years.

The main goal of this work is to enable any reader who is involved with the shipping industry to understand the role of the capital markets for this industry, assess the need and future of this market as well as point out and discuss the main areas of concern. It will also assess the possibility and feasibility of a merchant shipping company listing in the ASE by trying to answer the following questions:

- How have the shipping companies which are already listed in the U.S. and Oslo Stock Exchange performed so far and why?

- Was their good or bad performance mostly due to macroeconomic, microeconomic, or market reasons? What were these reasons and how could their poor performance have been avoided?

- What are the characteristics which are important for the stock prices of those companies and would they be as important if these companies were listed in the ASE?

- What type of investors invest in shipping companies and to what extend do they invest? What do they find attractive (or not) in such stocks?

- What can the companies do to attract more investors?

- Are currency exchange and interest rate issues a major drawback for shipping companies entering the ASE?

Chapter 2

Historical Overview

Before World War II, private equity and retained earnings were the major source of shipping finance and debt levels were around twenty to twenty five percent of shipping projects. Due to the needs of the industry and the growth in demand for shipping services, the period between the sixties and early seventies saw a large increase in debt financing. As a result of bank competition, several banks became excessively exposed to the shipping sector, stretching the usual sixty percent financial limit at times to more than one hundred percent in order to cover working capital requirements and vessel acquisitions. Today traditional banking sources of shipping capital have been restricted due to the following reasons:

- The shipping market collapse in 1973 which resulted because of the sharp reduction of oil production by OPEC countries was disastrous for both banks and owners. The substantially lower freight rates that followed that crisis led to the inability of many shipowners to pay their debts Nevertheless, the crisis was not fully appreciated by bankers who kept providing good deals with soft terms. Inevitably, another shipping market collapse came in the eighties for various reasons, one of which was the oversupply of vessels that was due mainly from the plethora of bank loans. During 1983 many banks withdrew from the shipping industry and those which remained either changed their credit policies, if they had any, or created new ones that were stringent enough in order to avoid further losses.

- The new Capital Adequacy Rules imposed on banks by the Bank of International Settlements in Switzerland in January 1993, led many banks to be more selective with their loans. According to these rules, the banks' capital base must reach a minimum of eight percent of risk weighted assets. As a result, shipping loans which represent higher risk loans, have been reduced by greater client selectivity and stricter loan terms and conditions. Now the

returns from shipping have to be compared with those of other sectors of the bank.

However, bank profits that relate to shipping activities can still be substantial and are not only in the form of interest rates, i.e., margins on LIBOR[4] and management fees, but also from charges on activities, such as foreign exchange transactions, money transfers, commission on letters of guarantee, and letters of guarantee. **Table 2.1** shows the average gross profits of four international financial institutions from various operations related to shipping except from advisory services and underwriting of issues. This table clearly shows that there is a shift from interest earning to ancillary service earnings.

Table 2.1

Average Gross Income of Four International Banks

YEAR	1988	1989	1990	1991	1992	1993
Interest	60%	58%	57%	55%	54%	52%
Foreign Exchange	19%	21%	23%	23%	23%	25%
Commission*	21%	21%	20%	22%	23%	23%

***Charges on Transfers, Letters of Credits, Letters of Guarantees and others**
Percentages out of total of Interest, Foreign Exchange and Commission Income
Compilation: International Center for Shipping, Trade & Finance, City University Business School, London, 1993

Even though it seems that banks are not willing to finance a large percentage of vessel acquisitions, the owners themselves do not want to have the large gearing they used to have; therefore, some owners suggest that even if their banks were willing to finance more than sixty percent of their projects, they would not agree to such terms. Nevertheless, these are the cash rich shipowners who have no problem finding the rest of the financing. However, it is unclear how the rest of the owners will finance their fleet replacement needs.

[4] LIBOR, the London Interbank Offered Rate, is used by banks as a base for the interest rate they will impose on their loans. There exist corresponding interbank rates in other European countries but LIBOR has been traditionally used for Shipping Loans all over the world.

There have been many discussions and attempts by Greek shipowners to tap the capital markets but the only fruitful attempts were those of the Angelicousis Group with Anangel-American Shipholdings, the listing of Global Ocean Carriers by the Tsakos Group and the Maritime Investment Fund also by the Tsakos Group. Moreover, Eletson Corporation was successful in raising one hundred and forty million dollars through a ten year Yankee bond[5]. **Tables 2.2** and **2.3** show a number of equity private placements and public offerings by shipping companies supporting the fact that more and more shipping companies have considered equity placements as a new financing method. In particular, **Table 2.2** gives some more information about the most recent of these stock offerings and also includes some unsuccessful offerings. In addition, **Table 2.4** lists various high yield bond offerings and the terms of the loans associated with them, and shows that bond offerings are also becoming increasingly important in shipping finance. **Figures 2.1** and **2.2** show the worldwide shipping debt and equity offerings from 1984 to 1993 in millions of dollars. It is interesting to note that the main reason for the big success of debt offering in 1993 was the low interest rates that prevailed during that period

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[5]A Yankee Bond is a bond issued in the US by a non-US issuer.

Table 2.2 Stock Offering Particulars

OFFERING PARTICULARS					
Issue Date	**Company**	**Offer Price**	**Amount***	**Stock Market**	**Underwriters/ Sponsors**
Jun. 87	Anangel-American Shipholdings	$10	$ 89m	Lux.	American Express Bank Shearson Lehman
Sept. 87	B+H Bulk Carriers	$10	$ 20m	NASDAQ	Mabon, Nugent & Co.
Sept. 87	First Olsen Tankers	$.25m**	$ 47m	private	Citicorp Investment
Jul. 88	Hellespot Tankers	$.25m**	$ 30m	private	Chase Manhattan Bank Drexel Burnham Lambert
Aug. 88	B+H Ocean Carriers	$10	$ 60m	AMEX	Merill Lynch C.M. Furman Selz M.D. & B. Mabon, Nugent & Co.
Dec. 88	Global Ocean Carriers	$15	$ 45m	AMEX	Merill Lynch C.M. Blunt, Ellis & Lowei
Feb. 89	B+H Maritime Carriers	$15	$ 45m	AMEX	Salomon Brothers Inc. Mabon, Nugent & Co.
May. 89	Nortankers	$15	$ 79m	AMEX	Smith Barney, H.U. & Co. Mabon, Nugent & Co.
May. 89	MC Shipping	$15	$ 45m	AMEX	Salomon Brothers Inc.
Jun. 89	Red Sea Tanker Fund	$.25m**	$ 42m	private	Chase Manhattan Bank Nat. Commercial Bank
Jun. 89	Anangel-American Shipholdings	$ 16.5	$ 107m	Lux-ADS; NASDAQ	Shearson Lehman Hutton Furman Selz M.D. & B. Mabon, Nugent & Co.
Aug. 89	Bay Ocean A Carriers	$15 E	$ 50m	AMEX	Donaldson L. & Jenrette

Table 2.2 Stock Offering Particulars continued

OFFERING PARTICULARS					
Issue Date	**Company**	**Offer Price**	**Amount***	**Stock Market**	**Underwriters/ Sponsors**
Oct. 89	Jason A Overseas	$15 E	$ 75m	AMEX	Smith Barney, H.U. & Co. Mabon Nugent International
Nov. 89	B+H Crude A Carriers	$15 E	$ 60m	AMEX	Salomon Brothers Inc. Prudential-Bache C..
Dec. 93	Maritime Inv. Fund Limited	$10	$ 45m	Oslo	Nomura International plc DnB Fonds AS
93	First Olsen Tankers Ltd.	N/A	N/A	Oslo	Fearnley Fonds A/S
Mar. 94	Viking Star A Shipping Inc.	$ 17 E	$ 240m	NYSE	Morgan Stanley & Co. Goldman, Sachs & Co. Smith Barney Shearson Inc.
Apr. 93	Astro Tankers A Limited	$14 E	$ 70m	NASDAQ	Lehman Brothers Furman Selz Inc.
Apr. 94	Strinzis Lines S.A.	Drs. 1,250	Drs. 453.8m	ASE	Barcleys Bank PLC Commercial Bank Citibank, Employment Bank E.T.E.B.A., Hios Bank E.T.B.A., Ionian Bank Euro Invest. Bank

* Includes promoters' equity participation
A: Aborted
E: Estimated
** The stocks were sold privately in "chunks" of .25m dollars
Source: Grammenos,. and Deere, "International and US Initial Public Offerings and private Placements of Equity for Shipping Investments, from 1987-1989", City University Business School, 1992.

Table 2.3 Publicly quoted shipping companies in 1994

Publicly Quoted Shipping Related Companies by Principal Market Trading in September 1994

MARKET	COMPANY	MARKET	COMPANY
Norway	A/S Ganger Rolf	**United**	Alexander & Baldwin
	A/S Hav	**States**	American President Cos
	Actinor Shipping		Anangel-American
	Awilco A/S		B+H Maritime Carriers Ltd.
	Belship Co. Ltd. Skibs-A/S		B+H Ocean
	Benor Tankers		BT Shipping
	Bergensen Dy A/S		Carnival Cruise
	Bona Shipholdings Ltd		Chiles Offshore
	Bonheur		CSX Corporation
	Borgestad		Global Ocean Carriers
	Far Shipping		International Shipholding
	Hafslund Nycomed		Corporation
	IM Skaugen		Kirby Corporation
	Kvaerner a/s		Maritrans LP
	Leif Høegh & Co		MC Shipping
	Mosvold Shipping		OMI Corp.
	Nomadic Shipping A/S		Overseas Shipholding Group
	Norwegian American Lines		PLM international Inc.
	Smedvig A/S		Reading & Bates Corp.
	Stolt Comex Seaway		Rowan
	Stolt Partners S.A.		Royal Caribbean Cruises
	Storli A/S		Sea Containers Ltd.
	Vard A/S		Seacor
	Western Bulk Carriers		Stolt-Nielsen
	Wlh. Wilhelmsen		Tidewater Inc.
	Maritime investment Fund		Todd Shipyards Corp.
Belgium	CMB		

Table 2.3 Continued

MARKET	COMPANY	MARKET	COMPANY
Netherlands	Nedloyd	**Sweden**	Argonaut
	Van Ommeren Transport		Bilspedition
	& Terminals		Bylock & Nordsjofrakt
United	Lasmo plc		Concordia Maritime AB
Kingdom	London & Overseas		Frontline
	Freighters PLC		ICB Shipping
	P & O		Nordstrom & Thulin
Canada	Algoma Central Marine		Reteri AB Gotland
	Viking Star		Stena AB Group
Denmark	Burmeister & Wain A/S		Stena line
	BurWain Tankers		United Tankers
	D/S 1912		Wallenius Lines
	D/S Motortramp	**Japan**	K. Line
	D/S Norden		Kawasaki Heavy Industries
	D/S Orient		Mitsui OSK
	D/S Svendborg		NYK Line
	D/S Torm		Sumimoto Heavy Industries
	DFDS A/S	**Malaysia**	MISC
	East Asiatic Co. Ltd. A/S	**Mexico**	TMM
	J.Lauritzen Group	**Thailand**	Jutha Maritime
Finland	Birka Line AB	**Republic**	Evergreen Marine Group
	Eff John Oy Ab	**of China**	
Germany	Bremer Vulkan	**Singapore**	Far Eastern Levingston
	Hapag Lloyd		Hai Sun Hup
Greece	Dane Lines		Keppel Corporation
	Strinzis Lines		Nepture Orient Lines
Hong Kong	IMC Holdings		Pacific Carriers
	Orient Overseas Ltd.		Sembawang Shipyard Ltd.
	Wah Kwong Shipping Ltd.		Straits steamship Land

Table 2.4 Bond Offering Particulars

BOND OFFERINGS

Company	OMI Corporation	Eletson holdings	Transp. Maritima Mexicana	Transp. Maritima Mexicana
Issue Date	10/27/93	11/19/93	10/7/93	5/5/93
Issue	10.25% Senior Notes	9.25% Mtg Notes	8.50% Senior Notes	9.25% Senior Notes
Ask	100	100.5	100.5	101.5
Size	$170MM	$140MM	$150MM	$150MM
Maturity	11/1/03	11/15/03	10/15/00	5/15/03
Rating	B1/B	Ba2/BB	Ba2/BB-	Ba2/BB-
Sinking Fund	None	None	None	None
Call Date	11/1/98	11/15/03	NC-L	5/15/98
Call Price	105.125	104.625	N/A	104.625
YTFC	11.11%	9.91%	N/A	9.72%
YTM	10.25%	9.17%	8.40%	9%
Underwriter	Goldman Sachs, Citicorp	Citicorp	Bear Stearns, Chase , Securities, Citicorp	Bear Stearns, Goldman Sachs

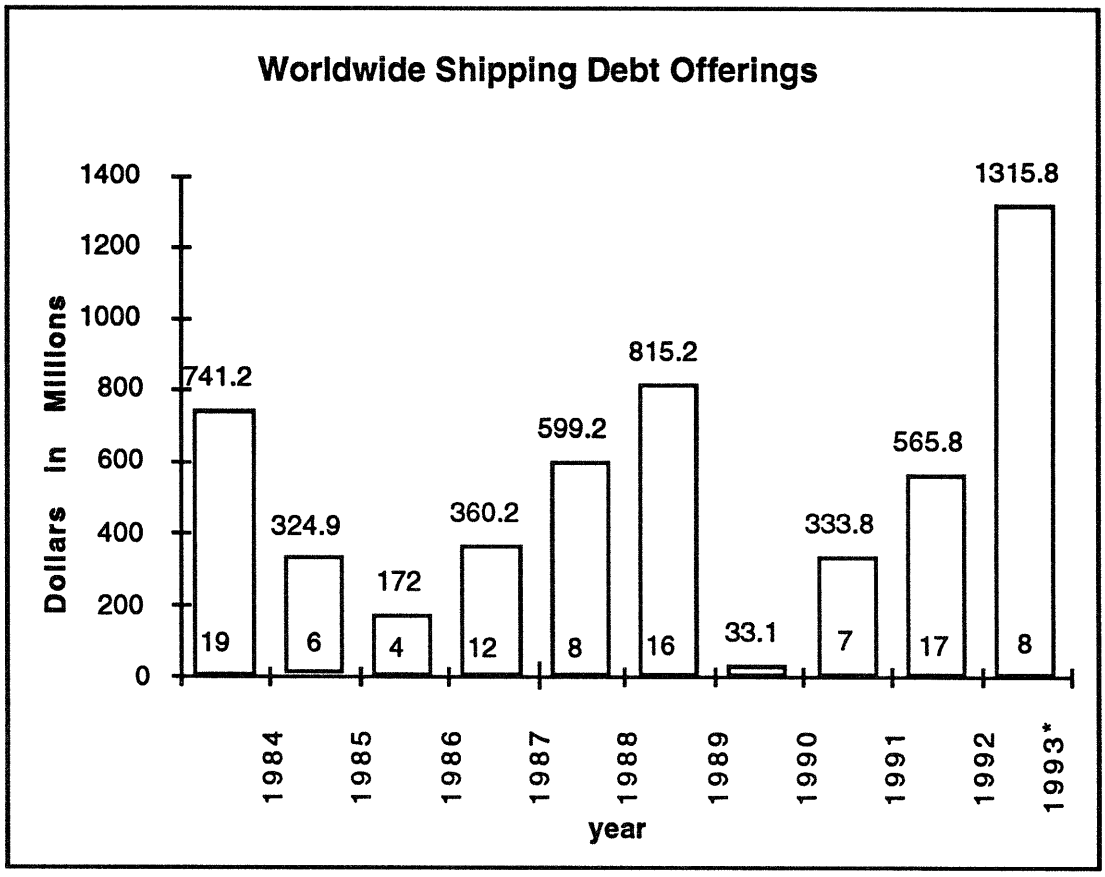
Table 2.4 Continued

Company	International Shipholding	Viking Star (Teekay)	Overseas Shipholding Group	Overseas Shipholding Group
Issue Date	7/1/93	7/8/93	9/29/93	N/A
Issue	9% Senior Notes	9.63% Mtg Notes	8.75% Senior Debts	8% Senior Notes
Ask	100	N/A	102.5	101.5
Size	$100MM	$175MM	$100MM	N/A
Maturity	7/1/03	7/15/03	12/1/13	12/1/03
Rating	B1/BB-	Ba3/B+	Ba1/BBB-	Ba1/BBB-
Sinking Fund	None	$25MM	None	None
Call Date	7/9/93	7/15/98	Make-Whole	Make-Whole
Call Price	103.375	104.813	N/A	N/A
YTFC	9.64%	N/A	N/A	N/A
YTM	9%	N/A	8.48%	7.77%
Underwriter	N/A	N/A	Goldman Sachs & Co., Chase Securities, Inc., Citicorp	Chase Securities Inc J.P. Morgan

Source: Morgan Stanley

Source: Articles and Company financial reports

Figure 2.1 Worldwide Shipping Debt



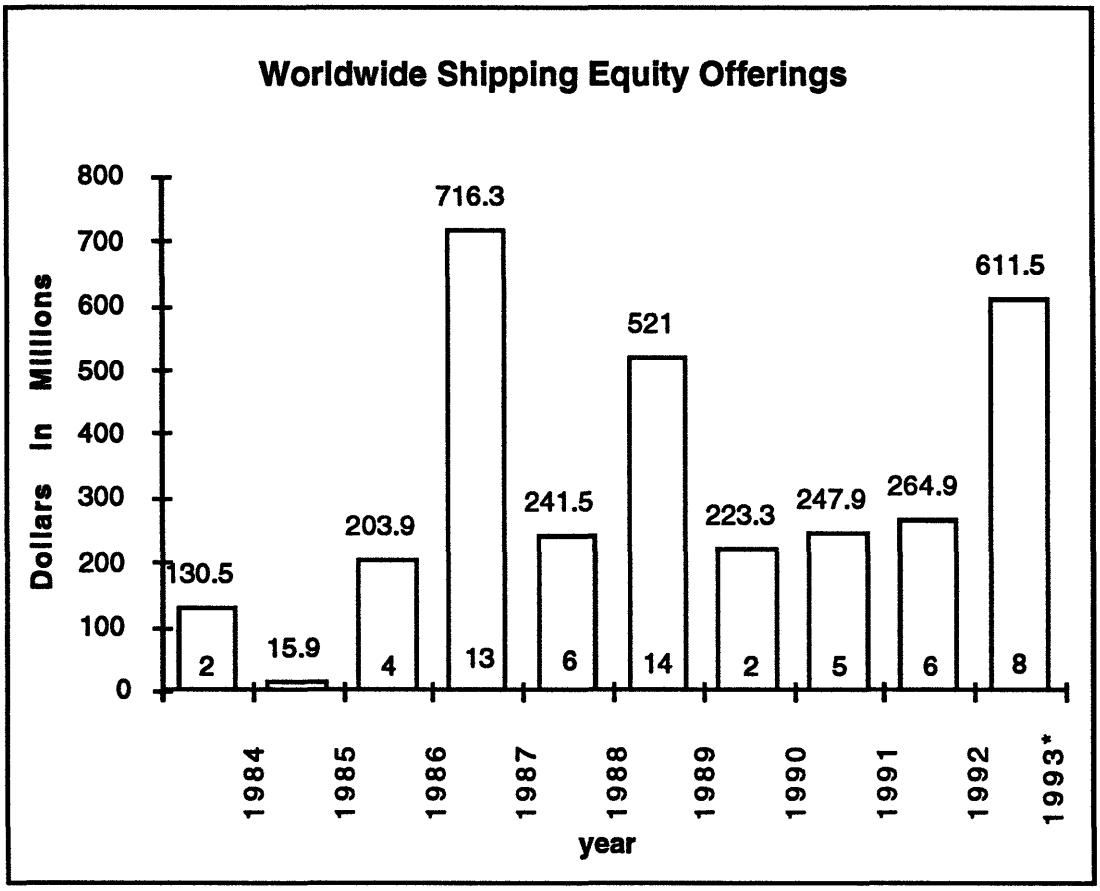
Note: Including Non-Convertible Public and Private Debt

* Through August 1993

Number inside bars represent the number of firms

Source: Salomon Brothers

Figure 2.2 Worldwide Shipping Equity Offerings



Note: Includes Common Stock, Convertible Debt and Preferred Stock

* Through August 1993

Number inside bars represent the number of firms

Source: Salomon Brothers

Chapter 3

Theory behind Private Placements and Public Offerings

When shipowners consider raising additional funds in the capital markets through either a debt or equity offering, they can choose between a private placement or a public offering. A private placement is a private sale of unregistered equity or/and debt securities to a relatively limited number of private or institutional investors. A public offering is a more regulated form of private placement and is the securitization of debt or/and equity which will be available publicly in one or more stock exchanges. The companies trying to raise the capital could be listed already in a stock exchange or are about to be listed.

Debt offerings have been limited in relation to their equity counterparts even though there was a surge of those issues during 1993 because of the low interest rates prevailing in the U.S. during that period. Shipping equity offerings come mainly in two forms. One is the form of an already established shipping company which wants to raise equity through the capital by either issuing new shares or selling the existing shares of the current owners to the public. The other form is a separate newly established shipping entity usually referred to as a shipping fund, which is financed through the fundraising initiated by the promoters. Such funds are typically used for speculative gains primarily from increase in asset value and are mostly in the form of private placements. But the tendency lately shifts toward the former type of offerings because the experience so far has shown that this type of approach is better suited for any offering. This will be discussed in great detail in **Chapter 4**.

