



ΠΑΝΕΠΙΣΤΗΜΙΟ ΠΕΙΡΑΙΑ
ΤΜΗΜΑ ΝΑΥΤΙΛΙΑΚΩΝ ΣΠΟΥΔΩΝ

ΠΡΟΓΡΑΜΜΑ ΜΕΤΑΠΤΥΧΙΑΚΩΝ ΣΠΟΥΔΩΝ
ΣΤΗΝ ΝΑΥΤΙΛΙΑ

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Στην

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ΣΤΗ ΝΑΥΤΙΛΙΑ

Παπαθανασοπούλου Χρυσάνθη

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του Πανεπιστημίου Πειραιώς ως μέρος των

απαιτήσεων για την απόκτηση του Μεταπτυχιακού

Διπλώματος Ειδίκευσης στη Ναυτιλία

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ABSTRACT

In this study we endeavor to explore the world of financing for shipping from the point of view of the current state of affairs in respect to the new alternative sources available to facilitate obtaining the necessary capital which propels one of the main global enterprises.

By “new alternative” sources we refer to any available financial source apart from that provided by the banking sector. In particular, debt and equity capital sources are profoundly analyzed and evaluated by depicting the pros and cons involved with a view to render assistance to the reader to select the best financial alternative source which will cater for his particular needs.

The paradox in the shipping financing world is that due to the present circumstances – recession – the banks hesitate to commit themselves to large loans and one would expect a reaction from the point of view of new alternative sources, which is not the case. Probably due to the fact that a stagnated economy affects equity and debt sources equally whether it is the banking sector or the new alternative sources.

We have to make clear that it is outside the scope of this project to indicate the BEST alternative source of raising the necessary funds to finance a venture since in the complex domain of the shipping industry many a factor should be taken into consideration before the shipmanager seeking a loan, the assets of his company and, of course, the volume of the funding in question.

The highly volatile shipping environment is determined by the ever changing financial markets and those operating within it are at the mercy of it. Global developments both political as well as financial can sometimes create an utterly

risky situation making extremely difficult the navigation through the dire straits of making the right choice.

Our research indicated that basically bank lending for the shipping industry will continue to play an important role since it provides up to 80% of the capital requirements in shipping. The remaining 20% is what we deal with here. Securing a loan within this 20%, despite some disadvantages involved, it can augment returns both for the borrower as well as the lender allowing for more leverage, higher returns on equity, lower operating costs and more importantly perhaps it releases vital funds necessary for other deals. Some changes in the structure of the company will be unavoidable i.e. consolidation, transparency of corporate structure and the provision of long term shipping services which on the other hand leaves assets intact.

1. INTRODUCTION

1.1. THE SHIPPING MARKET LANDSCAPE

Geographically speaking water covers 2/3 of our planet's surface. Since time immemorial, mankind realised the importance of sea and other water routes to shift goods from one place to another. Thus, the world shipping trade came to be the most important way of transporting commodities of various size and volume, playing a major role in the development of the world's international trade, representing today 99% of all goods shipped. To accommodate this, ships of all kinds and sizes were built and the more often than not vast amounts of capital required, led to the development of the shipping financial industry.

Before we elaborate on the sources of financing the shipping industry, we have to mention the framework of the necessary requirements for the acquisition of capital which has the following properties.

- ✓ Capital intensive, asset based, highly leveraged
- ✓ Cyclical markets both for freight rates, cash flows and asset values (*Figure 1.1*)
- ✓ Mature industry (with some growth sectors e.g. LNG)
- ✓ Lack of transparency / Ownership structure (Single Purpose Companies SPCs)
- ✓ Lack of transparency / Financial reporting vs. availability of market data
- ✓ Small companies, lack of consolidation (especially in dry cargo markets)
- ✓ Internationally mobile assets
- ✓ Subject to various jurisdictions/regulations
- ✓ Quality control
- ✓ Highly fragmented / diversified shipping sectors geographically (ownership, flag, crew, etc.)
- ✓ Low barriers to entry (mainly capital) - main sectors
- ✓ High barriers to entry in some niche / highly specialized sectors
- ✓ International (almost) perfect competition
- ✓ Ever changing regulatory environment (ship obsolescence, many technical aspects)

✓ Sensitive to political events, random shocks **Source: (DVB Bank, 2005)**

The most important factor in shipping, is of course, the ship itself called the asset. Ships vary in size, capacity, range, capability, and the type of cargo they carry. Some basic characteristics, however, all ships have in common are as follows:

- **VERY HIGH FIXED (SUNK) COSTS:** Obtaining a vessel be it in the form of a purchase or charter is the greatest initial cost. Consequently the form of financing the venture as well as the right timing are of essential importance for its success.
- **LONG DELIVERY TIME FOR NEWBUILDINGS:** it usually takes anything from 12 up to 18 months to build a ship. That is for the actually building. It might take however, much longer until a shipmanager “lays his hands on his ship” since the shipyard invites orders to secure work for the future and if that is the case 18 months to 3 years might lapse until the ship is actually delivered.
- **LIQUID SALE AND PURCHASE MARKETS.** The international nature of shipping has long established the need for an efficient sale and purchase market for used ships.
- **VESSELS ARE LONG LIVED WITH A RELATIVELY LOW SCRAP VALUES.** Ocean trading vessels can normally operate up to 30 years. End - of - life residual values are very low compared to the cost of new tonnage since very old ships are only worth their value in scrap.