Finally, there are some advantages and disadvantages to both equity and debt placements and between private placements and public offerings.

The next section will attempt to discuss the pros and cons of these issues and try to determine what kind of company is suited for any or both of these fundraising instruments and what makes an equity preferable to a debt offering for a particular company.

3.1 Bond Offerings

As discussed previously, debt offerings from shipping companies seem to be a good alternative to bank term loans. But as the following discussion will show, the companies which would most probably succeed on a debt placement are those that could get the best terms on a bank loan.

There are three main groups that can benefit (or lose) from a debt placement. These are the existing shareholders, the investors i.e. the bond holders, and to a lesser extent the financial institutions including banks, investment banks, brokerage firms and other firms involved in the transaction either implicitly or explicitly. What follows is first a comparison of debt offerings to equity offerings and term loans as these affect the company's existing shareholders. Then the most important advantages and disadvantages of debt offerings are presented to both investors and financial institutions.

a) The Company's Existing Shareholders

Advantages Over Equity

• One major advantage of debt over equity offerings is the retention of control that could be lost if an equity placement which involves the majority of shares takes place.

• In contrast to a public offering of securities, in a private placement of debt there is no requirement to file with the Securities and Exchange Commission any detailed financial information regarding the operation of the shipping company which is about to be listed, although for accounting purposes financials must be prepared in conformity with U.S. GAAP. Moreover, detailed financial information has to be disclosed to the investment bankers involved in the transaction and the purchasers of the privately placed debt, but the widespread dissemination of the issuer's financial information is avoided.

• In a debt offering, there is a known Cash Flow outlay in contrast to an equity offering where dividend payouts are not and cannot be strictly planned ahead.

• The transactional costs in the form of investment banking fees and expenses are usually lower in the case of a debt placement than in an equity placement. In fact, in some private debt placements, especially those of smaller size, no underwriting fees are paid. This is due to the fact that the risks involved in placing a debt of a privately held company in which there is no initial market are so high that no underwriter desires to take them. In such a case, the borrower bears the risk of placing the debt and the underwriters act merely as agents. This does not mean that preparing a memorandum for a private placement is not costly. Such a memorandum can rise to a level of detail that may be similar to that of a public offering prospectus, especially with a 144A type of placement. This is a very particular

type of placement to be discussed latter. Nevertheless, transaction costs overall are less for a debt offering than for a stock offering.

• In the US where there are tax exemptions on profit or loss of debt interest, it is assumed that debt is a better solution for the owners than equity. However, because usually low or no taxes are paid by shipping companies in general, this advantage might not be relevant in the shipping industry. Particularly in Greece, according to Public Law 2065/92, which applies only to the shipping industry, shareholders are free of any tax burdens.

Disadvantages Over Equity

• The limited number of purchasers available in a bond offering is a major disadvantage for bond offerings. Due to the typically low credit ratings of shipping companies, some potential lenders particularly in the U.S., may be prohibited by law to purchase such debt. U.S. pension funds for example are one of them. Moreover, according to Federal Reserve Bank statistics, forty percent of the debt placed in the U.S. market in 1991 was held by five insurance companies[6] and seventy percent of all privately placed debt was held by twenty insurance companies But not all twenty of these institutions do purchase shipping debt because U.S. state regulations allow only a certain portion of speculative investments to be included in insurance companies' portfolios. In particular, in June, 1990, the U.S. National Association of Insurance Commissioners made the rules which deal with the credit quality of the investments of insurance companies stricter[7]. Consequently, a BB rated bond, which was considered investment grade when purchased in 1990 is, as of January 1, 1994, considered a speculative investment. However, this applies only to the U.S. insurance companies and there remains a fairly large market abroad that might be interested in shipping bonds.

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[6]78 Federal Reserve Bulletin, February, 1993, pg. 80.
[7]Id at pg. 85

Advantages over Term Loans

- Both debt placement transaction and overall costs are less than standard bank debt financing costs. The typical one-vessel corporation bank financing with a preferred mortgage, assignment of earnings and insurance, along with parent or cross-guarantees, all of which are repeated over multiple transactions, can produce significant transactional costs. In contrast, the cost of debt placement in the U.S. is usually less. The two main exceptions are the public registrations with the U.S. Securities of Exchange Commission of debt placements in excess of US $5,000,000 which are of Section 4(2) of the Securities Act of 1993, as amended and Rule 506. For such offerings the overall costs may turn out to be higher than bank loan costs. But as the amount of funds to be raised increases, debt placements have a transactional cost advantage over traditional bank debt finance.

- On the other hand it appears that, at least some of the recent debt placements carry a financial cost well in excess of standard bank financing[8] and that the principal factor driving the transaction may simply be access to a level of debt financing not attainable from banks. So the greater maturity of the debt placements which is not offered by bank loans and which may coincide with the wide shipping investment horizon explains why the financial costs may be higher.

- The flexibility of a debt placement compared to that of a term loan can generally be seen as another advantage of public debt. The ability to tailor a placement to the needs of the issuer, for example, bullet payment provisions which are quite uncommon in bank debt, provides an advantage over bank loans. Also advantages over bank loans are the existence of subordinated debt as well as the ad hoc basis of debt offerings according to the relevant market conditions and the issuer's needs. But on the other hand we could argue that problematic bank loans are easier to restructure than debt placements. The impersonal structure of bonds, as opposed to the closer lender-borrower relationship of tailor-made term loans eliminates the prospect of work-outs

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[8] Mark M. Jaffe, Debt Placements, the pros and cons for shipping companies, Proceedings of the 6th International Ship Finance Conference, 1993

in debt servicing difficulties. Bond issuing may also prove to be more inflexible due to wider commitment and maturity and the bullet payment may turn out to be an excessive burden. Whether the ability of tailoring a debt placement to the needs of the issuer outweighs the advantage of being able to restructure a problematic bank loan is company specific and depends on various company as well as shipping market factors. It is however perceived that the downside risk of not having the ability to restructure a problematic bond loan is too high for many shipowners to even consider issuing corporate bonds.

- Another reason why debt offering is superior to term loans is that the amounts that can be raised through bond issues are much greater than through term loans when there is no syndication involved as it was briefly mentioned earlier.

- The publicity and prestige that come along with a bond offering are also incentives to prefer it over term loans. Few could argue that Eletson corporation did not gain from the publicity of its offering.

Disadvantages over Term Loans

- Although it was mentioned earlier that there is some flexibility in the structuring of a debt placement, there are some restrictions imposed on the borrower by the market. For example, insurance companies, which pose a substantial market for debt offerings, typically seek to match the duration of their investments to the duration of their liabilities. Since these liabilities are typically long range, a shipping company not interested in issuing debt with long term maturities might not find debt placements better than bank term loans.

Other restrictive terms of debt placements are the substantial repayment penalties in order to discourage re-negotiation as was discussed earlier. This is in sharp contrast to the flexibility and low repayment penalties usually associated with bank debt.

Finally the restrictive financial covenants in a private placement are another drawback for the issuer. The ability to adjust covenants in debt placements and to allow an issuer to ride out a storm is far different than in the case of traditional bank financing.

b) Investors (Bondholders)

Advantages and Disadvantages

• Holding bonds is less risky than holding stocks of a company since the company has an obligation to pay interest and principal to bond holders whereas it has no legal obligation to pay dividends or achieve capital gains for its stockholders.

• Since 1990, when the U.S. government fostered the creation of a secondary market in privately placed debt by the promulgation of Rule 144A, private debt placements of this type gained another advantage over the highly illiquid resale market for shipping bank loans. In particular, under Rule 144A, securities not registered under Section 5 of the U.S. Securities Act of 1993, as amended, may be resold or offered for sale to a "qualified institutional buyer" or to a purchaser that the seller reasonably believes is acting on behalf of a "qualified institutional buyer"[9]. As a result, some debt offerings that have not been through all the trouble of preparing financial statements and disclosing information that a public disclosure entails, could be sold to "qualified institutional buyers" who are considered to be institutions sophisticated enough not to need the vast public disclosure required by the Securities and Exchange Commission. Such buyers are any insurance company, investment company or employee benefit plan that "in the aggregate owns and invests on a discretionary basis at least US$100,000,000 in securities of issuers that are not affiliated with the entity"[10].

An added feature of the liquidity of this market has been the development of the automated "Private Offerings, Resale and Trading through Automated Linkages (PORTAL) Market". PORTAL is an automated system similar to the U.S. NASDAQ trading system and provides its users

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[9]17 U.S. Code of Federal Regulations Section 230.144(d)(4)(i)(1992)
[10]17 U.S. Code of Federal Regulations Section 230.144A(a)(1)(i)(1992)

with computer terminal access to this market. It also creates a secondary market by matching buyers and sellers of debt.

Another pending legislation before the U.S. Congress entitled Financial Asset Securitization Investment Trusts Bill ("FASIT"), could also be significant in increasing the liquidity of shipping debt. This bill would allow the establishment of investment trusts holding a bundle of privately placed debt that could be sold off to the U.S. public. Such asset-backed securities would further foster liquidity in the debt placement market since the package of debt placements backing the securities would represent a variety of shipping companies in a variety of sectors, thus minimizing the default of any one issuer.

- The information shortage on the merchant shipping industry is a problem for any potential bondholder in that industry. Unfortunately, in contrast to cruise and container shipping which are closely analyzed by Wall Street and other Stock Markets, bulk trading companies are part of an idiosyncratic industry unfavorable to outsiders. When such companies become borrowers, often referred to as "information problematic borrowers"[11], they impose an excess burden to lenders who have to make their own credit evaluations which possess an extra cost to the borrower. For certain borrowers the information shortage is such that it all but forecloses access to the investment banks and financial institutions in the debt market.

- Given the fact that because of the nature of the shipping industry debt offerings typically have low rating, there is a risk of insolvency for this type of offerings. The recollection of the U.S. junk bond market is a warning for both lenders and borrowers of this market.

- The lack of anonymity and confidentiality and its effects on the exposure of a corporate group is another disadvantage for any potential institutional investor. The grouping of companies necessary to structure a debt placement and the disclosure required in particular when this is a rule 144A placement puts these companies in danger of a catastrophic loss. In such

[11]78 Federal Reserve Bulletin, February 1993, "Recent Developments in the Market for Privately Placed Debt", pgs. 77-92, pg. 79.

a case, claimants and tax authorities can easily find all the information they need about those companies to destroy them completely.

- An advantage of shipping bond offerings over other transportation industry offerings is the existence of an International Law of the Seas, which provides for a legal route for solving disputes both on a national and international level whereas for example there is no such law for the Airline industry. As a result, if a legal issue becomes a reason for a misunderstanding between investors and promoters, it might be resolved because of the existence of the International Law of the Seas. However, the International Law of the Seas is not always enforceable, but still, it can still be used to resolve disputes of issues related to shipping.

c) Bankers, Investment Banks and other Parties Involved

Advantages and Disadvantages

- It could be surmised that for bankers, debt offerings pose a form of "competition" since they are an alternative to bank loans. However, debt offerings are usually the preferred way to go when it is impossible to secure good bank term loan deals. As a result, bond offerings cannot really be considered a disadvantage to bankers.

- As it was mentioned earlier, the new Capital Adequacy Rules endangered the jobs of those involved in shipping bank loans. However, bond offerings provide an advantage both to the specially trained personnel, who are less at risk of being used inefficiently or being laid off as well as to the banks which can profit from the fees associated with such bond structurings.

c) Concluding Remarks on Bond Offerings

So far some very important issues have been addressed but have also led to some interesting questions. Will debt placements play an important role in financing shipping in the future or is the new generation of shipowners going to stick to the traditional banking loans? Even though it seems that no significant contribution to shipping finance will come from bond offerings, the answer lies with the willingness of the new generation of shipowners to restructure their shipping interests in such a way so that debt offerings will be easier to place. The extent to which shipping debt can be securitized to a broad spectrum of investors will also play an important role in answering this question.

3.2) Equity Placements

a) The Company's Existing Shareholders

Advantages

- The main advantage of equity over debt placements is the reduction of financial risk which can be substantial in such placements. In a stock offering the issuers have no obligation to the shareholders whereas they are required to pay bondholders both interest and principal. However, the drawback is that in case the investment's rate of return is greater than expected, part of the gains have to be distributed to the stockholders. In the case of bond offerings, abnormal gains don't have to be shared with the lenders. Moreover, capital gains, i.e. the increase in value of the shares because of the company's good performance, do not have to be shared with bondholders either.

- If it is assumed that economies of scale exist within a shipping company, the increased profitability that comes both from the funds raised through an equity offering and from the additional bank debt that can be generated due to the reduction in gearing, is an advantage of equity placements. However, some shipowners may argue that there are no increasing returns to scale for shipping companies after some point. Their argument is based on the relationship between number of vessels and net earnings. An attempt is made in **Chapter 7** to quantify this view based on a model that determines whether the number of vessels owned has any effect on the performance of the company's shipping stock price. The results of the model suggest that there is a positive relation between the stock prices of shipping stocks and the number of vessels owned by a company.

- As in the case of debt placements, a successful private or public stock offering, will increase the prestige, reputation and market coverage of the issuing company due to the global presence and corporate expansion potential of most shipping related stock exchanges. Nevertheless, an unsuccessful listing could have negative consequences both for the issuer and the stock market handling the listing. Greek stockbrokers and bankers believe that an unsuccessful stock listing of a merchant shipping company in the Athens Stock Exchange (ASE) could lead to the collapse of the whole ASE since it is currently too small to handle investments like those required by merchant shipping companies.

- Shares offered as incentives to employees, is another advantage of stock offerings since this action may improve the performance of the company.

- "Playing with other people's money" is another advantage of existing stockholders because first it enables them to expand their business without tapping into their private funds and second to enjoy some of the profits from this investment. It should be addressed here that typically, the existing stockholders of a shipping company are also the managers of that company. As a result, when the former want to raise funds for a project they have in mind, they take advantage of those funds to invest and gain from their ideas through management fees and the ability to invest in a project otherwise not feasible because of the lack of funds.

Disadvantages

- The loss of control that could result by a stock offering is a major disadvantage for the original shareholders. The issuing firm becomes more closely observed and its management starts receiving influences from the new shareholders. Given the nature of the shipping industry where the decisions are often based on instinct and experience rather than on analytical calculations, problems may arise and bad decisions may be taken because of the influence of the new shareholders on management. On the other hand, if management is let completely free to act as it wishes, it may act on its own best interest rather than on the shareholders best interest which sometimes

do not coincide. In fact, this disadvantage has been the main reason why most shipowners have avoided the stock market so far, in particular, Greek shipowners who are known for the closed family nature of their business.

- The loss of privacy that follows when a shipping company goes public is another major disadvantage that has restricted companies from doing so for so many years. The listing disclosure requirements needed by most Stock Exchanges of the world but in particular those posed by the U.S. Security of Exchange Commission, limit the appeal of stock offerings. However, the view that shipping companies should become more corporate and publicly accessible is shared by many. Sooner or latter the new generation of shipowners will have to realize that it is no longer possible to conduct business without preparing detailed financial statements. The increased awareness for the environment and the continuously increasing safety issues are reasons why shipowners should also disclose more than they used to in order to make people trust their vessels for their transportation needs.

- High underwriting costs, management and advisory fees, sales and legal fees as well as paper work and road show costs is another area where equity placements have a disadvantage over bond offerings or term loans. Also the time needed by the managers for road shows and information distributing is substantial and was mentioned as a problem by some shipowners whose companies are already listed in a stock exchange. Moreover, it can be very costly to satisfy sponsors and underwriters because of the increased risk of such a venture.

- A tax disadvantage, at least in the U.S., is also another problem of an equity placement compared to a debt placement. In fact, equity dividends are not tax allowable for the company owners as opposed to debt interest. Nevertheless, the importance of the tax issue on this matter depends on the dividend policy of the company. If no dividends are paid and all investors' profits are realized as capital gains, tax considerations are unimportant. Moreover, depending on the country and the laws of a particular stock exchange the tax allowance on debt interest might not be a disadvantage for equity placements. In Greece for example, where shipping companies are

practically tax exempt, there is no tax advantage to a company if it issues bonds instead of stocks

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b) Equity Investors

Advantages and Disadvantages

• The potential profitability of shipping equity stocks is the main reason why any investor would be interested in such an investment. However, looking at the severe cyclicality of the shipping industry, the investor hopes for an extreme profit rather than an extreme loss when he/she considers acquiring shipping stocks. Therefore, the same argument can be used as a prime risk if the timing of the shipping stock purchase is bad and the offering turns out to be unsuccessful.

• Equity offerings enable shipping stock investors to have access to an otherwise closely held and difficult to enter industry. They also provide an opportunity for small, unsophisticated individual investors to enter this industry regardless of their financial background. This is an important issue in countries such as Greece and Norway, where the shipping industry is not only a major part of the country's economy, but of its culture as well.

• The lack of information about the shipping industry is a disadvantage to investors in shipping stocks Unfortunately, in contrast to cruise and container shipping which are closely analyzed by Wall Street and other Stock Markets, bulk trading companies are part of an idiosyncratic industry unfavorable to outsiders. As it was also pointed out in the discussion on debt offerings, such companies may impose an excess burden on stockholders who have to make their own credit evaluations at an extra cost.

• The low liquidity of shipping shares is another disadvantage to investors. Unfortunately, given the structure of the shipping industry and looking at the performance of already public shipping companies, it seems that the resale market of shipping stocks is very restricted because of the lack of investors interested in that kind of stocks. As a result even publicly traded stock investors have to incur the risk of not being able to sell their stock when they want to because of the lack of buyers.

- The existence of an International Law of the Seas suggests that there is a global legal framework for this industry. Even though this Law is not always enforceable, it is possible that such underlying legal support combined with a single currency for all shipping transactions, the dollar, could lead to the creation of an international shipping stockmarket.

- In Greece, where banks are allowed to own brokerage firms, investors should take into consideration the fact that there might be what is referred to as the "inside" information problem since the brokerage firm owned by the bank may have access to information that other brokerage firms, shareholders and the public cannot obtain before that information becomes publicly available. In the U.S. this is illegal and underwriting is done only by large investment banks which cannot act as commercial banks.

c) Bankers, Investment Banks and other Parties Involved

Advantages and Disadvantages

• Banks and bankers already involved in shipping may gain from equity offerings as follows. First of all, because of the reduction of gearing brought by equity offerings, banks will have the option to lend more to their existing customers if the latter went public, without needing to spend time and money to analyze the companies of potential new customers. Moreover, the publicly available information resulting from public offerings can also be used also by bankers at no extra cost. Also, banks not previously involved with shipping, can enter this industry more easily if they want to, due to the availability of this information. The surge of new German and Norwegian banks in the port of Pireas in Greece is facilitated by the fact that shipping has entered the capital markets.

Chapter 4

Startup Projects versus Perpetual Companies

As discussed in the beginning of this work, there are two ways to raise money through the capital markets. The traditional way up to 1987 was to enter the market as a perpetual shipping company in order to list or expand the existing businesses. However, since then a new investment vehicle was designed because it was thought that it could facilitate outside investment in the shipping industry. This is the Limited Life Shipping Fund type of company, which is set up for the purchase of shipping assets via a network of single-shipowing subsidiaries.

Since 1987, there have been many companies of this type listed in the equity markets. These issues were both private placements and public offerings, information for the latter being more readily available. **Table 4.1** lists some of the companies of this type that are listed since 1987 together with various information about those listings.

There are various reasons why this instrument was "invented", which become clear upon examination of the similarities of all those placements. First of all, most of these companies experience tax efficiencies which allow its investors to pay negligible taxes on earnings. This is achieved by these companies incorporating in offshore locations, as a result they have a tax advantage over their "onshore" shipowner competitors.

Table 4.1 START UP COMPANIES 1987-PRESENT

Issue Date	Company	Offer Price	Amount*	Stock Market
Jun. 87	Anangel-American	$10	$ 89m	Lux.
Sept. 87	B+H Bulk Carriers	$10	$ 20m	NASDAQ
Sept. 87	First Olsen Tankers	$.25m	$ 47m	private placement
Jul. 88	Hellespot Tankers	$.25m	$ 30m	private placement
Aug. 88	B+H Ocean Carriers	$10	$ 60m	AMEX
Dec. 88	Global Ocean Carriers	$15	$ 45m	AMEX
N/A	KFH Olsen Tankers A	N/A	$30m	private placement
Feb. 89	B+H Maritime Carriers	$15	$ 45m	AMEX
May. 89	Nortankers	$15	$ 79m	AMEX
May. 89	MC Shipping	$15	$ 45m	AMEX
Jun. 89	Red Sea Tanker Fund	$.25m	$ 42m	private placement
Jun. 89	Anangel-American	$ 16.5m	$ 107m	Lux-ADS;
Aug. 89	Bay Ocean Carriers A	$15 E	$ 50m	AMEX
Oct. 89	Jason Overseas A	$15 E	$ 75m	AMEX
Nov. 89	B+H Crude Carriers A	$15 E	$ 60m	AMEX
Apr. 89	BT Shipping	$10	$55m	private/NASDAQ
Apr. 93	Astro Tankers Limited A	$14 E	$ 70m	NASDAQ
Dec. 93	Maritime Inv. Fund Ltd.	$10	$ 45m	Oslo

* Includes promoters' equity participation
A: Aborted
E: Estimated

The most important similarity of all those funds was their limited life expectancy since they all included in their prospectus the following clause The management would liquidate the company and distribute all proceeds to shareholders within five to seven years from the company's inception, unless the shareholders voted otherwise. There are various explanations why such a trend persisted.

These companies were constructed for asset players who aimed at short-term profit rather that part-ownership of a shipping company with long-term profit goals. For this type of investor the timing of the issue and of the purchase of the assets is the crucial factor. Investors in this case will expect to see the purchase of secondhand vessels that stand a good chance of appreciation and will not necessarily expect high liquidity or steady income in terms of dividends. This is also why most managers of such funds purchased aged tonnage which would not be worth more than scrap after five to seven years anyway, making the investment liquid by itself, compensating for the expected illiquidity of the resale market for those stocks. Besides, most of these companies had a policy of not allowing funds to be reinvested but to be paid out as dividends, making steady dividend payout ratios impossible to begin with.

An exception to this "rule" was Anangel-American which had a policy of not buying vessels of more than seven years of age and was allowed to reinvest up to two-thirds of its net income. Maybe this is the reason why the investors decided with a dissolution vote in the final quarter of 1992 not to liquidate the company, but to let it go on as a perpetual company. And looking at the performance of Anangel-American compared to the other similar "funds", it might be suggested that it has performed better than any one of them by far. A possible explanation for this might be its policy of not buying aged vessels and allowing for reinvestment. Moreover, the Astro tankers fund which was attempted by the same company, but included very old tankers, did not succeed even though it was also offered by the Angelicousis group.

We could, however, argue that there were more problems associated with this offering besides the old age of the vessels. One of them was that the Angelicousis group does not have a history of managing tankers. Another problem was the bad conditions of the stock market for any IPO at that time. Finally, other major factors which contributed to the failure of this offering were the more restrictive regulations imposed on tankers and the great uncertainty at that time of the tanker industry.

But why was this "limited life" type of fund a necessary ingredient for these companies? What made the provision of liquidating the company after five to seven years so important? For the private placements the answer is that this provision gave a clearly-defined exit for investors for their illiquid investment. But for the public offerings, where the stock market gives an instantaneous means of exit, this is not such a valid answer. However, the fact that there is heavy discounting of asset values in shipping stocks could be a reason why such limited life funds were issued in the public markets.

There also exist many differences between these funds which, if examined carefully, could provide present investors with important clues for evaluating present opportunities. These differences could also indicate to shipowners what they should avoid and how they should proceed if they want to tap the capital markets.

The most important difference was whether these companies were placed privately or publicly. The trend was that the issuers that had no major equity resources turned to the public markets whereas the majority of well-established and cash rich owners went to the private placement markets. The most probable reason for this trend is related to the fact that typical private placement investors require and expect some equity participation by the management team. Since this type of investors consist of high net worth individuals, in order for shipowners to be able to invest in these funds they have to be high net worth individual also. Besides, since it is cheaper in terms of fees and other costs to have a private placement rather than a public offering there is no major reason why a well established shipowner would not prefer such a placement while at the same time avoiding the higher level of disclosure required for a public offering. However, Mr. Kanellakis, the president of Anangel-American, stated that if a company wants to succeed in the stock market it should do it "through the front door", i.e., fulfill all the requirements needed for a public offering. The good performance of Anangel-American suggests that it might be wise to take his advice.

Another difference among these funds is apparent in **Table 4.2** which shows the management's original stake in some of these companies. It is clear that Anangel-American was the only company that had a substantial equity

participation which may be another reason why it has done so much better compared to the other publicly traded start-up companies. However, the main reason for the 100% contribution of "B" type shares was that according to the Greek law a shipping company had to be at least fifty percent owned by Greek nationals if it's vessels were to fly the Greek flag. Therefore Anangel was "forced" to buy those shares if it wanted its vessels to fly the Greek flag. But, since the change of the law in 1994, the Angelicousis group decided it would trade these shares in the public equity markets. It is not known yet how investors will react to this action, but the result will serve as an indication on how important the owner's equity participation is in a public offering.

In the case of privately placed funds, Fred Olsen contributed U.S.$15 million of the U.S.$50 million equity in first Olsen and U.S.$5 million of the U.S.$25 million KFH Olsen. Papachristidis contributed 25% of both the U.S.$24 million raised by Hellespot Tankers and the U.S.$40 million contributed to Red sea, while Goulandris underwrote U.S.$10 million of the U.S.$100 million raised for International Tankers Limited.

Another important difference is the composition of the board of directors of these companies, some of them having board representation by the investment bank that had undertaken the original placement or by some retired shipping bankers while others being run exclusively by the promoters.

Although all of those companies had conservative debt policies, these policies varied from 65% gearing in the most aggressive cases to zero. Also there were differences in the quality of the vessels acquired which became apparent latter in time, when investors realized the importance of good maintenance of assets for a shipping company.

An attempt will be now made to try and answer such questions as what was the contribution of bankers to this trend, was the phenomenon a success or a failure, are we going to see more of this type of offerings in the future and if yes, how different will they be from the companies already listed?

Table 4.2

INSIDE OWNERSHIP OF PUBLIC STARTUP SHIPPING COMPANIES

COMPANY	% ownership	comments
Anangel-American		
"A" shares		
AMEX	18%	
ASGL	0%	
""B" Shares		
ASGL	100%	Greek law
B+H Bulk Carriers		
Insiders	2%	
B+H Maritime		
Insiders	0%	
B+H Ocean		
Insiders	11.50%	Contributed as profit on transfer of vessel
BT Shipping		
Furman Selz	10%	
Leehman	0%	
Insiders	1%	
Global Ocean Carriers		
Insiders	2.50%	
MC Shipping		
Insiders	1%	
Other "V" Group Companies	unknown	"V" refers to companies that help in the management of the fund
Nortankers		
Insiders	7%	Contributed as profit on transfer of vessel

Source: Bloomberg Database

Since companies with this structure achieved encouraging earnings during their first few years due to the upturn of the shipping cycle at that time, this structure was perceived to be successful by both shipowners and investment bankers. However, the latter, not having the experience of shipowners on the severity of the cyclicality of the shipping industry were more enthusiastic about this vehicle than shipowners. As a result, they became the ones urging shipowners to use this type of "back door" for raising funds through the equity markets. And since without an underwriter shipowners are unable to use capital markets, they went ahead and continued the trend. But looking at the result of such offerings since 1990 it may be better now to bring perpetual life shipping companies straight to the market instead of starting up new limited life companies. Examples are the offerings of Smedvig, Western Bulk, First Olsen and L.O.F. Also start up shipping companies like the Tsakos' Maritime Investment Fund have a trend to eliminate this limited life provision. As discussed earlier, the Astro tanker offering which included that provision was a failure.

From the shipowners point of view, these companies have produced positive results since they were able to find a source of finance during a time when banks were not so generous with their offerings. These funds allowed them to reduce their gearing and to expand further. Even though issuing costs were perceived to be very high, most of them were incurred by the outside investors and when promoters were required to buy equity, they generally acquired the shares without paying the selling commissions that other investors were required to pay.

As with some publicly traded companies, the management does not always act on the shareholders best interest. There are ways through which managers could benefit at the investor's expense. The provisions for the protection of investors by such actions are difficult to implement and the lack of requirements which could help to avoid such practices is a main reason why merchant shipping companies are not allowed to enter the Athens Stock Exchange yet. Following are some examples of structures that might benefit managers but harm investors:

The contracting of the technical management of the vessels to a company owned by the promoters is beneficial to the promoters but not necessarily to the outside investors, because they incur a technical management fee. However, it is hard for an outside investor to prove the opposite; therefore, a solution to this problem has not been found yet.

Another way the management could "cheat" is if it decides to operate its vessels in a pool and the pool management company is being partially owned by the promoters. The incurred monthly commercial management fee and the standard chartering commission upon each fixture are "revenues" for the promoters only but costs to other shareholders. These two issues are another reason why significant equity participation by the owners is so important to outside investors since such participation would reduce the size of such actions. And when we are dealing with a private placement, where financial information is not disclosed as in a public company, such participation is indispensable. We could argue that the solution to this problem might lie in the incentives given to the managers if they succeed in making profits above a certain level. Moreover, suitable auditing could also reduce the possibility of "cheating" by the management. However, this will not be covered here in further detail in this work.

In order to make suggestions from the investor's point of view whether this phenomenon was a success or a failure, a distinction must be made between two types of shipping stock investors. The speculative investors who are looking for short-term profits and the "dedicated" investors who buy shipping stocks in order to participate in the shipping cycle "game" and intend to hold the stock until the company is liquidated.

For the latter type of investor, share price performance with the exception of Anangel-American, has been mostly disastrous. Even though, the shipping market is partially responsible for this poor performance, it is not the sole cause. **Table 4.3** computes the Internal Rate of Return that an original investor, having received all the company's dividends, would have if he sold his shares in December of 1993. As seen from this table the only investors that would have made profits under this scenario would be the Anangel-American and the first B+H investors.

Dividend yields on the other hand have been substantial in some cases as **Table 4.4** suggests. But by looking back at **Table 4.3**, one can realize that the prices of most stocks went so low that the final results were mostly capital losses for the original stockholders. However, **Table 4.3** also indicates that positive returns could have been generated by speculative investors had they found buyers for their shares at the right time. This suggests that the liquidity of a quotation is of paramount importance for a shipping stock investor and as it was mentioned earlier, it is one of the reasons why "limited life funds" were "invented". Again with the exception of Anangel-American, most companies had a very low turnover and could be termed as essentially illiquid.

Does all this mean that this phenomenon was a failure? The answer depends on how the word "failure" is defined. As seen from the previous discussion, from the investor's point of view this general trend was a failure except in the two cases mentioned above. However, from the promoters' point of view, the answer depends on their equity participation. Those with high equity participation shared the losses together with the rest of the investors and some of them were burdened with some lawsuits. For those who did not have a high stake in the equity, did not have high monetary losses but their "goodwill" was certainly affected significantly.

It is the author's opinion that start-up shipping companies still have a future in the stock market as long as the mistakes pointed out in this work are avoided and serve as a lesson to both promoters of funds and investors. Furthermore, it seems that the trend is towards perpetual companies rather than limited life companies, at least for the public market. In particular, the success story of Anangel-American should serve well both promoters and investors who consider new start-up shipping ventures.

Table 4.3 SUCCESS OF INVESTMENT

COMPANY	I.R.R. % annualized Dec. 1993	I.R.R. %* annualized Peak	Comments
Anangel-American			
Luxembourg investor	16.6	39.7	
NASDAQ investor	6.7	8	
B+H Bulk Carriers	13.9	47.5	
B+H Maritime	LOSS	36.7	Sale after 3 mos at 9.0% I.R.R.
B+H Ocean	LOSS	42.8	Sale after 9 mos at 31.0% I.R.R.
BT Shipping	LOSS	43.4	Sale after 9 mos at 31.6% I.R.R.
Global Ocean Carriers	LOSS	10	Sale after 3 mos at 2.5% I.R.R.
MC Shipping	LOSS	5.3	Sale after 9 mos at 4.0% I.R.R.
Nortankers	LOSS	18.1	Sale after 9 mos at 13.5% I.R.R.
Maritime Investment Fund	LOSS	N/A	N/A

* I.R.R. if the investor sold their shares at the peak of their price

Source: Proceedings of the 6th International Ship Finance Conference

Table 4.4 PERFORMANCE OF INVESTMENTS

COMPANY	Offer Price U.S. dollars	Cumulative Dividends as of Dec 1993	Average Yield	Current Price 1993
Anangel-American				
Luxembourg investor	$10	$6.85	11.00%	$17.00
NASDAQ investor	$16.50	$4.50	6.40%	$17.00
B+H Bulk Carriers	$10	$12.81	20.50%	*
B+H Maritime	$15	$5.87	8.70%	$1.50
B+H Ocean	$15	$8.70	11.60%	$4.00
BT Shipping	$10	$1.48	3.50%	$3.25
Global Ocean Carriers	$15	$3.29	4.60%	$2.75
MC Shipping	$15	$3.54	5.60%	$3.50
Nortankers	$15	$0.30	0.75%	*

* These companies' stocks do not trade any more

Chapter 5

The Investor's Point of View

Few can deny that there is money to be made in shipping. It is well known that shipping is a high-risk high-return industry; however, in 1992 it was estimated that in the U.S. there were only about 225 institutions holding shipping securities with 20 per cent of those institutes holding just under 80 per cent of the equity[12]. **Chapter 3** discussed some of the reasons why investors might be restrained from owing shipping stocks and bonds. Nevertheless, it was decided that a separate discussion of the investor's point of view is necessary in order for the reader to understand what types of investors are represented in the capital market and what they are looking for in a deal.

First of all, investors are overwhelmed by the complexity of the shipping market. Good investment decisions require exhaustive analysis and complex judgments. The products are not standardized, and conditions are rarely replicated. Every company deals with different vessels under different chartering policies and has very different characteristics. The fleets have different sizes, different age structures, different capital structures and are run by groups of people of different nationality. This presents investors with many difficulties which prevents them from being active in the shipping sector. "The majority of activity in the investment community today involves the analysis of market statistics and the rapid exploitation of small pricing anomalies, rather than the more complicated and less easily definable business of identifying individual stocks which are under-valued" (Peter Stokes, Maritime Consultants Ltd.)." In addition, if you look closely at the larger funds -the mutual funds and pension funds- you find decision makers who do not understand the cyclical nature of the shipping industry, although

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[12] Furan Selz Inc., New York

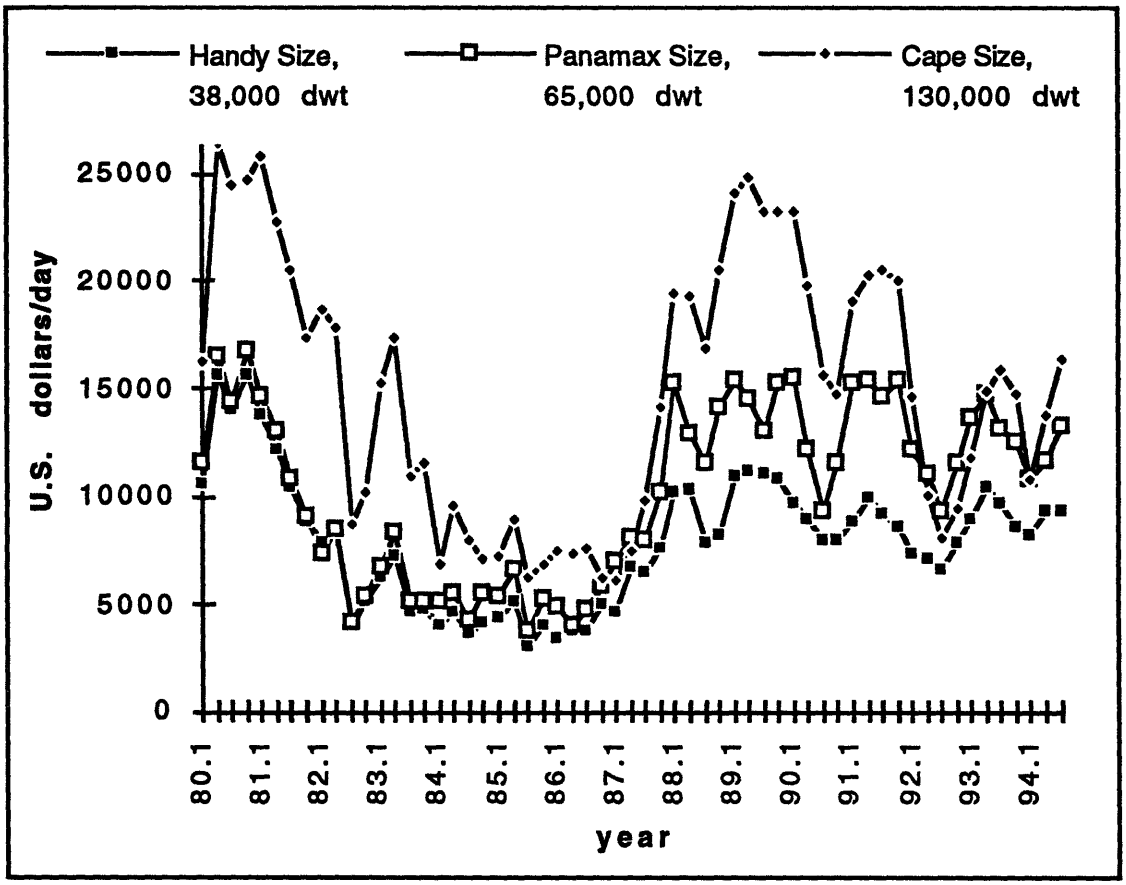
they could certainly make substantial gains in shipping over the long term" (Marine Money International). But understanding and accepting the cyclicality of the shipping industry is key for anybody who wants to enter the shipping business whether it is through the stockmarket or not.

Figure 5.1 depicts the high cyclicality of the industry by showing the average earnings in U.S. dollars per day for each different type of dry cargo vessels for the typical routes these vessels are engaged in. **Figure 5.2** provides the same information for Tankers. These values are calculated using the spot rates prevailing during each different quarter in order to emphasize the cyclicality of the industry. There is no need to elaborate more on the cyclicality of the shipping industry as the previous figures capture this very well. What is important is that the possible shipping stock investors understand that they should not regard this cyclicality as a way to speculate and make short run gains but decide that if they want to invest in shipping they have to do it " the right way ". They have to consider mostly the long run profits and not rush to sell their shares when the industry is at a low level of the cycle.

The regression analysis model developed in **Chapter 7** provides an optional way for investors to identify the individual stocks that are undervalued and try to find a way to standardize shipping companies. Using this model, an investor could input the characteristics of the shipping company that he/she wants to invest in, and estimate should the price of that stock be. If the stock price turns out to be undervalued, there is a chance of high returns with the purchase of the stock. However, if more accuracy is desired more data points should be included in the model and it should then be tested again but the idea would still be the same, that is to find the quantifiable characteristics of a listed or about to be listed company which are most important to the performance of shipping share prices and to use the results in order to find an approximate value of these stock prices. Also the model may be used in order to choose the companies that possess those desirable characteristics.

Figure 5.1:

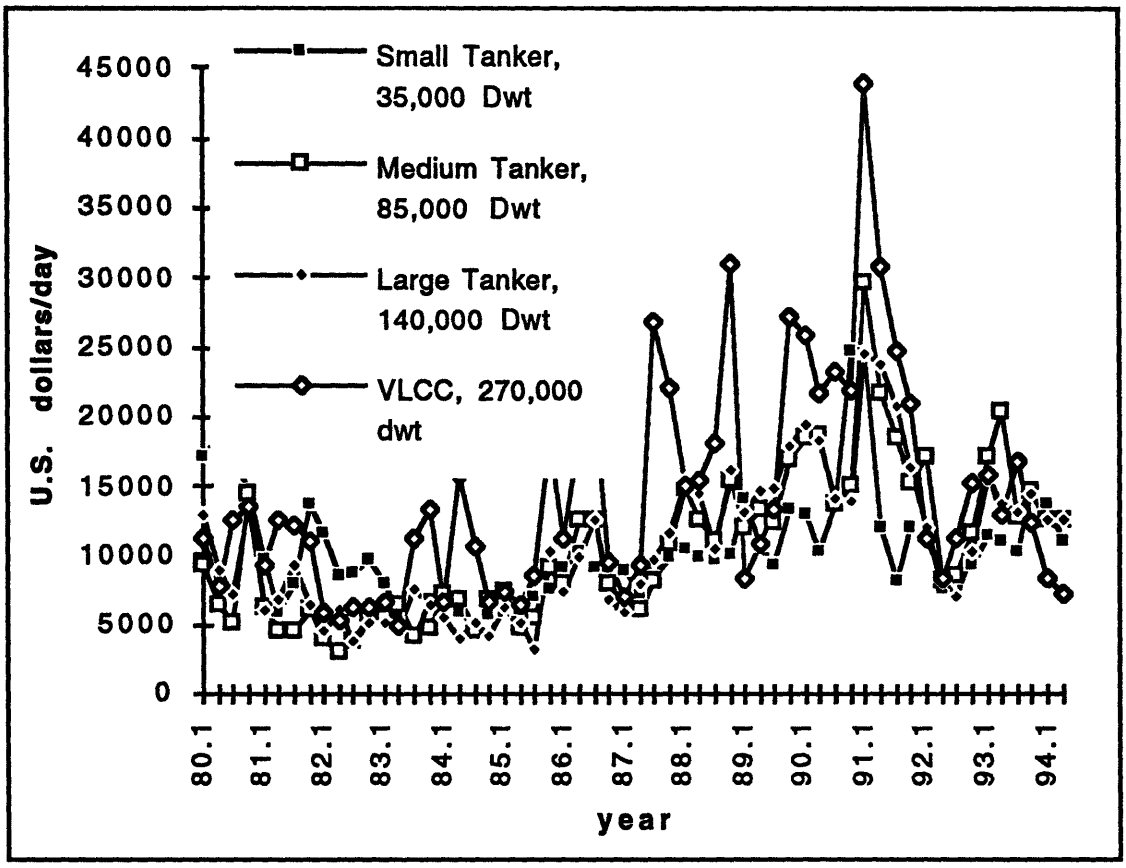
Revenues of Dry Bulk Vessels based on Spot Market Rates



Revenues of dry bulk vessels as calculated from the prevailing spot rates during each given quarter for different types of vessels. The routes chosen as typical for those vessels are the U.S. Gulf/Rotterdam loaded with grain for the Handy Size, the U.S. Gulf/Japan loaded with grain for the Panamax size and the Hampton Road/Richard bay/Japan route loaded with coal for the Cape Size.