Shipping Financial analysts, indicate that shipping finance, has reached the point of **FREIGHT RATES RECOVER**. On account of this, today, the diminishing demand for new buildings has led to the shrinkage of the world fleet, therefore, on the rationale of supply and demand, fewer ships available, led to the freight rates recover. This is the aftermath of the “golden age” of 2008 which supplied the market with excessive tonnage, thus creating an environment of “bubble” which subsequently deflated.

Figure 1.1 THE SHIPPING MARKET CYCLE, Source DVB BANK, 2005



1.2. SOURCES OF CAPITAL IN SHIP FINANCE.

Historically, the most widely used method to finance a new building or second hand vessel is asset-based bank finance. The value of the underlying asset, the vessel, is the main determining factor in the pricing of the loan. In times of growth and strong charter rates, asset backed financing allows aggressive pricing and leverage ratios while, in times of economic lows and lower charter rates, the ease of obtaining a bank loan is less apparent. In these periods of adverse market conditions for obtaining bank finance, ship owners search for alternative sources for raising capital in order to finance their operating costs as well as expanding projects. The inherent flexibility of bank lending (or senior debt, or first mortgage lending), which can be tailor-made according to the specific needs of each ship owner under the specific market conditions, has rendered asset based financing the dominant type of ship financing, especially for traditional owners with no corporate structure.

However, bank finance is not considered to be a panacea for the adequate provision of capital in the shipping industry. Some ship owners maintain that the main cause for the creation of a surplus of tanker tonnage and tanker building capacity was the extremely generous provision of finance on the part of the banks in the early 1970's, which plunged the industry into a slump lasting almost a decade. It also led to distortions in the age structure of the bulk fleet, which was not corrected until the early 1990's (Stokes, 1992).

The following table is a first introductory point of the alternative sources of raising capital available to an interested ship owner. In later chapters we will deal with the different financing methods for shipping.

Table 1.1: Sources of Raising Capital in Ship finance

Finance Category	Type of Finance	Typical Features
Equity	Owner Equity	Finance provided by owner from own funds and retained earnings
	Limited Partnership	Funds provided by partners e.g. German KG / Norwegian KS
	Ship Fund	Shares in company bought privately by individuals or listed on stock exchange
	Public Offering	Shares sold by subscription on public stock exchange
.....		
Mezzanine Finance	Private Placement	Debt with high interest rate and possibly equity rights e.g. Equity kicker
.....		
Senior Debt	Bond Issue	Security issued in the capital market
	Commercial Bank Loan	Loan provided by bank. Large loans may be syndicated between several banks
	Shipyards Credit	Loan provided by government or agency to assist domestic shipyards
	Private Placement	Debt finance arranged privately with pension fund, insurance company etc.
.....		
Lease	Finance Lease	Long term tax effective finance based on sale of ship to company which uses depreciation benefits. May be leveraged
	Operating Lease	

1.3 THE IMPORTANCE OF FINANCIAL LEVERAGE IN SHIP FINANCE.

As we already mentioned, financial leverage or gearing is the use of debt in order to increase the expected return on equity. We can measure the financial leverage with the following formula:

$$\text{Financial Leverage} = \text{Debt} / (\text{Debt} + \text{Equity})$$

In general, the higher the leverage in financing a project – in other words the greater the debt which is used – the higher the internal rate of return for the project (IRR) ceteris paribus. IRR is the most common method used for the approximation of the generated return on equity of a project.