Figure 5.2:

Revenues of Tankers based on Spot Market Rates



Revenues of tanker vessels as calculated from the prevailing spot rates during each given quarter for different types of tankers. The routes chosen as typical for those vessels are the Caribbean/U.S. Atlantic Coast route for Small Tankers carrying clean products, the Caribbean/U.S. Gulf route carrying crude oil for Medium Tankers, the Bonny/U.S. Gulf route for Large Tankers carrying crude oil and the Arabic Gulf/Far East route for VLCC's carrying crude oil.

Unfortunately for the shipping sector, the securities industry in the U.S. has, in the last decades, shifted away from value investments and has become more short term oriented, rather than adopting medium or long term criteria. As a result, highly speculative ventures are promoted whereas worthwhile projects are rejected. Consequently, shipping entrepreneurs with complicated projects stand a better chance of success by approaching high net worth individuals and corporate backers rather than by doing the round of the investment banks[13]. Moreover, this attitude creates problems in raising additional capital because stocks become greatly undervalued as a result of investors looking for the short term profits of the company. Consequently, entrepreneurs cannot attract the funds that they want because they offer an investment that can currently be obtained from the market at a much lower price.

One aspect that clearly differentiates investors that are currently thinking about entering the shipping industry is that they are evaluating each shipping deal as an opportunity compared to other shipping deals and as an opportunity compared to other industries. The investment world is increasingly global, and sophisticated investors are evaluating opportunities on a comparative basis. Within the asset-based sector shipping is merely one alternative to be compared to oil properties, real estate, timber and mining. The investors' difficulty in finding a shipping deal is probably less a function of the shipping industry, and more an example of the alternatives that they have to evaluate. The transactions in shipping have simply not been able to compete with opportunities elsewhere, not only because the industry has not done well, but also because of the unfavorable deal structure compared to other industries.

There are few investors like Warren Buffet, widely regarded as the greatest of them all, who applies fundamental analysis in his search for value and then makes major long-term investments in the companies of his choice. Buffet once said: " As far as I'm concerned, the stock market doesn't exist. It is there only as a reference to see if anybody is offering to do anything foolish". Bear that comment in mind when looking at **Figure 5.3** of the performance of the

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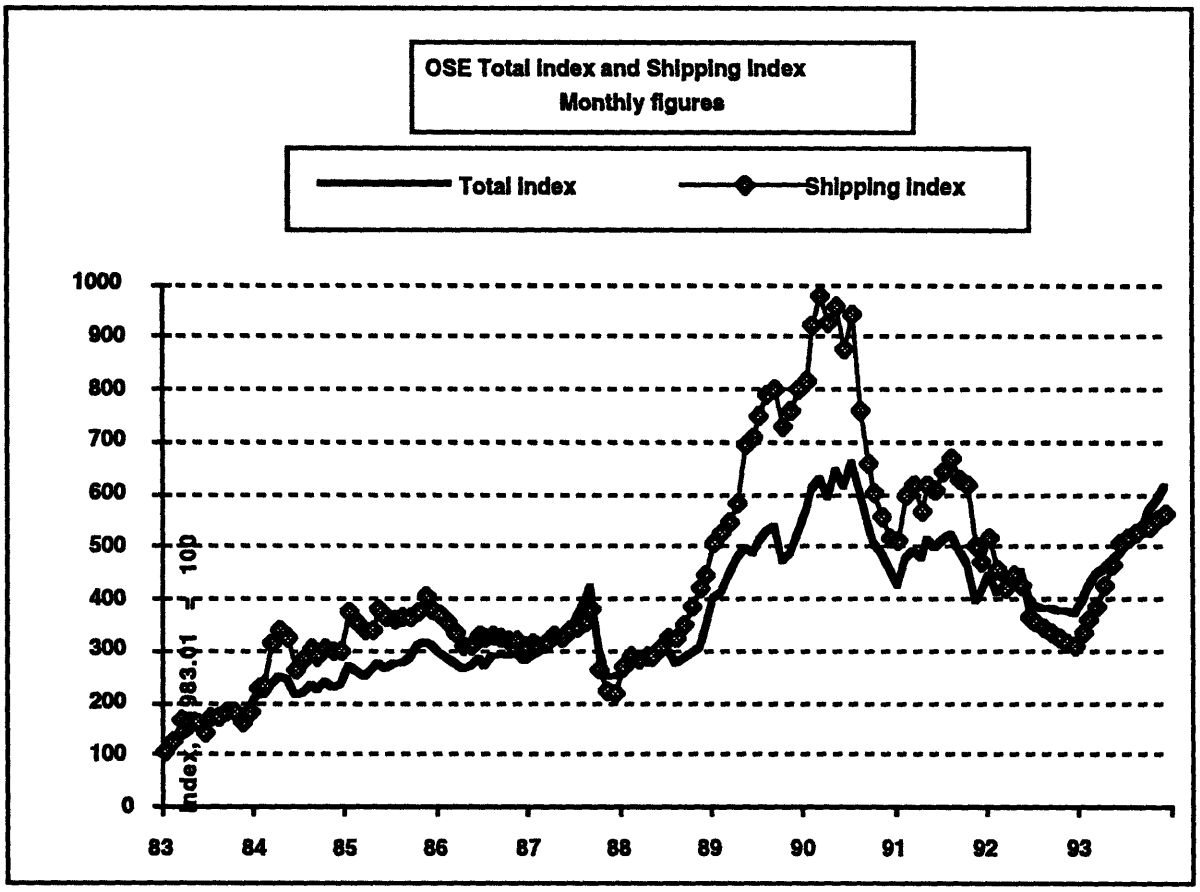
[13] Peter Stokes, Maritime Consultants Ltd.

Oslo Stock Exchange shipping sector index compared to the total Oslo Stock Exchange index since 1983.

Figure 5.3



Source: Marsoft Database

It is the very volatility of this index which constitutes its chief attraction to investment funds which see the potential to make very large short-term returns on their positions. Looking at the doubling of the index between the end of 1988 and the first quarter of 1990, or its halving between the third quarter of 1991 and the third quarter of 1992, or indeed the fact that it has more than doubled again since that low point, Buffet would presumably say that he has proven his point. The various extremes of the Oslo Shipping Index are a remarkable indicator of exaggerated optimism and pessimism -in other words foolishness- but professional securities traders will always

assume that they will be able to take advantage of these swings rather than become victims of them.

As it was mentioned above, investors have shown themselves to be remarkably insensitive to, or uninterested in, valuation criteria which are essential in analyzing shipping shares. A stockbroking analyst even said once that buyers of shipping shares, especially tanker shares, are simply viewing current prices as option money payable for the right to participate in the boom which is anticipated in one, two or three years' time. Meanwhile, buyers of high-yielding shipping debt securities in the U.S. seem in some cases to be remarkably relaxed about cash flow coverage of future interest charges as long as the current value of the security package looks high enough. This attitude suggest the possibility for future disappointment.

The fund raising community has been criticized in the past for the poor quality of the majority of equity raising shipping. projects. It is the investors' and fund raisers' attitudes which have attracted the likes of Nortankers, while keeping away projects which have profiles that could bring about new Bergensens, Stolt-Nielsens, A.P. Mollers, etc[14]. But the fund raising community cannot be blamed for tapping the capital market as aggressively as possible for as long as investors display such an accommodating attitude. Investors will need to find ways of evaluating shipping stocks and look deeper into the fundamentals and long term prospects of the companies, rather than adopting short term objectives and supporting weak asset-based structures.

Nevertheless, shipowners should not forget that on the aggregate they will eventually be punished if they adopt this attitude. Unfortunately, it is not necessarily that those who will take advantage of this attitude will pay. This presents a stronger point for equity placements than for debt placements, where the promoters incur a high financial risk and will eventually pay if they cannot repay the debts.

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[14] Lloyd's List, May 26, 1992

If a shipowner succeeds in raising a substantial amount of money through an I.P.O., that money is additional permanent capital and can be used for investment in fixed assets with a long-term economic life. But as soon as his shares are publicly quoted, he is at the mercy of the market's pricing of these securities and the market can be erratic. If, for whatever reason there is a sharp sell-off of the shares, the company's ability to continue using its paper to fund fleet renewal and expansion may be severely impaired. Only when investors realize that the way they should invest in shipping stocks is by buying them and keeping them for long-term profits, will the shipping stock market reach stability and become a good investment option. Perhaps shipping is not reborn every morning but, unlike many other industries, it isn't of danger of overmaturity. This means that shipping should be regarded as a long life industry whose strong point is not potential growth but "eternal" life.

The model described in **Chapter 7** suggests that there exists a way to find companies that meet the criteria. Some of these criteria are more important than others, the quality of management being the most important one for the investor who focuses on long term profits. However, the biggest problem is the control and liquidity of the deals. Since the size and the number of shipping projects is small and held by a small number of core investors, the trading volumes are inevitably low. In addition shipping in most markets does not even constitute a sector. It therefore has no sector index, its market weighting is insignificant and the performance of individual stocks is irrelevant. Consequently, most fund managers and stockbrokers will not devote any appreciable research capacity in such a sector.

Given the emphasis that investors put on control and liquidity, the perfect shipping investment will not exist as long as shipping remains such a small sector of the stockmarket. This industry is too capital intensive for investors who want to invest in the neighborhood of U.S.$10 million at a time. Investors would prefer to take their capital, add it to that of a few others, leverage it, start their own company, acquire a small number of ships, and contract out the technical and commercial management. This leaves them in the desirable position of having ultimate control over the company's

direction and over their ability to increase or liquidate their investment. However there are many drawbacks to this option.

First of all, this does not contribute to the diversification of the investor's risk over a large asset base. He is also limited to ships with an older age profile because of the relatively lower purchase price. The alternative is to acquire a minority stake in a larger, more established entity where he can achieve diversity over a larger asset base and hopefully a well run, professional organization. But this option leads to little control over the investment and its liquidity.

On the other hand the probable loss of control is the very reason why shipowners tried to avoid financing their projects through the stockmarket in the first place. In particular most Greek shipowners do not even want to consider the possibility of having someone interfering with the way they run their business. This is where shipowners and investors should compromise because both are right in a sense but neither one is willing to change his attitude. Nevertheless, Greek shipowners will eventually have to change their secretive attitude anyway because of the formation of increasingly stricter regulations imposed by the International Maritime Organization (IMO) every year.

What investors want is not control of day-to-day company operations because this is not their intent and they cannot run a shipping company. Investors are well aware of the fact that shipping is an area where experience is almost everything and it would be foolish of them to think that they can do better than a shipowner who has had first hand experience with the cyclicality of the market itself. But investors still need the ability to control operations should they disagree with management on fundamental strategic issues. If this is the case, investors would want to be able to walk away from the deal either through the forced sale of ships -the shipowners nightmare- or by putting their investment back to the company. Shipowners have the tendency to believe that investors should just be passive and let owners do whatever they think is best for the company but this endangers the investors much more than the owners. The only way this attitude could work is if the

management owns a large number of shares of the company that it is running. This way the problem of conflicting incentives would be eliminated.

There is however another solution to this problem, i.e., the comfortability of the investor with the liquidity or exit options. As mentioned before, a private shipping company liquidity can come either through forced sale of the ship or by putting financial instruments back into the company, for example making owners buy back all shares in case of a public company. However these exit options have ended a surprising number of potential shipping transactions. What the shipping industry came up with is another option, that of limited life funds which was discussed in more detail in **Chapter 4.**

Unfortunately for shipowners, the latest decade has made investment in shipping even riskier than it was before because of increasing environmental regulations and most importantly the spotty history of providing adequate returns for financial investors. Shipowners should be aware of this and will have to provide deals with better terms if the industry wants to attract new sources of capital.

Concluding, there are many new investors who consider the shipping industry more seriously. By doing so, they will increasingly be global, sophisticated investors, who regardless of the depth of their industry knowledge can cope with the issues described in this work. But the future of shipping in the capital markets will be determined by three parties: analysts, investors and shipowners and/or promoters of funds.

Chapter 6

The Shipowner's Point of View

In **Chapter 3**, the advantages and disadvantages of equity and/or bond offerings for shipowners where discussed. However, there are some other issues which shipowners should consider before they decide to raise capital through any stock exchange.

First of all, the timing of the attempt of any listing is the most crucial factor for the success of a deal. In fact the best time to raise equity is neither at the bottom nor at the top of the shipping cycle. As a matter of fact, if a shipping company's IPO is a success at the bottom of the shipping cycle, speculative investors will be satisfied because they would see their investment perform well. On the other hand, the shipowner will probably have to sell his stocks at a large discount since it would be really hard to convince investors that the bottom of the cycle has been reached. Nevertheless, applying for a listing at the top of the cycle is advantageous for the shipowner who would probably sell his shares at a premium, but would not be welcome by any investor who would soon note the drop of his stock prices as well as the nonexistence of dividends.

This point has been proved by the results of past listings. Shipping companies like Anangel-American, B+H Bulk Carriers and First Olsen which were correct on their timing satisfied their investors at least for the first couple of years. On the other hand, B+H Ocean Carriers, B+H Maritime Carriers and Nortankers which were not right on their timing proved to be a disaster for investors who wanted short term profits. Since most types of shipping stock investors as they were described in **Chapter 5**, were speculative investors who desired short run gains and were not experienced with the shipping industry cyclicality, they were not patient to hold their stocks and wait for the market to improve but instead rushed to sell them. As a result

the prices of these stocks were really undervalued and some of those companies do not trade anymore mostly because of this investors' attitude. However, the bad timing of the listing of those companies was not the only reason why the deals failed. As discussed in **Chapter 7**, there are also microeconomic factors that are extremely important in the success of a listing. It is the combination of good timing and all the characteristics to be described **Chapter 7**, which make for the first successful step of a listing.

Shipowners who are experienced with the cyclicality of the shipping industry hold the wheel on the success of their investment. Even if shipowners cannot persuade investors that the cyclicality of the shipping industry is a necessary evil as well as the reason why so much money can and has been made in shipping, then they can at least control the timing of their issue and make sure it is on the inflection point of this cycle. Fortunately for investors, the bottom of the shipping cycle is easy to predict and possible attempts to raise equity during these periods usually result in the failure of the IPO's. Examples of such listings that have been aborted are Bay Ocean Carriers, Jason Overseas, B+H Crude Carriers, Viking Star and Astro Shipping. What happened in these cases is that investors thought the deals where overpriced and they didn't allow them to succeed in the first place. Nevertheless there are more factors involved in finding the good timing for a shipping company listing besides choosing the right shipping cycle timing.

As with any other publicly listed company, the interest rates of banks as determined by macroeconomic factors will affect the pricing of any shipping company stock. In periods of high interest rates investors decide to invest in less risky instruments than shipping stocks. However, in low interest rate periods investors would turn to the stock market for higher returns. Therefore, the correct timing for a speculative investor to buy shipping stocks would be when low interest rates are prevailing and the shipping cycle is in its upturn. However, the time when the cycle will be at each bottom will eventually come and then the speculative investor will decide to sell his shares especially if interest rates are not low enough to make him remain a player in the stockmarket.

All these issues are proof of how difficult it is for a shipping company to perform well in the stockmarket. Currently the shipping stock market is a place where most people invest for short term profits. How else can one explain the fact that banks have been lending millions of dollars to shipowners with reasonable to very good terms. Nevertheless, shipping is a very peculiar industry and has not been analyzed extensively by institutional investors and investment banks. When investors realize that they should change the way they value shipping shares, there will be many more shipping companies financing their fleets through the capital markets. If investors understood the possible long run profits from shipping stocks and if they were patient and waited for the booms, shipping would be an industry they would invest in and more capital would be available for shipping from these "long term" investors.

Until then, shipowners, and particularly Greek shipowners, will most likely stay faithful to their bankers because they understand their needs and know the business as well as they do. But there is no reason why stockmarket investors should let bankers make all the shipping finance profits once investors realize the peculiarity and potential of the shipping industry .

Mr. Kanellakis, the president of the highly successful Anangel American stated during a recent interview that because of the current investor's attitude towards shipping stocks, no shipping company should abandon its "cozy" relationship with bankers in order to enter the stockmarket unless it has other reasons, like the urgent need to keep its cash flows as opposed to paying bank term loan interests or to "experiment" with the stockmarket. The first point was proved by the bond offering of Eletson, a company that does not hide the fact that cash flows were more important to its projects than the need for bank loans.

Interestingly enough, Anangel-American, one of the most successful shipping companies listed in the stock market, was able to perform well by persuading its investors that they should trust the company and it proved in term to the investors that the management was faithful and deserved their trust. What can be deduced from the author's discussion with Mr. Kanellakis is that if a shipping company considers seriously to finance its vessels

through the stockmarket, it should do it the "right way". It should start with a public offering in a relatively small stockmarket for which it fulfills the necessary requirements and then aim for larger stockmarkets like that of the New York Stock Exchange (NYSE) when additional amounts of capital will be needed.

Mr. Kanellakis also suggested that private placements in shipping should be avoided because of the high risks for investors associated with them, unless the promoters of these funds show their dedication to the good performance of the funds with their large equity participation in these deals. But even in this case, there is a high liability risk for investors as they would probably have to hold large percentage of the total company shares, usually in the order of 25 percent, thus subjecting themselves to the possibility to be held liable for the damages in case of company's vessel accident. As a result, it is better both for shipowners and investors to pursue a deal comprised of many investors, each owning less than three percent of the shares of that project. This can only be achieved if a public offering takes place in a stockmarket.

An interesting comment worth discussing was made by Mr. Kanellakis. His point was why there has been no shipowner who has bought himself shipping stocks of other shipping companies. One would assume that this would be the case given the fact that shipowners know the shipping industry well enough to enjoy long term gains from such an investment. One possible explanation is that because shipowners know the industry, they could use their funds to invest in their company instead of sharing the profits with other shipowners.

What merits further research is whether individuals involved with shipping industry but who are not shipowners themselves would invest in shipping stocks. There are quite a few such people in Greece who are not shipowners themselves but await for such an opportunity. Recall that in **Chapter 5**, it was mentioned that under current industry conditions it is not possible for such individuals to become shipowners. However, it would be interesting to see how would such individuals react if a well management shipping company ever got a listing in the Athens Stock Exchange (ASE).

Another issue that specifically tanker shipowners must be aware of, if they want to incorporate their company, is the issue of liability. It is the U.S. that strongly influences the future of the tanker side of the shipping industry. It is the U.S. that imposed the double hull restriction for tankers and it is the U.S. that is so concerned about the damages of the environment and enforces financial reliability requirements on owners. Unfortunately Americans are the only ones who understand the risks of polluting the environment and they are the only ones who can do something to avert catastrophic damages. As a result, it is better for tanker owners to issue shipping stocks in the U.S. where the laws are enforced and unexpected extra environmental cost burdens can be avoided. Investors in that market are aware of pending new laws affecting tankers, thus are rational in their decisions.

To conclude, it is clear from the above discussion that the nature of the shipping industry is such that shipowners are not easily convinced to turn to the equity markets for their financing needs. However, they have the power to change the banking finance trend and make the stockmarket a major source of shipping finance. It is the future generation of shipowners who will decide whether to initiate such a trend.

Chapter 7

A Regression Analysis Model which Asserts the Determinants of Shipping Stock Price Performance

7.1) The Goal of the Model

It is quite difficult to standardize shipping companies since each individual company has a combination of characteristics that rarely resemble those of another shipping company. As a result, a detailed analysis of each individual company is necessary when one considers investing in shipping companies. This is one of the main reasons why up until know shipping has been such a closely held industry, with each company's financing often performed by the same banks since the company's inception. Moreover, it is very difficult to compare the performance of shipping stocks to those of other industries since the standard ratios used for those comparisons are not very indicative in the case of shipping shares. For example, the expected future growth rate of a company, which is an important factor in the analysis of a company's performance is not so important in shipping since growth is not the industry's strong point. However, despite the difficulty in performing such comparative analyses, it is possible, particularly due to the shipping stock surge of the last six years, to use statistical models in order to perform shipping company valuations.

The model described in this chapter will attempt to quantify the most important shipping company characteristics, compare their importance for shipping stock performance and produce a valuation method that could be used both by shipowners and shipping stock investors as well as any bank or investment firm interested in underwriting a shipping stock issue.

Moreover, the model will demonstrate that there exists a way to protect the unsophisticated investors of the ASE, by ensuring that the shipping companies which apply for a listing possess the characteristics proved to be important by this model. The results of the model should prompt the Athens Stock Exchange Council to reconsider its current position of not allowing merchant shipping companies to be listed in that exchange.

The model is useful to shipping stock investors because it provides to them a rough method for checking whether a shipping stock price is undervalued or overvalued. Shipowners on the other hand, could use it to check whether their company or a startup project possess the characteristics needed in order to consider a listing in a stock exchange. It could also be used as an alternative company valuation method to be compared to existing company valuation methods. Finally, investment firms and banks could use it as an alternative way to value a shipping company in addition to typical methods that are being used so far[15].. It is common for financiers to use different company valuation methods for comparative purposes. The one described here is probably the simplest one and could be used as a check to the more complex analytical methods currently available. The model essentially predicts the value which stock market investors put on a company and would be relevant to companies that are listed or consider a listing in a stock exchange.