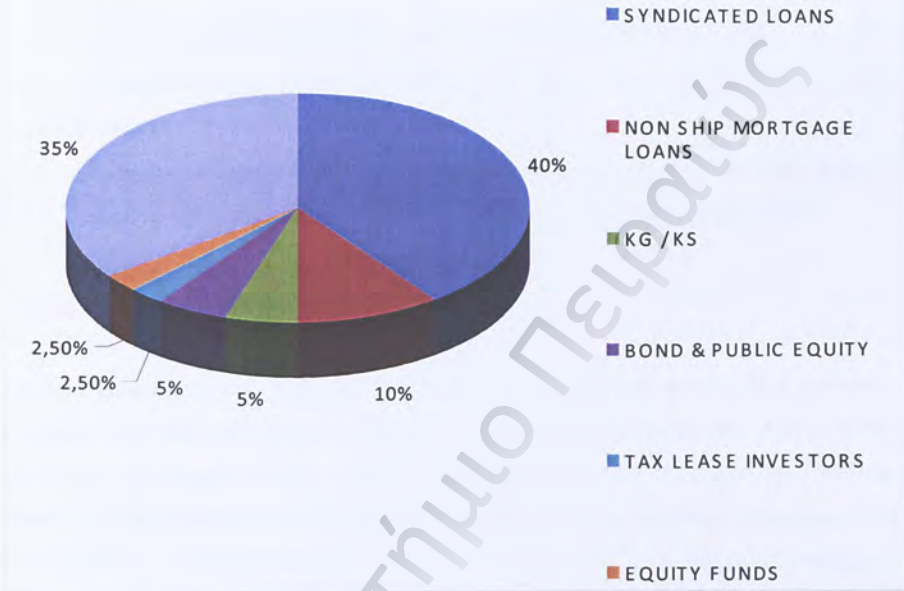
1.4. GENERAL MARKET OVERVIEW – CAPITAL REQUIREMENTS

Between the years 2002 and 2008 the world economy experienced a strong rebound accentuated by low interest rates. This boom stimulated growth. Particularly during 2005 and 2006, when oil prices broke every previous record. Shipping followed suit. High demand led to unprecedented level both in freight rates and the value of vessels whether newbuildings or second hand vessels.

This situation created a market thirsty for capital, thus boosting the necessity of shipping finance, mortgage based financing remains the predominant practice in shipping finance coupled with developments of other forms of financing compatible with the needs of the shipping industry. Figure 1.5 depicts – breakdown of capital sources both for equity as well as debt.

Figure 1.2: Sources of Capital Breakdown, Source: Lloyd's Shipping Economist, 2005

SOURCES OF CAPITAL BREAKDOWN



World trade enjoyed a strong comeback from 2002 to 2008 which was enhanced by low interest rates. The main propulsion came from the emerging markets such as China, first and foremost, followed by India and Brazil.

1.5. BASEL II – CAPITAL REQUIREMENTS

This is new capital accord, finalised by the Basel Committee on Banking Supervision at the Bank of International Settlements the end of 2004 having been debated since January 2001. It superseded the treaty that was in force since 1988. The main purpose of both these accords is to harmonise the Bank credit system by establishing a common method of calculating the capital requirements or capital adequacy of banks. Basel II has been fully implemented since 2007.

The second approach which can be implemented by banks under the Basel II accord is one that permits them to rely upon their internal credit risk assessment systems and estimate their own capital adequacy according to their own credit exposure. This method is called the Internal Ratings Approach (IRB). Risk assessment under IRB must take the following criteria into account.

- Probability of Default (PD) (i.e. the probability of the borrower going to default)
- Loss Given Default (LGD) (i.e. the amount that would be lost in the event of a default.
- Exposure at Default (ED) (i.e. the expected exposure at the time of the default)
- Effective Maturity (M) (i.e. effective loan tenor) (Richards Butler, 2004)

1.6. BASEL II AND SHIPPING

Opinions over the actual impact of the new Basel accord vary widely. It is generally accepted that it has led to higher loan margins for most shipping credits. Just as every other form of corporate credit, corporate shipping credit was accommodated without taking into consideration the size and quality of the corporate borrower. The majority of rated shipping companies come under the category of BB- or lower, according to Standard and Poor's rating agency. Companies with ratings below BB- representing the vast majority of shipping companies which indicates that if they were so rated, they would require 150% capital allocation. This being due to the fact that shipping is a particularly risk heavy industry, therefore, to obtain a loan there would be a need to charge 50% more for it.

According to Grammenos (2002), a possible consequence of Basel II in ship finance is that medium and small shipping companies may be at a disadvantage, since the capital adequacy requirements can be higher in their cases, than the current 8%, due to, for instance, their highly leveraged balance sheets or their lack of sufficient secured generated income. This would result in an increase in the required adequate capital on the financier's side, the cost of which will be passed on to the shipping companies by an increase in the margin. In addition, due to the fact that these companies are small and

show a lower profitability in their banking transactions they are deemed to be among the least desirable customers for the shipping divisions of the banks.

Moreover, representatives of the ship finance market like Kokkinis (2004) and Tourkolias (2004) agree upon the opinion that companies with sound corporate governance structures and strong balance sheets will be unaffected by the radical changes that Basel II accord triggers, or even under specific circumstances the cost of bank lending will be reduced for them. However, a significant number of medium sized shipping companies, which in some countries like Greece claim a big stake of the shipping market, will be partially deprived of an important source of capital in ship finance.

All these factors contribute to the fact that Basel II can be considered as another important reason why shipping companies should exploit alternative sources of raising capital in the ship finance market.

2. EQUITY FINANCING

Corporations generate capital through debt or equity. Equity capital financing is raised by the owners themselves or through the equity market. The public issue of shares entails an offer for sale to the general public and sometimes a listing on an established stock exchange. Another method is a private share issue which is addressed to a selected number of investors. Here, we analyze both public and private placements of equity in the shipping industry as well as the advantages and disadvantages their future potential.

Equity finance for shipping has by tradition come from within the shipping industry itself mainly from profits realised both by the vessel operations and ship sales, while the past years and until 2008 there has been a trend of attracting equity into shipping from sources outside industry, from external sources i.e. by listing shipping shares in the stock exchanges or by private placements mainly in the US market. Generally speaking, as the transport industry becomes more capital intensive a greater reliance on the capital markets is envisaged. This trend has ceased to exist due to the global economic turbulence from mid 2008 onwards.

2.1. EQUITY

Equity is the principal source of finance. In the memorandum of association the equity capital of a company is divided into shares, having an equal face or par value, which subsequently are distributed amongst the shareholders. Shares (or stocks) are traded in stock exchanges and pay dividend to their holders depending on the profitability of the previous year and the amount of shares they possess. Dividends are paid at the absolute discretion of the managing directors of the company. The practice of distributing profits is known as dividend paying out.

There are two (2) types of shares, the common ones and the preferred. Preferred shares pay a specific dividend to preferred shareholders in precedence over common share holders in the event of liquidation of the company's assets. On the other

hand, preferred share holders do not have the voting rights of common stock holders although preferred shares represent partial ownership of a company just as common stock does. Furthermore, preferred shares pay a fixed dividend provided the company has the ability to pay such a dividend. It is obvious that the main benefit of owning preferred shares is that the holder has a prioritized claim on the company's assets in case of bankruptcy.

2.2. INITIAL PUBLIC OFFERINGS (IPO)

A company can increase its equity capital in the form of capital supplied by issuing shares which then are sold to the public which, by the way, is the least expensive source of equity. The only problem is to find transparent and well – structured corporate entities. Newly issued shares are almost always sold at above par value price. This difference is entered in the company's accounts as an additional paid – in capital or capital surplus. Their value is then determined by the prevailing market dynamics. The method used by companies to enter equity markets for the first time, are initial public offering (IPO's). The usual procedure a company has to follow in order to enter a stock exchange depends on the legal framework in which a stock market operates.

As an example the following table pertains the main steps for making an initial public offering of shares in a US stock market.

Table 2.1: US IPO, Source: Brealey and Myers (2003)

Basic Steps of an US IPO	
1.	Company appoints managing underwriter (bookrunner) and co-manager(s). underwriting syndicate formed
2.	Arrangement with underwriters includes agreement on spread (typically 7% for medium-sized IPOs) and on green shoe option (typically allowing the underwriters to increase the number of shares bought by 15%).
3.	Issue registered with Securities and Exchange Commission (SEC) and preliminary prospectus (red herring) issued.
4.	Road show arranged to market the issue to potential investors. Managing underwriter builds book of potential demand.
5.	SEC approves registration. Company and underwriters agree on issue price.
6.	Underwriters allot stock (typically within over-allotment).
7.	Trading starts. Underwriters cover short position by buying stock in the market or by exercising the green shoe option.
8.	Managing underwriter makes liquid market in stock and provides research coverage.

IPO gives the opportunity to raise large amount of capital within a relatively short period of time. Its success depends on the market liquidity, which, however, under the present market conditions, is not easy to achieve.

Recently, there is a trend of more companies delisting rather than listing due to the world economic recession.

IPO's have been used recently as a preferable source of raising capital due to the internationalization of world equity markets. Consequently, we will elaborate on the basic rationale of public shares offering, analyzing the advantages and disadvantages for the ship owner and in general the current standings in the future evolution in the shipping industry.

2.3 SHIPPING IPOs

The maritime sector has been treated with limited enthusiasm by the investing community due to its volatility and the requirement of large amounts of capital, while presently, private investors seek safer placements for their funds (treasury bonds, gold etc). Therefore, the emergence of a public market as a major source of capital has been slow.

This precarious nature of the maritime sector constitutes incongruous profile of a listed company in a stock market. Sharp fluctuations in the operating profitability margins appear to be restrictive both for individuals as well as the institutional investors. Inconsistency, unpredictability of asset prices and earnings is another reason of putting – off potential investors in the shipping industry. As a result, the shipping industry underperforms in the majority of the world's stock exchanges. Historically, and despite the spectacular short run returns, long term returns have been poor to the point of evaporizing capital.