The fundamental idea is to perform a Regression Analysis with shipping stock prices as the dependent variable and the most important characteristics of the shipping companies as well as the market conditions as the independent variables. The main use of a regression analysis model is to provide a way to check the dependence of the variable to be regressed, in our case the shipping stock price, to the independent variables, in our case the characteristics of a shipping company and the shipping market conditions. The model is to indicate those microeconomic factors, i.e., those characteristics of shipping companies, that signal the future good

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[15] Two methods are typically used for valuing shipping companies. One is the Net Asset Valuation method which is based on the values of the vessels owned by the company if they were for sale. The second one used mostly is the U.S. is the Cash Flow projection method which is considering predictions of the future Cash Flows of the company and adjusts them to their present value.

performance of a company's stock. Moreover, it will show the importance of the shipping market performance as seen from the charter rates prevailing during each period, on the price of shipping stocks. There are various characteristics that are perceived to be significant in the performance of a shipping company such as:

- The Financial Leverage (Debt Structure)
- The Age Profile and Size of the fleet
- The Quality of the Fleet, Particularly Double Hull and Similar Provisions
- The Chartering Policy or Other Employment Strategy
- The Specific Market Orientation and Fleet Composition of each Company (e.g. Bulk, Tanker, Mixed etc.)
- The proposed Life of the Company (Limited Life vs Going Concern)
- The Equity Participation of the Promoter/Owner/Manager
- The Dividend Policy
- The Management/Track Record
- The Working Capital

These characteristics as well as the stock prices of shipping companies and the market condition are going to be the inputs to the regression analysis of this chapter. The model will combine time series and cross sectional data[16] in order to include as many data points as possible.

It should be noted here that although most of these characteristics were initially included in the model, many of them proved to be statistically insignificant and irrelevant to the stock price performance. **Section 7.3** includes a description of these characteristics as well as a discussion of their perceived importance by the members of the shipping community. In the same section, results of the model are compared to theoretical predictions.

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[16] Cross sectional data refers to different data points taken at the same chronological time (in this work, different shipping companies' stock prices at the same date). Time series data refers to data taken at different point in time (here, the stock price of a particular shipping company at different dates).

Finally, the results of the final run of the model as well as a discussion of the usefulness of these results are going to be included in **Section 7.4.**

7.2) Methodology

In general, a Regression Analysis model can be written as:

P(i,t)=a(i,t)+b1(i,t)X1(i,t)+b2(i,t)X2(i,t)+...+bj(i,t)Xj(i,t)+e(i,t)

for i = 1,2,.....N

t = 1,2,.....T for j = 1,2,.....,J

where: N = the number of cross-section units (companies)

T = the number of time periods

J = the number of explanatory (independent) variables

P(i,t) = the dependent variable, here. the share price of the companies being analyzed

a(i,t) = the intercept term of the model

bj(i,t) = the coefficient of each explanatory variable

X(i,t) = the explanatory or independent variables i.e. the characteristics described above

e(i,t) = the error term

A variety of models has been proposed for time series and cross sectional data which may be derived from the above equation by varying the assumptions made about the intercept term of the model, the slope coefficients and the error term. A possible taxonomy of models is indicated in **Table 7.2.a.**

Table 7.2.a: Taxonomy of time series, cross section models

Model	Intercept a(i,t)	Slope coefficient b(i,t)	Error Term e(i,t)
1	zero	common for all i,t	Fixed effects
2	common for all i,t	common for all i,t	E(ee')=Var(u)*I
3	common for all i,t	common for all i,t	E(uu')=V
4	varying over i	common for all i,t	Fixed effects
5	varying over i	common for all i,t	Random effects
6	varying over i,t	common for all i,t	Fixed effects
7	varying over i,t	common for all i,t	Random effects
8	varying over i	varying over i	E(uu')=Var(u)*I

Model number one was chosen as most appropriate for this work because of the following reasons:

1. It must be assumed that slope coefficients do not vary over individual companies in order for the model to be useful. In fact, the result showed that the slope coefficient was statistically insignificant, therefore, Model 1 was more appropriate than Model 4.

2. All Individual company particularities are going to be captured by the management variable; or else a dummy variable would have to be included for each company. Because of the large number of companies included, these "dummies" would reduce the degrees of freedom. They would also be against the purpose of the model, i.e., to find a way to value any shipping company regardless of the very particular individual company differences.

The above features reduce the general Regression Analysis model to the following form:

P(t)=b1X1(t)+b2X2(t)+...+BjXj(t)+e(t)

where: $t = 1,2,.....T$

$j = 1,2,.....,J$

T = the number of time periods

J = the number of explanatory (independent) variables

P(t) = the dependent variable i.e. the share price of the companies analyzed

bj = the coefficient of each explanatory variable

Xj(t) = the explanatory or independent variables i.e. the characteristics described earlier

e(t) = the error term

It should be mentioned here that before choosing the above method, many trial runs took place, some of which included various dummy variables that turned out to be insignificant. It is worthwhile to note two such interesting "dummy" variables that were dropped out from the final output, namely, the Oslo and the US dummy variables. These variables took the value of 1 when the relevant company had a listing in the Oslo or the US Stock Exchange respectively and zero otherwise. The results showed that statistically speaking, the choice of stock exchange did not affect the value of shipping stocks. The implication of this result is that there is no major difference between issuing shipping stocks in the U.S., Oslo or any other country whose stock market includes the shipping sector. However, further information and data from public shipping companies listed in many different world stock exchanges is needed in order to verify this conclusion.

Another important variable that was eventually dropped from the model was the stock exchange index of the country of each company's listing at each particular data point. For example, the S&P 500 index could have been included to account for the influence of the general performance of the U.S.

stock market on U.S. shipping Stocks. On the other hand, the Oslo Stock Exchange total index could have been used similarly for the companies listed in the Oslo stock exchange. The reason why these variables were dropped from the model is that they were multicollinear with the shipping index variable which turned out to be more significant than the stock market performance index. Since the results are better when the shipping index is used instead of the market index, keeping the former index seemed more appropriate. Yet, the reason for the multicollinearity of these indexes is that both indexes are very sensitive to the Gross National Product (G.N.P.) of the relevant country. In particular, the shipping index is very sensitive to the world economy in general and factors such as steel production and energy consumption which in turn are influenced by the U.S. economy. Since most companies in the model were listed in the U.S., the multicollinearity of the shipping index with the S&P 500 index was expected.

7.3) Description Of The Variables Used In The Model

Financial Leverage (Debt Structure):

Even though, according to Modigliani and Miller the financial structure of a company is irrelevant to its performance in a tax free environment, in reality this might not be so. It was also shown by Modigliani and Miller that the tax deductibility of debt interest rates raises the company's values. However, it has been perceived that in the shipping world, the smaller the Debt to Equity (D/E) ratio, the better the company's performance. In fact, it has been shown that the degree of financial leverage accentuates the shipping cycle more than can be compensated by tax advantages. Therefore, the company's financial record should show net debt generally remaining below 40% of total capital employed[17] and operating cash flow usually covering interest charges more than three times. Operating cash flow should have remained positive after interest charges throughout all stages of the shipping cycle, and cash flow returns on capital should average more than 10% per annum over the cycle.

A possible explanation as to why the low D/E ratios are better for a public shipping company is that the low or nonexistent taxes which shipping companies usually pay make tax advantages of debt irrelevant to the performance of these companies. In fact, the results of the regression analysis suggested that the higher the D/E ratio of shipping companies, the lower their stock price, however, keeping in mind that the results were statistically significant only at the 8% level. Nevertheless, the results agree with what experts of the shipping community believe on the effect of the leverage of a public shipping company on its stock price.

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[17] Peter Stokes, Shipping's Track Record as a Basis for Attracting Capital, Proceedings of the 6th International Ship Finance Conference, Lloyd's of London Press Ltd, 1994

Age Profile And Size Of The Fleet:

The question of age is becoming more sensitive as the shipping market increasingly adopts a quality-conscious stance. The continuously imposed regulations suggest that the quality of the vessels is going to be increasingly important in the future. The OPA 90 with its double-hull requirements and the increasing fear of unlimited liability have mostly affected the tanker industry but also the total shipping sectors in general. Moreover, through the recently imposed Rule for Financial Responsibility Requirements, OPA will enforce the financial responsibility requirements which failed to be implemented by CERCLA in the past. This Certificate of Financial Responsibility Requirement (COFR) together with other imminent requirements impose another burden to the owners, in particular, those who don't own quality vessels. Nevertheless, those requirements will solve the problem of unlimited liability for those owners whose vessels are qualified.

However, age alone cannot determine the quality of the vessel, neither can the age profile of the fleet provide any indication of the standards maintained by different shipowners. Yet, age does seem to be an important determinant of earning potential as well as the price of shipping stocks. Nevertheless, according to Peter Stokes, the Managing Director of Maritime Consultants Ltd.[18], a company that wants to tap the stock market successfully should have a fleet of more than 10 vessels with a balanced age profile, including some fully amortized ships producing a base of free cash flow, some more modern tonnage and a newbuilding program. Also, the capital commitments for the newbuilding program should not be excessive in relation to existing capital employed and the technical quality of the fleet should be independently verifiable as excellent. As seen from the results of the model, the larger the number of vessels of a company, the higher its price should be. But this does not imply that there are increasing returns to scale in shipping. It simply suggests that most public shipping companies that have a large number of vessels issued their shares at an initially higher price instead of issuing more shares at a lower price. On the other hand, it turned out that

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[18] Peter Stokes, Shipping's Track Record as a Basis for Attracting Capital, Proceedings of the 6th International Ship Finance Conference, Lloyd's of London Press Ltd, 1994

the coefficient of the variable representing average strongly influenced the price of shipping stocks.

Quality Of Vessel:

As described above the quality of vessels, rather than their age, might be a better way to assess their seaworthiness . However, information about quality values is harder to obtain as opposed to age. If such information was easily accessible, quality of vessels would be a better variable for the model compared to average age.

Chartering Policy:

The chartering policy of a company defines whether its vessels are going to be employed on a long-term charter, bareboat charter or in the spot-market. Time charters represent a more conservative chartering policy whereas "playing" in the spot market is riskier, but with higher potential returns or losses. Bareboat charters are the least risky form of chartering and are commonly referred as leasing. In order to see whether the chartering policy of a public company affects its price, a chartering policy variable was included in the model. The variable was defined as the percentage of Dead Weight Tonnage (DWT) charted long term out of the total DWT owned during each year. However, because it turned out that this variable was multicollinear with the Management variable to be discussed later, it was eventually dropped out of the model as it was somehow represented by the Management variable.

Nevertheless, the fact that some of the companies which were analyzed operate a large number of liner vessels, posed a problem because liner vessels operate under established rate schedules. Therefore, liner vessels had to be classified as vessels being on long-term charter thus providing the company with relatively certain future income. Also any specialized vessels where classified as long term charters since they produce a more certain cash flow than typical dry cargo and tanker vessels.

The Specific Market Orientation And Fleet Composition Of Each Company (e.g. Bulk, Tanker, Mixed etc.):

It was mentioned earlier that tanker ownership is perceived riskier due to all the uncertainty of the increasing importance of environmental regulations. In order to see whether the composition of the fleet influences the shipping stock prices, a variable defined as the percentage of tankers over the total vessels owned by the company was included in the model. Since cruise line companies were not included in the model, this variable basically suggests whether a company owns mainly tankers or bulk carriers. However, for those companies which also own containerships or other types of vessels this variable represented the percentage of the number of tanker vessels owned out of the total number of company vessels.

It could be argued that there is no reason to include this variable in the model. However, as the results showed, it turned out that the coefficient of this variable is positive and significant. This can be explained by the fact that since tankers are generally more expensive than bulk carriers of the same age, the value of a tanker owning company similar in size and average age to a dry bulk owning company will have a higher value hence a higher stock price than the latter. Moreover, the freight rates of tankers are generally higher to those of similar in DWT and age dry bulkers. Still, the results do not imply better performance for shipping stocks of a tanker owning shipping company. They imply, however, that the value of those companies are higher. It should be kept in mind that the purpose of the model is to find a way to standardize shipping companies in general regardless of the type, number and age of their vessels.

The Proposed Life Of The Company (Limited Life vs Going Concern):

As it was discussed in detail in **Chapter 4**, start-up shipping projects which generally include a limited-life provision, might perform differently in the stockmarket because of this provision. Recall that investors of this type of company are risk takers focusing on asset play rather than steady earnings from dividend payout ratios. As a result we would expect their stock prices to

be lower than the prices of similar ongoing entities. In order to check this further, a variable (Dummy variable) was included in the model which took the value of one if the company had a limited life provision and zero otherwise.

However, the results showed that this variable was irrelevant to the stock price performance. A possible explanation to the insignificance of this variable is that by including it in the model, multicollinearity was introduced with the dividend variable which will be discussed later. This result was expected since it was evident by the data that the companies that were of the limited life fund type gave more dividends than their ongoing entity counterparts. Dropping this instead of the dividend variable, however, seemed to be more reasonable and proved to be a better solution for the output of the model.

Dividend Policy:

The dividend policy of every public company is considered to be very important for the satisfaction of investors. As a result, dividends paid during each year are expected to influence the stock prices of any public company. Even though Modigliani and Miller showed that in a tax free and ideal economic environment dividend policy is irrelevant to the value of a company, when tax issues and other imperfections are introduced into the economy, dividends paid do have a great influence on the stock price of that company. Keeping that in mind, the management of a public company typically aims at a stable dividend stream since it has been shown that investors prefer stable dividends than erratic dividend payout ratios. However, looking at public shipping company dividend payout ratios, we can see that most of the managers of these companies do not agree with the need for a stable dividend payout policy. With the exception of few companies, most dividends paid to shipping stock investors were special dividends because of abnormal returns of the companies. **Table 4.4** and **Appendix 7.c** show the unsteadiness of the dividend policies of some public shipping companies of the limited life fund type. However, it was unstable dividends that made the investment in such stocks attractive in the first place.

Nevertheless, despite the unstable dividend policies of public shipping companies, the model shows that yearly dividends paid to stockholders affected the price of the relevant shipping stock shares. In fact, it was shown that a one dollar dividend paid resulted in a $.673 drop of the stock price. Yet, before commenting on these results, it should be noted that it is reasonable for any company's stock price to drop after the announcement of the dividends to be paid by as much as the amount of dividends paid. For example, if a company's stock price was ten dollars before an announcement of a one dollar dividend for each share, it would be normal for that share price to drop to nine dollars after the announcement. Therefore, the results of the model suggest that in fact, the higher the dividends paid, the better off the investor is but the lower the value of the firm. Indeed, the value of the firm will have to drop because there is less working capital available for the company since it was used to pay dividends to the shareholders. To conclude, it was shown that dividends paid are perceived as a good sign for the company's performance by the investors.

Management/Track Record:

Bankers value the management track record as the most important determinant when structuring a term loan for a shipping company. More specifically, the ability of managers to adapt to the cyclical fluctuations of the shipping industry is one of the determining factors for bankers to give loans. This is particularly true in weathering market crises, where resourcefulness in income generation and cost budgeting have often been critical in ensuring survival. However, it is very difficult to evaluate the management track record of a company and thus include it as a variable in the model.

In this work, the Management Track Record was defined by comparing each company's individual performance to the average performance of all shipping companies which were analyzed. First, the Return on Assets (ROA) of each company was calculated for each year by dividing the net yearly income by the total current assets of the company. This ratio explains fairly well the ability of management to manage its assets i.e. run the shipping business. Then an average value of all companies' ROA was calculated again for each year. The yearly management value for each company was defined

as the difference of the ROA of that company in a given year from the average ROA value calculated earlier. **Appendix 7a** shows how the management values were obtained by considering ROA values of several companies.

It should be kept in mind that another possible way of quantifying the management value is by looking at the revenues generated by each company and comparing them to the revenues that would have been generated if the average appropriate one year time charter equivalent rate had been used for each particular vessel. However, this method was not pursued here, as the method based on ROA was deemed sufficient and simple enough to capture the main differences in management track records of different companies.

Equity Participation Of The Promoter/Owner:

As it was discussed in **Chapter 4**, the equity participation of a company's promoters could influence the performance of that company. However, it was not possible to obtain values for the equity participation of the owners on each company for each year, as such data is unavailable.

Working Capital

The Working Capital of a company is collectively known as the current assets and current liabilities. It is generally accepted that the Net Working Capital, i.e. current assets less current liabilities, is an indication of the ability of a company to overcome difficulties. Moreover, the high value of the Net Working Capital is also a sign of good management. Nevertheless, the results of the Regression Analysis suggested that the value of that variable did no affect the shipping stock prices significantly.

Price of Shipping Stock:

The price of the stock of each shipping company at each particular point in time was chosen as the dependent variable. All figures were converted to U.S. dollars using the appropriate exchange rate at each data point. Moreover, all share prices and dividends were adjusted for any stock split that occurred during the period analyzed.

Shipping Market Conditions:

To quantify the shipping cycle at each particular data point (either end of June or end of December of each year) an index called RIRINDEX was created as follows. First a Dry Bulk Index and a Tanker Index were created separately. The Dry Bulk Index was defined as the average one year time charter rate of all types of dry bulk vessels. The first step was to find the average one year time charter rate for a typical Handy Size, a typical Panamax and a typical Cape Size vessel for each relevant quarter. Then, using the DWT percentage of each of those categories, the average typical dry bulk vessel one year time charter rate was calculated for each relevant quarter. **Appendix 7b** shows the values of the parameters used for the creation of this index as well as the Tanker Index which was created in a similar fashion. Since data points were taken either at the end of June or December, only those two quarters were used to build the indexes.

As it mentioned above the Tanker index was created by finding the one year time charter rates for typical Small Tankers, Medium Tankers, Large Tankers and Very Large Crude Carriers (VLCC) and finding their weighted average value using the DWT percentage of each of those categories for each relevant quarter. **Appendix 7b** contains the calculations and the values used for the creation of this index. However, because each company operates a mixture of tankers and dry bulk vessels it was appropriate for the final shipping market index to be different for each company. As a result, the final index, named RIRINDEX was defined as follows:

INDEX=(%tankers owned) X Tanker Index+(1-%tankers owned) X Bulk Index
for each company and each data point

RIRINDEX=INDEX(at relevant data point) / INDEX (at year 90.4)
for each company and each data point

Year 1990.4 was chosen as a base year randomly in order to make the index unitless. As a check to the calculations it was ensured that each company had a value of one for the RIRINDEX in 1990.4.

The results of the regression analysis suggested that the shipping index had a strong influence on shipping stock prices at the 100% level of significance. Moreover, the results suggest that most investors are indeed speculative and value their stock according to how high one year time charter rates are at each particular point in time. But as it has been mentioned throughout this work the high cyclicality of the shipping industry is an irreversible fact that has to be dealt with by investors who should use their shipping stocks as a long term investment instrument and not as a speculative short term potential investment. But for those who still want to be speculative, buying shipping stocks when the shipping market is at its bottom is a risky investment with potentially high returns .

As it was mentioned in **Section 7.2**, there were also other variables included during the initial trial runs of the model. But, it is not part of this work to show the steps taken to reach the actual results. The variables described here, however, were the ones of most importance even though some of them ended up to be insignificant to the valuation of the dependent variable. The next section includes a discussion of the results of the Regression Analysis and indicates areas of concern on those results. It also identifies the usefulness of the model to any party involved or wishing to be involved in the shipping industry.

7.4) Results and their Application

Appendix 7c shows the inputs to the regression analysis of this work. It should be noted that data points were taken for either the end of June or the end of December for each year depending on what data was available for each company. Moreover, most companies included were listed in the U.S. market and were start-up projects instead of ongoing entities. However, the input variables varied significantly among companies thus accounting for a variety of type of shipping projects.

The statistical results of the model are given in **Appendix 7d** and should be self explanatory to a reader with basic knowledge of the regression analysis method. However, a more detailed explanation of these results is necessary. First of all, the signs of the coefficients turned out to be as expected. The age coefficient turned out to be negative suggesting that the higher the average age of the company's vessels, the lower the stock price. The tanker coefficient turned out to be positive suggesting that tanker ownership leads to higher stock prices. This result was not evident beforehand but is statistically significant to the 100% level of significance.

As expected, the management coefficient had a positive sign since the better the management track record, the better the stock price performance. Also expected was the positive sign of the index variable suggesting that the higher the freight rates, the higher the stock prices. The dividend coefficient had a negative sign because, as described in **Section 7.3**, with the announcement of dividends to be paid, stock prices are expected to drop as much as the amount of dividends to be paid. The number of vessels variable had also a positive sign verifying that a public shipping company should have a large number of vessels. Finally, the leverage variable had a negative coefficient verifying that high D/E ratios are not a good sign for the healthy performance of shipping companies.

The important result of the model is its high adjusted squared multiple R which turned out to be 93%, indicating that a very good sample was chosen

to describe the dependent variable. What this value indicates is that 93% of the shipping stock price can be explained by the independent variables used in the model. Moreover most T statistic values showed that results were acceptable at least at the 95% level of significance.

The results of the model could be used in many ways. One of them is to indicate the most important predictable determinants of stock price performance In this case predictable refers to items that can be forecast. Moreover the model predicts how sensitive stock prices are to changes in these determinants. For example, the decision by a company to buy newer vessels of a certain type, the announcement of dividends and the decision to borrow more money are all factors that can be predicted. Using the coefficients of the model, an investor could forecast how the price of the stock should have performed after the announcement. If, the stock price calculated is more than the actual stock price after the announcement, there is a possibility that this share is undervalued and the investor should consider buying that stock. If, on the other hand, the stock price after the announcement is found less by the model than it actually is, the stock is probably overpriced and should be sold before its price drops.

As an example suppose a company's shipping stock price at a certain time was $10. Suppose also that the holding company announces a change in its D/E ratio from 50% to 60%. The model predicts a decrease of 2.904*(.1)=$.29 in the stock price . If right after the announcement the price of the stock decreases by more than that, the stock is predicted undervalued by the model and should be bought by a possible investor. If on the other hand the stock price increases after the announcement, all other variables remaining constant, it is probably overvalued and should be sold before its price drops. Another example could be the decision of a company to buy tankers increasing its tanker variable by 10%. The model predicts that such an action, given all other variables are kept constant, would increase the stock price by .097*10=$.97. Again, the predicted price should be compared to the actual price in order to make a decision about buying a stock or selling it.

The model above can also be used in conjunction with a model predicting the time charter rates of vessels. If there is strong support that the

shipping market index (RIRINDEX in the model) will increase, then the coefficient of that variable could be used to predict the shipping price change. Then, depending on the results, the stock will be either overvalued or undervalued. It should be mentioned here that not only the investors but also the promoters of the funds could use this model to predict the effect of their actions on the price of their company's shares.

The model can also be used as a supplement to other stock pricing instrument for shares of a company about to be listed. For example, suppose that the Maritime Investment Fund (MIF) which was not included in the model was in need of pricing its shares at the end of 1993. MIF was composed of four tanker vessels of 10.75 years of average age, had in 1993 a value for management of 18.1%, had D/E ratio of .909 and the RIRINDEX for the company for that year was 0.884. The model predicts that its stock price should be -0.589 * 10.75 +.097* 100 + .092 * 18.1 + 12.773 * .884 + .149* - 2.904 * .909 = $14.28. Regarding the number of shares to be issued, this will be determined by the amount of money needed to be raised by the company.

7.5) Possible Improvements

There are several improvements that can be made to the model of this chapter. First of all, both more time series as well as cross sectional data points would enhance the results and allow for further model evaluation. Ideally, all public merchant shipping companies for each of the year they were trading should be included. Moreover, semiannual or even quarterly data for those companies would allow one to include even more data points in the Regression Analysis. Including more companies (cross sectional data) into the model would also allow for the use of the limited Life Dummy Variable which was prevented from being used because it distorted the results. If the sample of ongoing entities was bigger, that variable would probably deduce useful information about the difference in expectations of investors of this type of companies compared to investors in ongoing entity company stocks. Also, the VESSEL variable might have been defined differently, for example as the total DWT instead of the number of vessels owned by a firm. Also, the TANKER variable might have been defined as DWT percentage of tankers compared to the total DWTs owned by a firm.

Another way the model could be improved is by defining the MANAGEMENT variable more accurately. Such a definition could be achieved by calculating the revenues of a company had it chartered its vessels at the average time charter rate of each period and comparing the results to the actual revenues of those vessels.

A test that could be used to ensure the accuracy of the model which would be feasible if more data points were available to us is the following. Different random samples could be tested using the same dependent and independent variables. If regardless of the sample the results were the same, this would serve as a check to their accuracy. However, the limited number of data points available prohibited the use of this test.

APPENDIX 7a

CALCULATION OF THE VALUE OF MANAGEMENT

COMPANY	YEAR	Anangel American	B+H Bulk	B+H Maritime	B+H Ocean	Global Ocean	Norta	MC Ship	Avg ROA
ROA	89.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.91
MNGMT	89.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
ROA	89.4	N/A	68.60	N/A	N/A	N/A	-8.70	N/A	12.76
MNGMT	89.4	N/A	55.84	N/A	N/A	N/A	-21.46	N/A	
ROA	90.2	13.22	N/A	9.99	10.58	N/A	N/A	2.76	5.66
MNGMT	90.2	7.56	N/A	4.33	4.92	N/A	N/A	-2.90	
ROA	90.4	13.22	-22.00	9.99	10.58	2.40	N/A	2.76	3.56
MNGMT	90.4	9.66	-25.56	6.43	7.02	-1.16	N/A	-0.80	
ROA	91.2	11.28	N/A	-3.61	-3.54	N/A	N/A	1.90	-1.59
MNGMT	91.2	12.87	N/A	-2.02	-1.95	N/A	N/A	3.49	
ROA	91.4	11.28	-39.00	-3.61	-3.54	5.10	N/A	1.90	-4.28
MNGMT	91.4	15.56	-34.72	0.67	0.74	9.38	N/A	6.18	
ROA	92.2	5.62	N/A	-28.08	-8.17	N/A	N/A	-3.08	-3.69
MNGMT	92.2	9.31	N/A	-24.39	-4.48	3.69	N/A	0.61	
ROA	92.4	5.62	N/A	-28.08	-8.17	0.60	N/A	-3.08	-3.45
MNGMT	92.4	9.07	N/A	-24.63	-4.72	4.05	N/A	0.37	
ROA	93.2	3.90	N/A	-42.13	-26.66	N/A	N/A	-1.12	-8.71
MNGMT	93.2	12.61	N/A	-33.42	-17.95	N/A	N/A	7.59	
ROA	93.4	3.90	N/A	-42.13	-26.66	-2.00	N/A	-1.12	-9.00
MNGMT	93.4	12.90	N/A	-33.13	-17.66	7.00	N/A	7.88	

Comments: Due to the lack of information available, many values of the ROA for some companies were not available for some data points. However, the results are still a good indication for the value of the management of each company for the relevant year of operation.

APPENDIX 7a continued

COMPANY	YEAR	Hoegh	OSG	OMI	Berg	Wilh	Argon	BT shipp.	Avg ROA
ROA	89.2	N/A	3.37	N/A	11.22	3.30	10.39	1.17	4.91
MNGMT	89.2	N/A	-1.54	N/A	6.31	-1.61	5.48	-3.74	
ROA	89.4	N/A	3.37	N/A	11.22	3.30	10.39	1.17	12.76
MNGMT	89.4	N/A	-9.39	N/A	-1.54	-9.46	-2.37	-11.59	
ROA	90.2	-2.19	3.73	0.89	8.58	9.07	2.68	2.97	5.66
MNGMT	90.2	-7.85	-1.93	-4.77	2.92	3.41	-2.98	-2.69	
ROA	90.4	-2.19	3.73	0.89	8.58	9.07	2.68	2.97	3.56
MNGMT	90.4	-5.75	0.17	-2.67	5.02	5.51	-0.88	-0.59	
ROA	91.2	8.30	3.56	2.45	0.28	2.44	-10.08	-30.45	-1.59
MNGMT	91.2	9.89	5.15	4.04	1.87	4.03	-8.49	-28.86	
ROA	91.4	8.30	3.56	2.45	0.28	2.44	-10.08	-30.45	-4.28
MNGMT	91.4	12.58	7.84	6.73	4.56	6.72	-5.80	-26.17	
ROA	92.2	4.03	0.00	-4.71	1.39	-1.22	-2.92	-3.50	-3.69
MNGMT	92.2	7.72	3.69	-1.02	5.08	2.47	0.77	0.19	
ROA	92.4	4.03	0.00	-4.71	N/A	-1.22	-2.92	-3.50	-3.45
MNGMT	92.4	7.48	3.45	-1.26	N/A	2.23	0.53	-0.05	
ROA	93.2	6.16	0.98	-2.13	N/A	N/A	N/A	N/A	-8.71
MNGMT	93.2	14.87	9.69	6.58	N/A	N/A	N/A	N/A	
ROA	93.4	6.16	0.98	-2.13	N/A	N/A	N/A	N/A	-9.00
MNGMT	93.4	15.16	9.98	6.87	N/A	N/A	N/A	N/A	

Comments: Due to the lack of information available, many values of the ROA for some companies were not available for some data points. However, the results are still a good indication for the value of the management of each company for the relevant year of operation.

APPENDIX 7b

Calculation Of The Dry Bulk And Tanker Index Used In The Model

year	89.2	89.4	90.2	90.4	91.2
DRY BULK INDEX	12830	13128.8	11680	9300	11630
TANKER INDEX	14015.50	15886.00	18481.00	16940.00	18440.00
% Handysize of total dry	0.45	0.45	0.45	0.45	0.45
% Panamax of total dry	0.25	0.25	0.25	0.25	0.25
% Cape Size of total dry	0.3	0.3	0.3	0.3	0.3
Handy Size, 38,000 dwt	89.2	89.4	90.2	90.4	91.2
Spot - USG/Rotterdam - Grain					
Spot rate (usd/tonne):	17.7	17.4	14.9	15.4	16.1
Voyage cost (usd/day):	3900	4000	3700	5100	3800
Earnings per day usd/d	11140	10800	9020	8000	9930
One Year Time Charters					
TC rate (usd/dwt/m):	7.71	7.69	7.14	5.82	7.04
TC rate (usd/day):	9900	9875	9200	7500	9100
Panamax Size, 65,000 dwt	89.2	89.4	90.2	90.4	91.2
Spot - US Gulf/Japan - Grain					
Spot rate (usd/tonne):	25.2	26.5	22.0	23.5	26.3
Voyage cost (usd/day):	5100	5400	4900	6800	5000
Earnings per day usd/d	14500	15200	12200	11500	15400
One Year Time Charters					
TC rate (usd/dwt/m):	5.96	5.87	5.08	3.95	5.39
TC rate (usd/day):	13100	12900	11200	8700	11900
Cape Size, 130,000 dwt	89.2	89.4	90.2	90.4	91.2
Spot - HR/RB/Japan - Coal					
Spot rate (usd/tonne):	18.4	17.7	15.0	14.2	15.4
Voyage cost (usd/day):	6680	7110	5960	9560	6080
Earnings per day usd/d	24900	23300	19800	14800	20300
One Year Time Charters					
TC rate (usd/dwt/m):	3.87	4.14	3.59	2.84	3.44

TC rate (usd/day):	17000	18200	15800	12500	15200
TANKER INDEX	14015.50	15886.00	18481.00	16940.00	18440.00
% of Small tankers of total	0.19	0.19	0.19	0.19	0.19
% of Medium tankers of total	0.18	0.18	0.18	0.18	0.18
% of Large tankers of total	0.17	0.17	0.17	0.17	0.17
% of VLCC's of total	0.46	0.46	0.46	0.46	0.46
Small Tanker, 35,000 Dwt	89.2	89.4	90.2	90.4	91.2
Spot - Carib/USAC, clean					
Spot rate (WS, basis 94):	191	231	196	421	220
Flat Rate (usd/tonne):	3.54	3.54	3.72	3.72	4.29
Voyage costs (usd/day):	3140	3330	3430	4900	3510
Earnings per day usd/day	10560	13240	10330	24740	12000
One Year Time Charters					
TC Rate (usd/dwt/m):	9.13	9.72	9.80	10.65	11.41
TC Rate, '80s built usd/d	10800	11500	11600	12600	13500
Medium Tanker, 85,000 D	89.2	89.4	90.2	90.4	91.2
Spot - Carib/USG, crude					
Spot rate (WS, basis 94):	117	140	144	140	163
Flat Rate (usd/tonne):	3.94	3.94	4.15	4.15	4.63
Voyage costs (usd/day):	6700	7080	6080	9000	6210
Earnings per day usd/day	13260	16840	18590	14980	21700
One Year Time Charters					
TC Rate (usd/dwt/m):	4.94	5.57	6.00	6.25	6.23
TC Rate, '80s built usd/d	14200	16000	17300	18000	18000
Large Tanker, 140,000	89.2	89.4	90.2	90.4	91.2
Spot - Bonny/USG, crude					
Spot rate (WS, basis 94):	76	90	90	88	112
Flat Rate (usd/tonne):	8.83	8.83	9.38	9.38	10.76
Voyage costs (usd/day):	5090	5460	5340	9130	5410
Earnings per day usd/day	14610	17940	18210	13890	23700
One Year Time Charters					
TC Rate (usd/dwt/m):	3.05	3.37	3.68	3.66	3.58

TC Rate, '70s built usd/da	14750	16300	17900	17800	17500
VLCC, 270,000 dwt	89.2	89.4	90.2	90.4	91.2
Spot - AG/East, crude					
Spot rate (WS, basis 94):	43	79	63	77	82
Flat Rate (usd/tonne):	9.88	9.88	10.70	10.70	11.80
Voyage costs (usd/day):	10000	10720	8720	15090	8840
Earnings per day usd/day	10850	27200	21630	21940	30900
One Year Time Charters					
TC Rate (usd/dwt/m):	1.61	1.87	2.34	1.92	2.23
TC Rate, '70s built usd/da	15000	17500	22000	18000	21000

APPENDIX 7b continued

year	91.4	92.2	92.4	93.2	93.4
DRY BULK INDEX	12735	9425	9140	11230	10500
TANKER INDEX	20272.00	14580.00	13082.00	13817.00	14973.00
% Handysize of total	0.45	0.45	0.45	0.45	0.45
% Panamax of total	0.25	0.25	0.25	0.25	0.25
% Cape Size of total d	0.3	0.3	0.3	0.3	0.3
Handy Size, 38,000 dw	91.4	92.2	92.4	93.2	93.4
Spot - USG/Rotterdam					
Spot rate usd/tonne	14.8	13.2	14.3	17.0	14.6
Voyage cost usd/day	4000	4100	4300	4000	3800
Earnings per day u/d	8600	7100	7900	10500	8600
One Year Time Charte					
TC rate (usd/dwt/m):	7.43	6.19	6.35	7.43	6.97
TC rate (usd/day):	9600	8000	8200	9600	9000
Panamax Size, 65,000	91.4	92.2	92.4	93.2	93.4
Spot - US Gulf/Japan					
Spot rate usd/tonne	26.6	21.3	22.3	25.9	22.7
Voyage cost usd/day	5300	5400	5700	5300	5000
Earnings per day u/d	15400	11100	11600	14800	12600
One Year Time Charte					
TC rate (usd/dwt/m):	5.84	4.57	4.16	5.07	4.62
TC rate (usd/day):	12900	10100	9200	11200	10200
Cape Size, 130,000 dwt	91.4	92.2	92.4	93.2	93.4
Spot - HR/RB/Japan -					
Spot rate usd/tonne	15.5	9.7	9.7	12.3	11.9
Voyage cost usd/day	6560	6560	7140	6210	5690
Earnings per day u/d	20000	10100	9500	14900	14700
One Year Time Charte					
TC rate (usd/dwt/m):	3.91	2.49	2.38	3.10	2.94
TC rate (usd/day):	17300	11000	10500	13700	13000
TANKER INDEX	20272.00	14580.00	13082.00	13817.00	14973.00

% of Small tankers of	0.19	0.19	0.19	0.19	0.19
% of Medium tankers	0.18	0.18	0.18	0.18	0.18
% of Large tankers	0.17	0.17	0.17	0.17	0.17
% of VLCC's of total	0.46	0.46	0.46	0.46	0.46
Small Tanker, 35,000	91.4	92.2	92.4	93.2	93.4
Spot - Carib/USAC, cl					
Spot rate WS, basis94	223	161	191	208	257
Flat Rate usd/tonne	4.29	3.74	3.74	3.94	3.94
Voyage costs usd/day	3720	3770	4020	3660	3470
Earnings per day u/d	12000	7600	9400	11000	14600
One Year Time Charte					
TC Rate (usd/dwt/m):	10.31	9.30	8.03	9.13	9.80
TC Rate, '80s built u/d	12200	11000	9500	10800	11600
Medium Tan, 85,000	91.4	92.2	92.4	93.2	93.4
Spot - Carib/USG, cru					
Spot rate (WS, ba 94):	128	86	110	156	121
Flat Rate usd/tonne	4.63	4.15	4.15	4.40	4.40
Voyage costs usd/day	6630	6690	7180	6450	6040
Earnings per day u/d	15300	8100	11600	20300	14600
One Year Time Charte					
TC Rate (usd/dwt/m):	6.58	4.87	4.18	4.51	5.03
TC Rate, '80s built u/d	19000	14000	12000	13000	14500
Large Tank, 140,000	91.4	92.2	92.4	93.2	93.4
Spot - Bonny/USG, cr					
Spot rate (WS, ba 94):	85	54	64	73	74
Flat Rate usd/tonne	10.76	8.98	8.98	9.53	9.53
Voyage costs usd/day	5900	5870	6470	5460	4900
Earnings per day u/d	16300	8200	10300	13700	14500
One Year Time Charte					
TC Rate (usd/dwt/m):	3.93	2.89	2.58	2.78	2.95
TC Rate, '70s built	19200	14000	12500	13500	14300
VLCC, 270,000 dwt	91.4	92.2	92.4	93.2	93.4

Spot - AG/East, crude					
Spot rate (WS, ba 94):	63	37	54	45	42
Flat Rate usd/tonne	11.80	10.14	10.14	10.80	10.80
Voyage costs usd/day	9660	9600	10600	8910	7970
Earnings per day	21000	8400	15200	12900	12300
One Year Time Ch					
TC Rate (usd/dwt/m):	2.60	1.77	1.63	1.66	1.79
TC Rate, '70s built	24500	16500	15200	15500	16800

APPENDIX 7b continued

year	94.2	94.4
DRY BULK INDEX	10540	12500
TANKER INDEX	13644.00	14256.00
% Handysize of total dry fleet	0.45	0.45
% Panamax of total dry fleet	0.25	0.25
% Cape Size of total dry fleet	0.3	0.3
Handy Size, 38,000 dwt	94.2	94.4
Spot - USG/Rotterdam - Grain		
Spot rate (usd/tonne):	15.9	18.0
Voyage cost (usd/day):	4200	4200
Earnings per day (usd/day):	9300	11100
One Year Time Charters		
TC rate (usd/dwt/m):	7.20	7.66
TC rate (usd/day):	9300	9900
Panamax Size, 65,000 dwt	94.2	94.4
Spot - US Gulf/Japan - Grain		
Spot rate (usd/tonne):	22.1	27.4
Voyage cost (usd/day):	5500	5600
Earnings per day (usd/day):	11700	15700
One Year Time Charters		
TC rate (usd/dwt/m):	4.66	5.66
TC rate (usd/day):	10300	12500
Cape Size, 130,000 dwt	94.2	94.4
Spot - HR/RB/Japan - Coal		
Spot rate (usd/tonne):	11.9	15.9
Voyage cost (usd/day):	6630	6720
Earnings per day (usd/day):	13800	20600
One Year Time Charters		
TC rate (usd/dwt/m):	2.85	3.71
TC rate (usd/day):	12600	16400
TANKER INDEX	13644.00	14256.00

% of Small tankers of total tankers (DWT)	0.19	0.19
% of Medium tankers of total	0.18	0.18
% of Large tankers of total	0.17	0.17
% of VLCC's of total tankers	0.46	0.46
Small Tanker, 35,000 Dwt	94.2	94.4
Spot - Carib/USAC, clean		
Spot rate (WS, basis 1994):	212	226
Flat Rate (usd/tonne):	3.71	3.71
Voyage costs (usd/day):	3860	3920
Earnings per day (usd/day):	11100	12000
One Year Time Charters		
TC Rate (usd/dwt/m):	10.14	10.40
TC Rate, '80s built (usd/day):	12000	12300
Medium Tanker, 85,000 Dwt	94.2	94.4
Spot - Carib/USG, crude		
Spot rate (WS, basis 1994):	113	120
Flat Rate (usd/tonne):	4.08	4.08
Voyage costs (usd/day):	6820	6910
Earnings per day (usd/day):	12500	13600
One Year Time Charters		
TC Rate (usd/dwt/m):	4.85	5.02
TC Rate, '80s built (usd/day):	14000	14500
Large Tanker, 140,000 Dwt	94.2	94.4
Spot - Bonny/USG, crude		
Spot rate (WS, basis 1994):	71	74
Flat Rate (usd/tonne):	9.34	9.34
Voyage costs (usd/day):	5880	5950
Earnings per day (usd/day):	12600	13400
One Year Time Charters		
TC Rate (usd/dwt/m):	2.79	2.85
TC Rate, '70s built (usd/day):	13600	13900
VLCC, 270,000 dwt	94.2	94.4

Spot - AG/East, crude		
Spot rate (WS, basis 1994):	35	49
Flat Rate (usd/tonne):	10.04	10.04
Voyage costs (usd/day):	9600	9720
Earnings per day (usd/day):	7300	14000
One Year Time Charters		
TC Rate (usd/dwt/m):	1.51	1.61
TC Rate, '70s built (usd/day):	14200	15100

APPENDIX 7c

The Inputs to the Model

COMPANY	YEAR	Price	average AGE	% tankers	Mngmnt above meanROA	90.4 base y RIRI combin index	div in $	# of vessl	Net Workin g Capital	Leverg D/E
Anangel	90.4	10.13	6	0	9.66	1	1.1	16	-9.29	0
	91.4	15.88	6.3	0	15.56	1.369355	0.9	17	-9.93	0
	92.4	13.13	7.47	5.5	9.07	0.971216	1	18	-10.3	0.26
	93.4	17.63	7.2	5	12.9	1.116775	1	19	-1.02	0.55
B+H Bulk	89.4	5	16	0	55.8	1.411694	10	6	2.45	0.39
Carriers	90.4	2.38	17.3	0	-25.6	1	0.5	6	-0.68	0.64
	91.4	1.88	18.7	0	-34.7	1.369355	0.3	5	0.61	0.73
B+H	90.2	9.63	15	44	4.33	1.183338	1.5	9	0.98	0.54
Maritime	91.2	6.63	17	44	-2.02	1.179262	3.5	9	3.53	0.76
	92.2	1.5	17.6	44	-24.4	0.946228	0	8	7.41	0.89
	93.2	1.63	18.8	44	-33	1.035098	0	5	-0.26	0.78
B+H	90.2	10.5	16.5	46	4.92	1.180039	3.4	13	-0.32	0.54
Ocean	91.2	8.38	16.5	46	-1.95	1.176022	1.8	13	-0.23	0.67
	92.2	2.38	17.5	46	-4.47	0.943173	0	13	0.37	0.64
	93.2	3.81	17.8	46	-17.94	1.027261	0	11	-4.07	0.75
Global	90.4	4.63	18	12.5	-1.15	1	1.3	8	0.482	0.43
Ocean	91.4	4.13	18.75	12.5	9.3	1.368707	0.2	8	5.95	0.79
Carriers	92.4	1.63	19.43	12.5	4.05	0.982006	0.1	7	4.238	0.34
	93.4	3.88	19.33	12.5	7	1.128223	0	6	3.84	0.58
MC	90.4	5.5	13	0	-0.796	1	0.9	8	0.13	0.6
Shipping	91.2	7.5	13.4	0	3.49	1.250538	1	8	-0.53	0.57
	92.2	3.75	8.6	0	0.6141	1.013441	1	8	-1.12	0.56
	93.2	3.38	15	0	7.59	1.207527	0	8	-1.15	0.5
Nortankers	89.4	16.17	15	100	21.46	0.93778	0.3	4	2.35	0.22
Hoegh	90.2	11.19	8.5	23	-7.85	1.217976	0	32	-10	1.57
	91.2	13.4	11.4	28.6	9.9	1.204209	0	28	-117	1.21
	92.2	11.59	11	28.6	7.72	0.969753	0.3	28	-153	0.84
	93.2	14.58	13	0	14.9	1.207527	0	21	-322	1.2
Wilh.	90.2	13.36	6.43	15	3.4	1.231172	0.1	48	-247	2.26
Wilhelmse	91.2	13.03	8.6	15	4.028	1.226239	0.2	48	1050	1.71
Limited	92.4	12.33	9	15	2.23	0.951215	0.2	48	1239	0.85
Argonaut	90.2	4.18	7	.79	-2.98	1.216327	0.2	N/A	43.1	0.42
	91.2	4.77	7.1	.79	-8.49	1.21166	0.2	N/A	-48.6	0.51
	92.4	2.48	5.28	.79	0.53	0.932266	0	N/A	-290	1.71
BT	90.2	5.25	13	100	-2.7	1.090968	N/A	6	1.48	0.9
shipping	91.2	6.5	14	100	-28.9	1.088548	N/A	6	1.58	0.73
	92.2	1.75	15	100	0.19	0.860685	N/A	6	2.15	1.17
Bergensen	90.2	3.27	8	41	2.918	1.188286	N/A	39	94	0.22
	91.2	3.46	8	42	1.87	1.182502	N/A	42	978	0.08

APPENDIX 7d

The Results of the Regression Analysis

MODEL CONTAINS NO CONSTANT.