2.4 ADVANTAGES AND DISADVANTAGES OF GOING PUBLIC.

The main advantage of opting for IPO by a company is that it first and foremost constitutes the least expensive source of equity. Moreover, IPOs provide a company with the opportunity of generating the large amounts of funds necessary for the realization of costly and ambitious investment plans, typically associated with shipping, thus long term economies can be achieved. The fact that providing collateral is not a prerequisite and indeed prepayment or repayment of equity capital is another attractive feature of IPOs. Last but not least this option offers the opportunity of securing future equity increases thus providing the company the chance of maintaining a stronger and healthier balance sheet a basic requirement for enhancing the company's financial profile as well as enabling the company to withstand the sharp ups and downs of the shipping domain.

On the other side of the coin, the requirement of a large initial outlet, necessary for preparing, documenting and reporting in order to enter into IPO are some of the negative characteristics of the process. What is more, splitting the equity can lead to future loss of control. Equity proceeds have to be invested quickly, a risky affair, due to the uncertainty of the market cycle. Bureaucracy coupled with managerial inflexibility can lead to the early demise of the project. In addition to the above, lack of liquidity can cause a volatile stock price performance.

All in all, it transpires that for the successful use of an IPO a good managerial team with a proven track record and a long tradition in shipping, holding companies having a corporate status rather than a family one and the operation in time charter market as opposed to spot market activity constitute the basic ingredients.

Financials.

The company must own all listed fleet of young vessels and maintain acceptable and transparent financial results. Finally the funds raised should be preferably used for vessel acquisition and diversification rather than debt repayment.

2.5 FUTURE MARKET DEVELOPMENTS

The period 2006 – 2007 is a turning point for shipping IPO's since the raised capital is breaking every other historic record in the industry. This achievement was triggered by

China's spectacular growth as well as the increase of global demand for oil. The fear that the sudden surge of shipping companies, accompanied by investors demand for these shares would lead to a potential stock market bubble was not fully justified since shipping equities market collapse under the pressure by the external to shipping global financial collapse in mid 2008.

2.6. PRIVATE EQUITY MARKET DEVELOPMENTS

The private equity is characterized nowadays by the existence of several investment opportunities due to the currently depressed asset market. However, everything depends on the individual investors' faith in the shipping market, its strong fundamentals, as well as, his personal opinion regarding future market trends.

The logic behind that is that a private equity seems to be a good opportunity of making companies more efficient at times when public markets are flat. It appears that private equity has become the long term funding basis of these business. Long term funds have generated higher returns in private equity in comparison to other investments.

Unlike the market standings before the financial crisis when private equity has attracted the interest of small and mid – cap parties only private equity investors of substantial economic background, as well as market expertise, could be interested in investing in shipping.

3. GERMAN KG STRUCTURES / THE NORWEGIAN KS PARTNERSHIP

Financing of newbuildings or recently delivered ships with high value shipping contracts have been financed in Germany. K.G. which is a limited partnership's of investors. According to basic principals, a KG consists of two different kinds of shareholders. The one is called "Komplementar" who has unlimited liabilities for the actions of KG and the other one is called "Kommanditist" who assumes the manager's duties with a limited liability to the amount of his share. It is usually the case of a ship's owner selling and chartering back his vessel to a special purpose company (SPC) the purpose of which is to own the vessel during the charter hire period. The arranger of the structure will negotiate with banks and sell the equity to a group of German private investors with high taxable income, who will use the investment to reduce their individual income tax (Kokkinis 2005).

To better understand the KG structure we have to elaborate on the German fiscal and more specifically tax system.

3.1 GERMAN INCOME TAX SYSTEM

The German tax system is deemed to be one of the most complicated and regulated systems in the world. For instance, the German tax payer has to pay 53% income tax, 9% church tax, deducted at source by the State on behalf of the churches, and /additionally he pays 5.5% solidarity contribution which is a result of the reunification / of Germany. When adding these figures, we conclude that German tax payers pay to the Inland Revenue amounts up to 65 or 70% of their individual income (Heidenreich, 2001). Naturally, this tax burden also applies to the German ship investors who invest in average \$ 50,000 in ships per year with a wide range of between \$ 15,000 and \$ 2.5 million (Salamon, 2000). The paradox in the German tax system is that the investor is aiming for losses. A loss is not necessarily a bad thing. The basic idea of Limited Partnership Marine Investment Funds is founded on this basis, which is in fact to transform taxes into equity capital and this is most apparent in Germany especially

towards the end of the year. At this time of the year, investors have a rough idea of their taxable income and hence they aspire to counteract this by the purchase of goods which are liable to allocations of loss.

3.2. GERMAN TONNAGE TAX SYSTEM

A tonnage tax is a tax on a deemed profit based on the net tonnage of each of the ships a company operates as opposed to a tax on profits calculated according to the normal corporation tax principals of the country. In practice, tonnage tax establishes an effective tax regime for shipping companies. This method of determining profit, including any income generated from the sale of a vessel constitutes negligible tax burden on the profits of the company. In Germany, it was introduced on 01\01\1999.

According to Norton Rose International Law Firm, the computation of the profits, which is the taxable income under the tonnage tax regime, is determined as follows. The number of days within the relevant financial year that the ship is operating in international trade (as a general rule, 365 days), multiplied by the number of each full net 100 tons, multiplied by the following amounts:

- a. € 0.92 for net tonnage up to 1,000
- b. € 0.69 for net tonnage exceeding 1,000 up to 10,000
- c. € 0.46 for net tonnage exceeding 10,000 up to 25,000
- d. € 0.23 for net tonnage exceeding 25,000

Table 3.1. Example German tonnage tax computation, Source: Norton Rose (2005). New Opportunities for KG Finance in Shipping (Shipping Briefing). Norton Rose

Net tonnage of the vessel:	
50,000 tons	
Days of operation	: 365 days
10 x €0.92 =	€9.20
90 x €0.69 =	€62.10
150 x €0.46 =	€69.00
250 x €0.23 =	€57.50
Total	€ 197.80
Annul Tax:	€ 197.80 x 365 days = €72,197

Tax amounts must be compared to the generated profit from the operation of the vessel, in order to fully appraise its relative size and burden for the ship owner.

In order for a company to opt for a tonnage tax system a number of conditions has to be satisfied. First of all, the vessel must be a merchant ship, operating internationally almost exclusively out of Germany. Some other details regarding management of the vessel are stated by German tax authorities. The KG itself does not have any employers or offices, so for the services of ship – management a company, which can either be a German affiliate of characters or a German affiliate of major shipping companies, is used.

Whatever the case, the management company has to be German and the vessel must be registered in Germany. A negotiable turn is flagging of the vessel which basically states that the ship should sail the German flag. In most cases, the KG is the owner of the vessel but this is not a prerequisite for tonnage tax purposes and it is possible for KG to charter out the ship on the ship of a Bareboat or Charter contract.

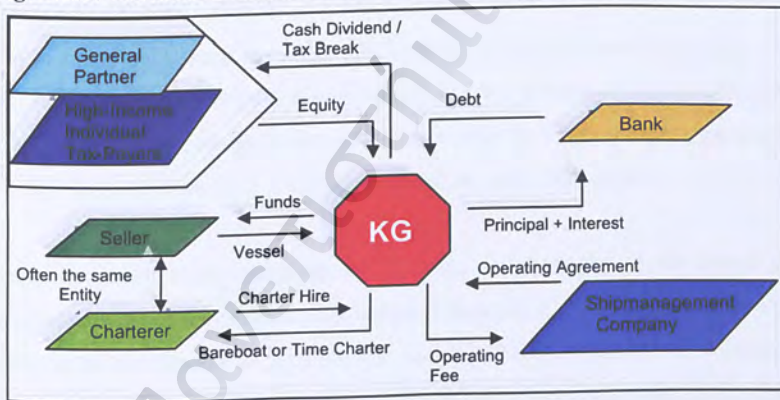
The future of the German tonnage tax has been recently amended and these amendments came into effect on January 2007. Investors make use of losses from depreciation and certain expenses. After the purchase of the vessel, and the inevitable depreciation in the first two or three years, the KG investors in order to reduce thier taxable income, opt for the tonnage tax treatment. In such cases the difference between actual market value and the book value needs to be recorded in a separate register. When the ship is sold, these hidden reserves need to be reserved increasing the profit for that year. From 01/01/2007 onwards, KG investors can only choose tonnage tax treatment initially for the purchase of the vessel, or 10 years after but not during the 10 year period.

3.3 THE BASIC KG STRUCTURE

German KG Financing has grown significantly in recent years. Especially from the year 1999, total funds including both equity and senior bank debt used to finance the project under the KG structure. In 2004 there was an equity investment of Euro 2.9 Bil. And total funds raising to more than Euro 27 bil. The growth of rate of fleet in 2009 was 14,3% (Bundesamt für Schifffahrt, VDR and Lloyds Register). In 2007 the volume of placement was over USD 12.75 bn. For the last twelve years the cumulative amount invested in Ship KG's is over USD 94 bn. Currently, there are more than 1100 KG's in operation. Most KG's support the financing of container ships (+50%) but Bulker share is rapidly increasing (HSH Nordbank AG) .

This enormous demand for KG financing is due to a number of factors. The German tax legislation and the creation of favourable possibilities, and tax privileges for ship projects, is one of them.