Dep var:PRICE	N: 31
Squared multiple	R: .944
Multiple R: .972	Squared multiple R: .944
Adjusted squared multiple R:.930	Standard error of estimate: 2.548

Variable	Coefficient	Std error	Std coef	Tolerance	T	P(2 tail)
AGE	-0.589	0.151	-0.893	0.0443747	-3.903	0.001
TANKERS	0.097	0.022	0.316	0.4345006	4.325	0.000
MNGT	0.092	0.040	0.163	0.4668242	2.313	0.030
RIRINDEX	12.773	2.175	1.522	0.0345848	5.874	0.000
DIV	-0.673	0.328	-0.151	0.4291341	-2.048	0.052
VESSEL	0.149	0.068	0.317	0.1122677	2.206	0.037
LEVER	-2.904	1.601	-0.262	0.1110185	-1.814	0.082

Analysis of Variance

Source	Sum-of-squares	DF	Mean-square	F-ratio	P
Regression	2640.229	7	377.176	58.075	0.000
Residual	155.871	24	6.495		

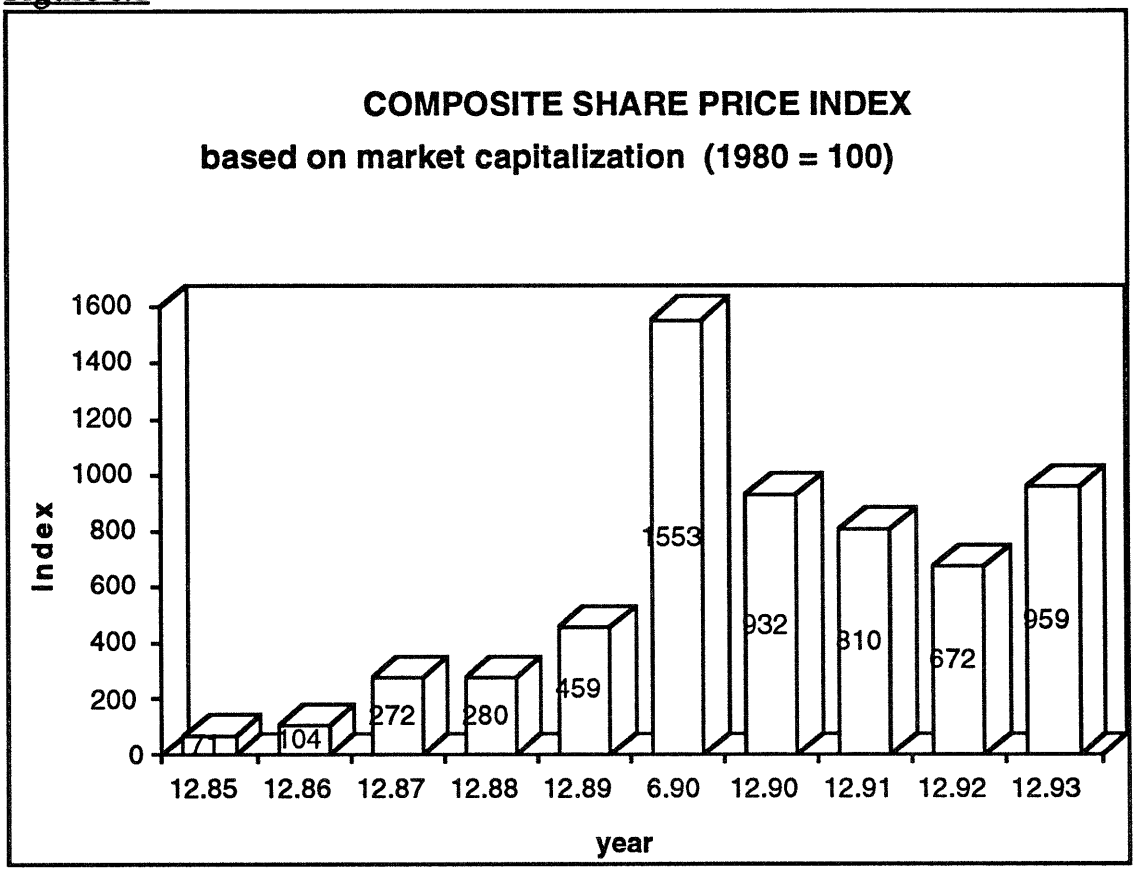
Chapter 8

The Athens Stock Exchange

8.1) Current State and Development and Future Prospects

The Athens Stock Exchange (ASE) was small and quite uninteresting until 1986 when foreign investment was allowed in it for the first time. Since then, the share price INDEX started rising dramatically as depicted in **Figure 8.1.**

Figure 8.1



It is interesting to note that despite the persisting macroeconomic imbalances of the Greek economy and the turmoil in the former Yugoslavia a number of factors gave an impetus to the market and underlined its potential for substantial growth. Market capitalization at the end of 1993 was Drs. 3,117.0 billion, up from previous year's 2,044.3 billion and transaction volume for 1993 almost doubled with average daily transactions value reaching 2.5 billion against Drs. 1.3 billion in 1992. The increased market activity was also reflected in the capital raised through rights issues and initial public offerings (IPOs) which amounted to 101.0 billion in 1993, a threefold of the total funds raised in 1992.

The underwriting boom continued well into 1994 when a wave of companies from virtually all economic sectors succeeded in raising equity through the ASE. Of the 40 companies slated to get new listings on the ASE the most interesting were the Greek Telecommunications Company and the MEGA channel listing. Needless to say that the recent stock listing by STRINZIS lines was a pioneering step for shipping companies wanting to raise funds through the stock market, and others are following closely. In fact DANE, has already gone public successfully and more passenger shipping companies are ready to follow.

The outlook for the future of the ASE which is keeping on with the modernization of its operational framework appears promising. There is continuous improvement of the operational and legislative structure and economic and structural measures are aiming to further deregulate the financial sector and facilitate domestic and foreign investment. Sources in the stock market believe that there is still ample room for more companies to enter the market since only a quarter of the 200 largest Greek companies have entered so far. However some stockbrokers believe that the growth of the ASE is slower than they would have expected but still substantial.

There are many areas of improvement for the ASE which has some characteristics that should be considered by both native and foreign investors who think about investing in Greek company stocks. First of all, about 80% of ASE investors are unsophisticated individuals who turn to their brokers for

advice and basically invest according to the advice of the latter. As a result, unlike the U.S. stockmarket, brokerage firms are the major players of the stock exchange game and to a lesser extent large institutional investors such as mutual funds and insurance companies. Moreover, since foreign investors were allowed for the first time to enter that stockmarket in 1986, not much foreign currency has been invested so far. In fact very few brokerage firms have a foreign investor department as most of them do foreign private deals only in special circumstances. It is true that if both foreign sophisticated individual investors and foreign institutions invested only a minuscule fraction of their funds in the ASE, the latter would grow substantially and the Greek economy would be helped tremendously during a time when it needs it most. Nevertheless, growth is imminent as seen from the dedication of brokerage firms to attempt to attract foreign investors. Moreover, the fact that the first Warrant into a basket of Greek blue chip shares was successfully issued on a private placement basis to sophisticated investors in the Luxembourg stock exchange is a big improvement for the ASE. This issue is a sign that the derivative market that has until now been traded only in the parallel market[19] is starting to grow and become a part of the ASE. However, there are some characteristics of the ASE and of the way Greeks "do business" that should not be ignored by potential ASE investors.

First of all, in Greece, unlike the U.S., banks were allowed to own brokerage firms. As a result the common problem of inside information, which is present at every stock market is largely augmented at the ASE since any macroeconomic change like the increase or decrease of the interest rate or money supply which affects stock prices could be available to a brokerage firm before it becomes public information. On the other hand, in the U.S., brokerage firms are not allowed to commit in any banking activities because of fear of inside information leakage; consequently every investment firm obtains information once it is publicly available[20].

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[19] The parallel market is the trading of shares that haven't been legally introduced in a stockmarket but fulfill the requirements needed for approval. This market was legalized in Greece in 1988 with law 1806/1988.

[20] Since 1989 Banks in the U.S. are allowed to own subsidiaries engaged in stock brokerage.

Another peculiarity of the Greek stockmarket is the unorthodox way by which some investors choose to do business. Because of the illiquidity of the market and the fact that few investors own large chunks of company stocks, it is really easy for any of these investors to influence the performance of a stock at least for a short while. For example, an investor who owns a large percentage of a company could decide that he wants to spread a rumor that the company is not doing well. He then tells his broker to sell many if not all of his shares leading the stock price to go down. When the prices are low enough he buys the stocks again at a discount and he has instantly made a profit at the expense of the unsophisticated investor who was influenced by the psychology of the masses. However, this trend has decreased since the ASE became computerized and the psychology of the masses does not influence the performance of stocks any more.

The goal this chapter is to determine if there is a promising enough future for the ASE to accept the offerings of merchant shipping companies. The feasibility of such a listing is assessed by examining the current status of the legal system of the ASE as it affects the shipping industry and by trying to implement the results of the model developed in **Chapter 7** and comments of all previous chapters to that matter.

8.2) The Legal Framework of the Athens Stock Exchange in relation to the Shipping Industry.

It is well known that the merchant shipping industry is of vital importance to Greeks and acts like a "life vest" to the economy since it is the major employer and the major source of foreign exchange of the country. However, it is a sector missing from the Athens Stock Exchange but probably not for very long for reasons to be discussed in this and the following section.

Even though there had always been discussions about shipping companies raising equity through the ASE and the subject is by no means new, the legal framework of the ASE had never allowed it until now. The Athens Stock Exchange Council had always thought that the best way to protect the investors was simply by not allowing such a risky industry as the shipping industry to raise funds through the ASE at all (article 7 of the Law 959/1979). In 1990, the law was modified and with article 55 of the Law 1892/1990 it was possible for shipping companies to become public if only they fulfilled the requirements stated for any limited liability company and after the approval by the Committee of Money Market of the Greek Ministry of Finance. Moreover, more specific terms would be determined by law after the proposals of the Ministers of Finance and Mercantile Marine. In fact, the specific rules for shipping companies would be made when the first shipping company would apply for a listing.

The continuous efforts of coastal shipping companies to enter the ASE led the council on the 23rd of January, 1992 to decide on additional terms and conditions for the shipping companies applying for a listing in the ASE . In particular, the council set the following listing requirements for shipping companies, conditions 1 to 5 being required by any type of company wanting to be approved for a listing:

1. The applicant company must be of limited liability type (Societe Anonyme) with equity capital of at least DRS. 500 million for a period of two years before the application for entry.

2. It should have a five year record of satisfactory operating profits. Newly established firms or firms with a shorter life span may ask for a special approval from the Capital Market Committee.

3. The applicant company should increase its share capital by at least 25%, through a public offering.

4. It should issue a prospectus prior to the public offering that has to be approved by the Stock Exchange Council. Moreover this prospectus should describe analytically the future use of the fund raised by the stock market.

5. It should hire an underwriter (one or more banks and/or brokerage firms having a minimum share capital of DRS. 1 billion), who will handle the issue and buy its shares not absorbed by the public.

6. Shipping companies in particular, in order to enter the ASE, apart from the above terms and conditions set in the Presidential Decree 350/85, must have five vessels, two of which must be no more than 20 years old, the remaining three vessels not to exceed 25 years each. The total capacity of the vessels should be at least 10,000 dwt.

7. The value of the ships should be determined by the Chamber of Shipping and by an internationally acclaimed firm of estimators.

8. A Certificate from the appropriate authorities should be provided in case of sale or purchase in order to inform investors.

9. Permission from the Bank of Greece is essential.

10. The maximum Debt/Equity ratio should be 70/30.

11. In order to determine the share price, the real net position and the price according to the real profits of the previous five years should be taken into account.

12. The P/E ratio for the previous five years should be greater than 8, taking into account the market conditions.

On the 14th of June, 1994, after the intentions of coastal shipping companies to enter the ASE were proven, the Council of the ASE decided that there had to be some changes on those rules for the better protection of the investor. The changes were the following:

1. The minimum number of vessels was now four instead of five but the total capacity increased to 20,000 dwt. Moreover the most restrictive requirement is that those had to be passenger ships excluding merchant shipping from a public offering for the time being.

2. The value of the ships should be determined by the Chamber of Shipping or by an internationally acclaimed firm of estimators. Moreover a second opinion could be asked if the ASE thinks it is necessary.

3. The vessels should be insured according to their value by an internationally acclaimed insurance company, for example Lloyd's of London, the Norway market or different markets for dangers of the vessel and the engine. They also have to be insured by acclaimed P&I clubs for damage/claims from a third party.

4. The vessels should be followed by a registry that is acclaimed by the Greek government. It should have the highest ranking class in that registry for vessels of the same category and must be free of qualifications.

5. In case that the whole administration of the companies' vessels is given to a shipping administration company, the latter should have a permanent establishment in Greece.

6. The certificates acclaiming the value of the vessel, the insurance contracts, the registry certificates, the copies of the nationality documents and the certificates of ownership and weight of the vessels should be deposited together with the application for a listing on the ASE and their date should be no more than a month earlier than the date of the application.

7. The newly entered companies in the ASE and those already in it should be limited liability companies of law 2190. These should either be the shipowning companies themselves or be the holding companies, and their subsidiary shipowning companies should be limited companies of either law 2190 or law 959. The chartered accountants of the company should inspect the company as well as their subsidiaries, whatever their form, according to the appropriate rules of inspection and subject to law 2190 They should also sign the balance sheets and handle the accounting statements.

8. Every other activity of the company should be included in the prospectus.

9. If one of the above requirements except those mentioned in paragraph 1 ceased to exist after the listing, this would be adequate to suspend the negotiations of the stock of that company in the ASE.

Besides these requirements, the following issues important for a listing were emphasized:

1. The age of the vessels and their rebuilding is substantial for their value, their viability and for the prospects of the company.

2. The compliance with not only the required security regulations in a federal and national level, but also with the future scheduled rules is a sign that will be taken into consideration when determining the asset value of the company.

3. The quality and the history of management is going to be a deterministic fact.

4. The condition of the relevant market at the time of the offering have to be appropriate .

5. The distribution of the domestic and foreign income should be considered.

6. The fact that the fixed investments on the vessels of shipping companies are negotiable and liquid in the international market as exchange currency is important.

It is well known that the Athens Stock Exchange is still at its infancy and in the process of "growing up", establishing rules and regulations as it grows. The requirements for any company that wants to become a part of the ASE are very vague and the major requirement is the approval of the Stock Exchange Council. In fact, there are no set rules for anything and existing ones could be changed instantly if the Stock Exchange Council decides that this is better for the future of the ASE. Consequently, each potentially listed company is going to be examined individually by the Council and be approved or rejected depending mostly on the Council and to a lesser extent on the preset rules and regulations. The Athens Stock Exchange is a place where "rules are made to be broken", a statement that could have positive as well as negative implications.

The reason why the application approval process is so company specific is because the Stock Exchange Council has the obligation to protect the investors due to the primitive state of the ASE. As it was mentioned earlier, both investors and promoters of funds of the ASE run their business in a very unorthodox way. And since the majority of the ASE investors are not experienced at all, the Stock Exchange Council has an obligation to protect these speculative investors by not allowing companies using such unorthodox ways to enter the ASE.

It turns out that the reason why merchant shipping companies are not allowed yet to be listed in the ASE is not that the Stock Exchange Council has firmly disapproved a listing but because no merchant shipping company has actually gone through the process of preparing a prospectus and applying for a

listing. Nevertheless, there have been many discussions between shipowners and bankers but neither party has taken the first step and gone beyond these discussions, although the first party to do so will probably have an advantage provided it is reasonably priced. This point is examined in more detail in the following section.

Finally it should be mentioned that some shipowners have found an alternate way to finance the purchase of vessels from the ASE. Mr. Panagopoulos, for example, financed the purchase of passenger vessels through ATTICA, a company that is basically unrelated to shipping before the requirements for the listing of passenger shipping companies had been set by the Stock Exchange Council. Also Cosmos, a limited liability industrial, commercial, and textile company raised additional capital to finance cargo vessels for the transportation needs of the company. However, there were restrictions involved with the shipping part of that company such as that the company should not use more than 7.5 percent of its equity for the purchase of vessels and the shipping part of the company will not be above 10 percent of the total business of the aggregate company[21]. Needless to say that 51.9% of Cosmos Ltd. shares are owned by Globe, a well known shipping company run by Mr. Dimitris Hatzis and Mr. Kyriakopoulos the help of whom is appreciated in the writing of this thesis.

The decision of Cosmos to basically finance its shipping needs using the backup of a well established non-shipping related entity brings up the question of whether there is a better way to finance shipping through public offerings than the direct listing of a shipping company in the Stock Exchange. It could be the case that investors would desire the insurance of a diversified integrated group. For example a group that engages in various activities such as oil trading and storage, international trading, bunkering, shipping etc., could be more attractive to investors than a public shipping company with all the risk it entails. Such a group would diversify the risk for its investors who would be less fearful of the cyclicality of the shipping industry. However, there is a legal implication on the possibility of the ASE accepting such an issue because of the problem with the shipping part of such a company. Yet,

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[21] Informative bulletin for the additional raise of capital for Cosmos Ltd., April-May 1994.

the listing of such a company could help find other sources of capital for shipping in case bank loans and pocket money are not enough.

To conclude, as it can be deduced from this chapter, the legal framework of the ASE is not explicit and laws are made on an industry specific basis. In fact anything is allowed as long as the Stock Exchange Council approves it. Therefore the possible approval of a merchant shipping company listing is not out of the question. But a necessary step before the approval of a listing is an application by a shipping company. The shipping community awaits for the first merchant shipping company which will find an underwriter that would agree to share the risk with the company and apply for a listing in the ASE.

8.3) The Athens Stock Exchange and the Shipping Industry

Most Greek shipowners have avoided the stockmarkets because they are satisfied with the "cozy" relationship that they have with their bankers and see no reason why they should enter foreign grounds and be subject to a costly failure. Besides, most Piraeus based bankers admitted that they generally give better loan terms to Greek shipowners than they or any other bank would give to foreign owners. Moreover, most Greek shipowners are asset players, i.e. they make most of their profits by the correct timing of the sale and purchase of vessels and do not have a typical public entity company structure where profits come mostly from the operation of the vessels. As a result, most Piraeus based well established shipping firms, have no incentive to try stockmarket financing unless they cannot get good bank loans because of personal reasons.

As discussed throughout this work, the limited life funds were created for the risk taker type of investor who wants to gain from capital appreciation of the assets. However, the liquidity of these funds was guaranteed since they included the limited life provision and other provisions like paying all gains as dividends and not allowing for reinvestment. But if an ongoing shipping entity that specializes in asset play decided to get a listing in a stock market, investors, being concerned about their liquidity options, would interfere with the management and its decisions on sales and purchases of vessels. Investors would not agree to stay passive and would become a burden to the management Even though the good management track record of the asset player type shipowners is a good indication for the future good performance of such companies, institutional investors would prefer not to be passive at all. This attitude is perfectly understandable in the U.S. where investors are not familiar with the shipping industry which is not a part of their everyday work experience. In fact, the unfamiliarity of investors with that industry and the resulting lack of analysis is the reason why there is such low liquidity of shipping stocks in the U.S. stockmarket. But, were those companies listed in Greece, things would probably be different.