Figure 3.1: The Basic Structure of the KG, Source: Author



Another factor which came to force in 1999 was the enormous expansion in container shipping. The high liquidity in German economy during the period of KG expansion is another point contributing to its success and, off course, the relatively good and trustworthy track record of the KG is a strong hold of its development.

As we already mentioned, KG consists of limited partnerships, which are high income individuals such as managers, entrepreneurs, lawyers, doctors or even foundations and limited liability companies, which act as a general partner. They can participate in the KG with a minimum investment of EUR 15,000 (LSE, 2002). Their risk of investment is limited to the nominal value of their contributed investment. The KG uses the aggregate of the collected equity for the purchase of the vessel. The investors usually provide equity of up to 35% to 50% of the total contract value.

The rest is provided as bank debt which is arranged by the KG in favourable margins, always relative to the credit worthiness of the charterer. First ranking mortgage over the vessel is used for the securitization of the loan. After the acquisition of the vessel the KG charters it out to a charterer. There are also cases where the seller of the vessel is the same as the charterer, this is the case of sale and lease back structure. The charter party can be either bare boat charter or time charter.

3.4 SHIP OWNER'S AND INVESTOR'S PERSPECTIVES

The outstanding efficiency of the KG system originates from its safeguarding a profit for both parties involved, the ship – owners and the investors. It gives the opportunity to a large number of private investors to participate in a high volume project that under normal circumstances they could not enter on an individual basis.

Moreover, there is no necessity of personal involvement of the investor with the operational side of the project. This aspect is important, since in the majority of KGs the participants are strange to the industry, lacking ability, expertise or willingness to get involved with shipping per se. The most significant advantage for the investors is the tax benefits offered by the KG. As mentioned before the KG subscriber can either use the accelerated depreciation to schedule to create book losses that offset against regular income to reduce taxable income, or create income with minimal taxes under the tonnage tax system. The lucrative tax benefits are the basis on which the advantages for the ship owner are generated as well.

Investors are share holders requiring a relatively moderate return on capital invested before tax. They look about 6% per annum. This approach is because masters expect individual tax savings which will further increase their return of capital after taxes. It is obvious that the KG offers 100% financing scheme with blended cost of capital (debt and equity) that ranges from 8% to 9.5%. This depends on the rating of the charterer, the duration of the charter, the vessel type and the market in which the vessel is employed. Although more expensive the KG provides a mixture of debt and equity. KG deals in both debt and equity, offering competitive schemes.

This is because the ship owners expect to make more on the equity portion of the financing which raises the weighed average cost of capital to what is typically the cost of financing arranged by KG's (Marine Money .)

What is more, the KG gives the ship owner the opportunity to insert the companies balance sheet the asset which is the vessel itself.

In search of drawbacks for KG structures, what should be mentioned is the large amount of fees required for the arrangement of a deal. This is the major negative aspect of the KG financing, which, in many cases, will erode a large part of the lower cost of capital for the owner. The fee earners under this financing system are the KG houses, which can collect as much as 15% of the equity raised in fees (Heidenreich, 2001b). KG houses are acting as intermediary parties, as arranging agents of the KG deals. They act as the linking party, between investors and ship owners.

The vast majority of KG funds are effectively bankrupt and are only kept afloat because of a willingness on the part of Central Banks to turn a blind eye to loans that should have been written off at the end of last year.

According to Bernhard Schulte SHipmanagement chief executive Andreas Drousiotis, banks have in many cases effectively take control of KG fund vessels where the outstanding loans far outweigh the value of the ship and reach deals with shipmanagers to continue operations.

While the deals have not involved a formal closure on the loan or a sell – off of the vessel, the banks have given assurances to the shipmanagers that are operational costs and are now being guaranteed by the bank.

The banks need to see repayment of loans and interest and have accepted that they will get what they can. The managers need the operational costs and the banks have guaranteed this. (Drousiotis, 2010).

Confirmation from one of the industry's leading shipmanagers that banks are quietly manoeuvring behind the scenes and avoiding public foreclosures could go some way to explain why the widely predicted series of bankruptcies has not occurred. While few banks have taken ownership of vessels in financial difficulty, the fact that they are now prepared to take on a supervisory equity position in vessels they financed suggests that troubled KG funds have been given breathing space to find a solution.

Clearly, the shipmanagers will not be financing the operations without income, so everyone sits round a table and finds a solution. Out of the reduced income and considering operating costs, that is what the banks can get, no more (Drousiotis, 2010). The estimation is that around 70% of KG funds are effectively still bankrupted. However, the real problem in this scenario, lies with the banks and how long they can continue to sustain this financial stand – off.