It is well known that even though Greece is a tiny little country, it has always been one of the major shipping powers of the world owning fleets that exceeded in number those of superpowers like the U.S.A., Japan and the former U.S.S.R. Consequently, the shipping industry is a major employer in Greece and is a part of the everyday vocabulary of most Greek families. There are very few Greeks who haven't had a relative who was involved with this industry. And the ability, lifestyle and richness of many Greek shipowners is envied by most Greeks. As a result, it has been the lifetime dream of many Greeks to become shipowners themselves and become the new Onassis or Latsis[22]. But unfortunately for such entrepreneurs market conditions have changed a lot.

To become a shipowner nowadays is not as easy as it used to be. The increasing environmental regulations and the importance of replacing older tonnage has lead to huge capital requirements for starting a shipping company. The alternatives would be either to form a partnership with other investors with whom they would share the costs or invest in shipping stocks in the stockmarket and become a small part of a shipping company. There are many problems associated with the first alternative such as the probable disputes that would arise from such a partnership. However, the second case is the most feasible way to own part of a shipping company.

The preceding discussion suggests that Greeks would mostly buy shipping stocks to fulfill a dream they've always had without looking at the possible returns on their investment and without even doing any analysis. Rational or not, this a valid argument and this point should not be ignored by those shipowners being afraid to take the first step and consider a listing in the ASE. On the other hand, the irrationality of ASE investor is the main reason why the Stock Exchange Council is so strict with applying companies. So, the main problem for shipowners is obtaining the approval of the listing as the existence of small individual investors is almost guaranteed. Such

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[22] Onassis and Latsis were famous and successful Greek shipowners.

investors would buy those stocks even if no substantial underpricing[23] is done. However, this argument hold only for the success of an IPO and not for the future good performance of those shipping stocks. In fact, it is most probable, that the same unsophisticated individual investors who would rush to buy these shares, will also rush to sell them as soon as the shipping cycle starts to descend toward a recession. However, before obtaining the approval of the Council there is a necessary and perhaps sufficient step that shipowners should take, namely, to find an underwriter for their issue.

In Greece, only brokerage firms that have a minimum share capital of 1 billion Drs. are allowed to become underwriters. And there are only three brokerage firms that fulfill this requirement because they are subsidiaries of banks. These are the National, the Commercial and the International brokerage firms. Moreover, convincing a foreign investment bank to underwrite an issue in Athens is even harder than changing the law. Therefore, the underwriting in Greece is done mostly by banks and the notion of investment banks is not pertinent to the ASE. As a result, if an owner considers a listing, he would have to find a bank that would underwrite the issue. There are many reasons why finding a bank to do the underwriting of a shipping related listing would trigger the success of an IPO.

First of all, in Greece, unlike in the U.S., underwriters cannot act on a best effort basis[24]. Therefore, the underwriter of an issue would have to act in an all or none basis, i.e. to buy all the shares of the issuing company at a discount and then sell them to investors. If a bank which has been lending money to a shipowner for many years believes in his good management abilities and decides to take that risk, then investors have a strong incentive to believe that the deal is rational without even doing any analysis. But would banks rely on such an investor attitude and underwrite an issue if they are not sure it is correctly priced and valued? The answer lies on the bankers and their conservatism. In the worst case scenario, the banks will be stuck

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[23] To ensure the success of an IPO, listings of new shares are usually offered at a lower price than their true or estimated value. The risk of not selling the shares of a new listing is perceived too high to attempt not doing some underpricing.

[24] When the best effort basis is used, underwriters can cancel the deal if they are no able to sell all the shares. In such case, the discount with which they would buy the shares would be lower because they do not have to incur the high risk of not being able to sell all the shares.

with equity participation of the shipping company they probably lend money to. The reason why this is undesirable is explained below.

High equity participation in a merchant shipping company is really risky for a bank because of possible liability issues. Imagine a bank being part owner of a tanker shipping company which is responsible for a substantial oil spill. If lawyers decide the bank is partly responsible for the spill, it could mean a disaster for that bank. As a result, lawyers themselves have advised bankers to stay away from such deals and the latter have avoided such listings and rightfully so. Yet, if the problem of unlimited liability in case of a catastrophe is solved, banks will probably change their attitude and be less reserved when deciding whether to underwrite a shipping stock issue or not. The Certificates of Financial Responsibility (COFR) are probably going to solve the unlimited liability problem and they have already been received as the guarantee of limited liability for those who possess them. Therefore, it is expected that bankers would be less averse to underwriting an issue of a shipping company whose vessels have COFR.

Nevertheless, if the best effort method was used for underwriting in the ASE, the shipowners would be risking paying for the costs of an unsuccessful IPO. In such a case the finding of an underwriter would not necessarily signal the good valuation of a deal and investors would have to be more rational in their decisions. But since requiring underwriters to act on an all or none basis increases the protection of investors, it is quite unlikely that in the near future the best effort method is going to be used by Greek banks, and/or brokerage firms for ASE listings.

But a successful IPO does not necessarily imply the stocks will perform well in the future. What could happen in case a merchant shipping company gets a listing is, as mentioned earlier, a successful IPO because of the large number of small unsophisticated individual investors who would want to buy merchant shipping stocks. And unlike the U.S. stock exchange investors, these represent about 80 percent of the ASE investors whereas institutional investors and sophisticated individuals represent the rest. However, unsophisticated investors usually let their stockbrokers take most of the investment decisions for them, as a result, if the latter decide these stocks are

not a good deal, those small investors would definitively be influenced by their broker's advice. But what do these brokerage firms and what do institutional investors such as mutual funds and insurance companies think about the possible success of shipping stocks in the ASE?

In June of 1994, the first passenger shipping company, Strinzis lines, had a successful IPO in the ASE. DANE followed latter in the year and MINOAS lines is the next passenger shipping company ready to list its shares. Even before the success of these offerings, most if not all Greek brokerage firms began doing analysis on passenger shipping and became exposed to the peculiarities of the shipping industry. From various interviews with Greek brokerage firms it was apparent that after their experience with the shipping sector so far, they would definitely be interested in merchant shipping stocks. However, the analysts should not forget that the differences between passenger shipping and merchant shipping are substantial.

First of all, the coastal shipping business is mostly a leisure business competing for the consumer's disposable income and therefore competes against other vacation alternatives. Also because the cruise part of passenger companies is a relatively new concept, it has not yet matured so the business has continued to attract an increasing number of passengers even during periods of recession. Accordingly, the stocks of cruise companies are valued at higher multiples of earnings and cash flow than cyclical industries like transportation which are more heavily influenced by the growth of the Gross National Product (G.N.P). But since both merchant and coastal shipping companies involve ships it might seem that there are a number of similarities between passenger lines and cargo shipping.

The modern-day coastal shipping is generally covered by the transportation/shipping specialists within the banking community. Many legal and business issues are similar to both industries particularly as they relate to security, valuation, marine surveys, etc. Moreover, like cargo shipping, the coastal business is very capital intensive with individual cruise ships costing U.S. 100-300 million to build. And in addition to being capital intensive, there have been historically limited sources of capital available. Financing has traditionally been provided by the bank market, supported by

government O.E.C.D credit in the case of newbuildings. Nevertheless, cargo shipping is much riskier than passenger shipping and the approval of coastal shipping companies in the ASE was a necessary step before cargo shipping companies can follow.

After their experience with Strinzis Lines, many Greek brokerage firms stated that they would definitely be interested in merchant shipping stocks. But since most of them have not really done any analysis on the merchant shipping industry, they would probably change their mind and avoid such stocks even though they currently believe they could be used for diversification purposes in their portfolios. The same argument was given by mutual fund companies which believe that the shipping sector is missing from their portfolios. The latter were really optimistic about the need of cargo shipping stocks in their portfolio and stated that they would consider buying part of a reasonably priced issue only for diversification purposes. This argument suggests that the first merchant shipping company getting a listing would have an advantage over the rest because mutual funds would want to include merchant shipping stocks in their portfolios for diversification purposes. Even though institutional investors represent only about 20 percent of the typical ASE investor, it is still a substantial amount that should not be ignored.

Fortunately for analysts and brokers, the experience of shipping companies with the world stockmarkets so far has produced extremely valuable and inexpensive material about the shipping sector that could not be found easily five years ago. Companies annual reports give plenty of information about the shipping sector and the performance of those stocks as seen from the model in **Chapter 7** suggests that <u>there are</u> ways to protect the unsophisticated investors. As it has been discussed throughout this work, most of the areas where shipping stock promoters could take advantage of investors have been identified and most of them can be avoided by a prospectus that includes provisions in case those methods are used. Moreover, the importance of some shipping company characteristics for the performance of the price of shipping stocks have been identified. The management track record, the average age of the vessels and the promoters' equity participation in the offering are the most important ones. Therefore,

the argument used by the Stock Exchange council that there are no ways to protect the investors is not valid anymore. Plenty of shipping data as well as experience exists regarding the performance of such stocks in foreign stock markets. But there are still valid arguments against the approval of merchant shipping stock listings in the ASE.

First of all, because of the capital intensity of the industry, even a couple of merchant shipping stock listings would comprise an extremely large portion of the ASE. As I mentioned in **Section 8.1**, the total Market Capitalization of the ASE in 1993 was 3,117 billion Drs., around 12,468 million dollars. If only two shipping companies want to raise around $50 million[25] each, a typical to small amount for a merchant shipping company, they would compose 0.8 percent of the total capitalization of the ASE. Therefore, the biggest fear of all parties involved with the ASE is that there is a probability that a merchant shipping company listing will jeopardize the future of the stockmarket as well as the future of any brokerage firm. On the other hand the success of such a sector in the ASE could help it increase drastically attracting more foreign investors than it could have ever hoped for.

As discussed in **Section 8.1**, there are very few Greek brokerage firms which deal with foreign investors. Many brokers mentioned that they do not have a foreign investor department but they would do some private deals if there were foreign investors interested in some Greek stocks. But given the fact that only a minuscule portion of the typically invested amounts by large foreign sophisticated individual investors and large foreign institutions is on the level of millions of dollars, the Stock Exchange Council should consider relaxing the rules. It should think of how much these funds would help in accelerating of the growth of the ASE and in attracting much needed foreign income in the country. This type of foreign investors will be sophisticated enough not to need protection from the Greek Stock Exchange Council.

As a results of interviews conducted by the authors with stockbrokers it became clear that the listing of Strinzis lines brought plenty of foreign

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[25] Because of the high processing fees associated with a listing it is not advisable to attempt to raise an amount of funds less than this value. Since costs are spread out over the number of issued shares, the higher the funds raised, the lower the processing fee per share.

investors to the ASE, particularly from the U.S. This is a very good incentive for the qualifying and prestigious shipowners who have a good project in mind to go through the trouble of applying for a listing in the ASE. And why do shipowners like Angelicousis and Tsakos have to go to the U.S. or Oslo in order to raise equity? Isn't this a pity both for the Greek economy and the Greek brokerage firms which have been trying to grow very successfully for the last few years? Or are these stockbrokers afraid that they would be overwhelmed by a sudden growth of the ASE?

It is true that if the shipping sector becomes a successful part of the ASE, large investment banks like Leehman Brothers, Morgan Stanley and Goldman Sachs will not stand still. They would immediately expand their business in Greece, becoming a threat to the small stockbroking firms which will be faced with overwhelming competition. But if this is a reason why the Stock Exchange Council would not allow a listing then this would be another proof that politics run the Greek economy and not economics.

However, there is another issue preventing the possible success of a merchant shipping company's stocks in the ASE, namely, the currency risk. In merchant shipping all transactions are done in U.S. dollars Therefore, an adverse fluctuation in exchange rates of drachmas and dollars could be catastrophic to the investors. Solution to this problem is the use of future options and swaps. But unfortunately these derivative instruments are not free. Moreover the derivative market in the ASE is practically nonexistent. But this a good reason why the derivative market should become a part of the ASE. For example, a multicurrency option in which the price will be denominated for a particular interest period, will allow the buyer of a stock to switch from the original purchase currency, in this case Greek drachmas, to another currency, in this case U.S. dollars. But maybe this is too much of a challenge for the ASE. However, costly or not, the currency risk problem is not unavoidable. For example, this has not been a major problem for the shipping stocks in the Oslo Stock Exchange.

With the above in mind, now is a good time for merchant shipping to enter the ASE. Interest rates in Greece are now[26] low enough and are expected to decrease even further which suggest that the stockmarket activity is going to increase in the future. Moreover, as most shipping consulting firms predict, there will be a long awaited shipping boom in the near future.

To conclude, it is the shipowners' bankers' and stockbrokers' decision that will answer the question of whether the Athens Stock Exchange will ever play a role in merchant shipping finance. The point of this work is that the larger industry sector of Greece, i.e. the shipping sector, should be included in the ASE as long as the companies that desire a listing are qualified and include all those characteristics of the shipping companies which have succeeded in the foreign stock exchanges. This will benefit the shipowners, the bankers, the ASE as well as the Greek economy. To give you a hint as to the type of a company that is qualified for a listing, Anangel American is a benchmark case.

[26] As of December the 7th of 1994, the Greek Government has decided to reduce the interest rate of the Commercial Bank of Greece because of the low rates of inflation seen lately in Greece and other banks are expected to follow this example. In December of 1994 the deposit rate was 18%, the lending rate 27%, The inflation rate 11% and the real lending rate 16%.

Conclusion

Even though banks have gained momentum lately in shipping finance, providing again good deals to shipping firms which are well established and have a good track record, Capital Markets, are still an alternative way of financing shipping. The last five years proved that at least a small part of shipping finance can be accomplished through public listings and corporate bond offerings. This was a result of the banks being strict with their deals which caused shipowners to seek alternative methods for their financing. One of the reasons why shipowners did not stop experimenting with the Capital Markets was because this was an efficient way to secure funds.

In addition, there is still a category of shipowners who cannot ensure a good deal from banks, either because of the low quality of the vessels they own or because of past servicing difficulties on their loans. These shipowners might believe that there is no need to replace or renew their fleet because there is not much difference in the profitability of their vessels to that of younger ones and/or the downside risk of doing so is too high. By tapping the Capital Markets shipowners can get better quality vessels without using their own funds and exposing themselves to high downside risks. Along with the reduction in downside risk there is also a reduction in financial risk because shipowners can be offered better deals on their term loans, have maintenance cost reduced, revenues increased and insurance and other liability costs reduced. As a result, if the world fleet needs renewal but shipowners are unwilling to do it using their own cash reserves, the stockmarket seems to be a good alternative.

Shipping companies may choose different ways to use the Capital Markets for their shipping finance needs. Public Equity Offerings should be chosen by companies that need to reduce their financial risk, reduce their gearing, renew their fleet and do not have cash available or are afraid of the downside risk of using their own funds to buy younger vessels. Asset player type of companies should consider startup projects which include the limited life provision but allow for the change of this provision in case the majority

of stock owners vote for it. This gives asset player companies the choice of trying to become high quality tonnage owners with steady earnings if they want to, but either do not have the funds or do not want to risk using their own funds. Anangel American is an example of a company that started as an asset player and succeeded to become a profitable ongoing entity. On the other hand, companies that focus on operational profits should list their shares and promise investors steady dividend streams and capital appreciation of their stock. Companies that manage good quality vessels and have a good reputation are good candidates for such listings.

Shipping bond offerings should be considered by those companies which have difficulty security bank loans despite the high quality of their fleet, need cash flows and longer maturities on their loans, are well established entities focusing on operational earnings and are not considering the inflexibility of restructuring a bond offering to be a major problem. Typically, companies that have a major project in mind and need a large amount of initial capital are turning to this type of financing. Unfortunately, there are not many shipping companies that possess the characteristics needed and can get the high rating needed to issue bonds. Eletson corporation is one of the few examples of companies that realized that the bond market was the solution to its financing needs.

Even though private equity placements seem to be a good choice for well established shipowners, past experience has shown that some startup privately placed shipping funds have ended in losses for their investors. It is suggested that such placements should be avoided by investors unless their promoters agree to a high equity participation in those funds. Only successful shipowners who are high net worth individuals themselves are able to contribute large funds to their placements to ensure other investors about the high expectations of their projects. Therefore, only well established and cash rich shipping firms should consider this type of financing for their projects. In case there is no high equity participation by the promoters, there are not many incentives to managers to run the projects the best way they can. Nevertheless, there are many advantages for shipowners to use private placements instead of public offerings since they could avoid filing with the SEC and paying large underwriting costs.

Regardless of the choice of private or public equity or bond offering, there are crucial macroeconomic factors which will determine whether a public listing, either in the form of a private placement or a public offering, is going to succeed or not, the timing of the offering being the most important one. The right time for shipowners to list their companies is when the shipping cycle is starting to climb if they want their IPO to succeed without significant underpricing. Moreover, they should ensure that interest rates are not too high in the country they consider doing the listing. Yet, most stock market investors are not experienced with the cyclicality of the shipping industry and are not in a position to predict the right time of a shipping stock offering. It is the experienced shipowners' responsibility to ensure that market conditions are right for an offering if they want its success.

Unfortunately for the shipping industry, potential investors of shipping stocks and bonds, as for example large institutional firms and high net worth individuals, lacked experience in the shipping industry to accept its high cyclicality and the consequences of it. Most speculative as well as dedicated long term investors were not willing to accept the way the industry works. Or to be more realistic, they had the potential and knowledge to invest in other industries they were more familiar with. However, as suggested from **Table 4.3**, if the shipping stock market had been more active, i.e. if shipping stocks had been more liquid, large returns could have been generated by speculative investors even for startup projects. Moreover, investments in some ongoing shipping entities like Leif Høegh, Bergensen and Wilh Wilhelmsen had been extremely profitable at times. It is a fact that there is money to be made in shipping otherwise banks would not be committed to it for as long as they have been. The problem is that it takes time to get familiar with the industry but it seems that the recent investor experience has put them in a position to be able to understand the peculiarities of the shipping industry. A combination of good shipping projects in the capital markets and detailed analysis by investors could lead to more and more shipping companies choosing stock listings and bond offerings as the way to finance their shipping needs.

The author's opinion is that in the near future Capital Markets will gain momentum in shipping finance and both the shipping and the banking community will see many new public as well as private stock and bond offerings in the U.S. and Oslo stock exchanges as well as in less active in the shipping sector exchanges like Sweden, Denmark, the Netherlands etc. This opinion is based on the following facts that affect most parties involved with shipping finance.

First of all, many have argued that the unlimited liability uncertainty which has been one of the main reasons why both investors and underwriters have been avoiding shipping projects, is now resolved at least for companies holding Certificates of financial Responsibility (COFRs). Such companies as well their investors are not exposed to the risk of being held liable in case of a damage such as an oil spill. As a result, the banks or investment banks underwriting the issues of those companies do not have to bear the risk of having unlimited liability in case they end up with equity participation in those issues. Recall that even though equity participation of the underwriters of an issue was desirable by investors and shipowners, it was very risky for the underwriters because of the unlimited liability issue. However, whether COFR are indeed a firm solution to the unlimited liability problem has been questioned by many. Nevertheless, it is a good start for the ultimate solution of the liability issue in the shipping industry.

The solution of the unlimited liability issue will also help long-term investors change their attitude towards shipping stocks since it will make it easier for them to choose the right projects to invest in. Simply by looking at the equity participation of the underwriters they will know which deals are less risky and good for long term investment. Yet, the attitude of the risk taker type of investors who aim at speculative gains will not change with the solution of the unlimited liability problem. Such investors will invest in companies that will probably not have COFR as well as high equity participation by their underwriters.

However, it is the author's opinion that both long term and short term investors are now ready to increase their involvement with the shipping industry since they have by now gained enough experience to be able to accept

the way the shipping industry works. The involvement of investment banks with shipping stocks that started in 1987 has allowed them to experience themselves the cyclicality of the shipping cycle and the way this industry functions. Investors are now aware that comparison of shipping to other industries should not be done the traditional way.. They also know what to expect from shipping stocks as well as how to choose between shipping company stocks. Still, the major requirement for investors to use the knowledge they have gained is the existence of correctly priced shipping stocks in the Capital Markets.

Another reason why the author supports that Capital Markets will provide large funds for shipping finance in the future is that banks will probably not be able to provide most of the funds for the current fleet replacement needs. Even though, as mentioned before, banks have lately been giving good deals to shipowners, they have a policy of not lending more than a fraction of the funds needed for the project. However, not all shipowners are willing or able to provide the rest of the funds. It is the author's opinion that those funds will come from the stock exchange. And the reason why these funds will need to be raised is that the increasing environmental regulations will eventually urge shipowners to renew their fleet regardless of the difference in profitability and the downside risk of such an investment.

Regarding the issue of whether the Athens Stock exchange will play a role in shipping finance, it is the author's opinion that because of the importance of the shipping industry in Greece, sooner or later the first merchant shipping company will attempt a listing in that exchange either as a separate shipping entity or as part of an integrated group engaged in many activities besides shipping. Whether investors will respond to such an issue in a positive manner depends on the type of company that will do the listing. It is the author's opinion that a company possessing all necessary characteristics for good shipping stock performance, many of which were described in this work, could satisfy its investors.

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