Strictly speaking, and the end of 2010 the banks should assess the value of their loans, and if they are not covered they need to write – off the difference. The fact is that nobody does that.

It is not only Germany. There is no point to name banks, but the reality is the reality. Even in the UK, the biggest financing bank, was basically throwing 90% financing at every vessel at the peak of the market. This is now the bank that has the biggest problems and it's an issue how they are going to cover it up.

The fact that they widely expected foreclosures have not materialized suggests that banks have been given tacit permission by central banks to overlook the usual banking procedures when it comes to shipping loans.

The auditors must have noticed, the central banks must have noticed, but they do not want to do anything about it because it affects the economy of the country on account of the magnitude of the loans in question.

3.5 THE NORWEGIAN KS PARTNERSHIP

The KS partnership is another form of financing vessels. This way of financing bears many similarities to the German KG analyzed previously. Its main difference being that it mostly deals in financing of second hand vessels aged over 15 years.

So far the KS market has been used widely during the 1980's reaching its peak volume between 1987 and 1989 when USD 3 billion was raised as the basic equity by various investors in KS companies. Subsequently, KS market has suffered a long trend of depression as a result of radical reforms in the Norwegian tax legislation in 1997, to the point that this financing method was deemed to be obsolete. The resurgence of the shipping markets during the last year has regenerated the interest of both ship owners and investors. This traditional financing source of equity funded by Norwegian investors has for the time being almost ceased to exist.

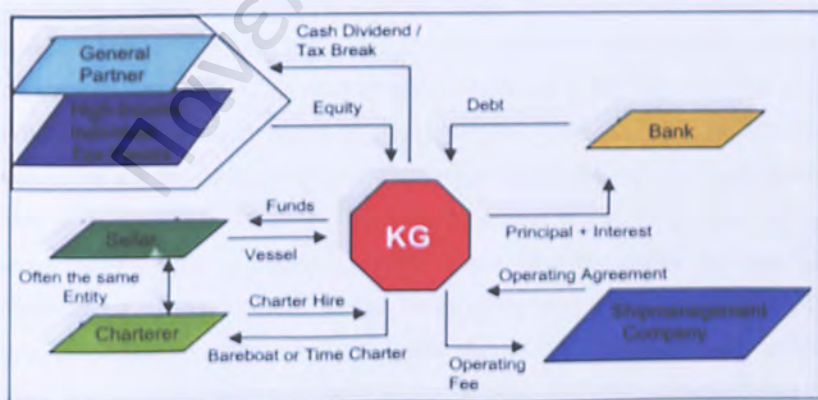
3.6 THE BASIC STRUCTURE.

KS is short for Kommandihselskop which means limited partnership. It has been widely used to raise capital for single purpose vessel owning company. The legal requirement for the formation of the KS according to Norwegian Companies is a partner and several limited partners, who can be either legal entities or individuals. Limited partners carry only limited risk as far as the ship owner is concerned, but they hold a joint liability against the KS if one of the other limited partners fails to honor his financial obligations. On the other hand, the general partners assume full responsibility towards

the creditor of the KS. In effect investors reluctant to assume any kind of liability on behalf of the KS have caused a differentiation in the organization of the partner ship. In this new structure the general partner is substituted by a single purpose company with limited liability possessing sufficient capital to be in accordance with the minimum capital requirement of 10% shares of ownership as general partner. The manager of the project hold 100% ownership of the SPC. At least 40% of the company capital shall be locked up to be paid to the limited partnership imposing a restriction on the partners to not freely dispose of it. The minimum capital requirement is NOK 20,000.- for its participating limited partner. At least 20% of the individual partners obligation is prerequisite for the KS to be registered with the registered for business enterprises. Another 20% must be paid after 2 years.

In most cases there is only one general who must provide at least 10% of the company's capital and own at least 10% of the KS net capital at all times. Furthermore investors agree to a further amount of "uncalled" capital if the general partner so desires. This happens only if something goes wrong and it provides extra reassurance to banks and lenders. Round 50% of required demand for the acquisition of the vessel is raised by a senior bank debt. The KS can achieve higher bank financial leverage as it is shown below.

Figure 3.2 the basic structure of KS partnership, Note: Figures represent capital flows as percentage of equity, Source: Pareto



After the presentation of the legal framework around the KS partnerships. The following figure illustrates the interrelation between the entities involved in the structure.

A report by Marine Many distinguishes two types of set ups for a shipping KS. In the first shipowning company is relatively small or it consists of a few private individuals. An investor to be able to participate both in this type of venture in an internal or external for, a KS is set – up regarding the ownership of the vessel while the shipowning company will take a management fee for running the vessel commercial operation . The vessel concerned is not necessary to have a charter therefore the investors simply hope that the management will achieve the profit on the vessel. The shares in the KS of this type are limited in numbers sold to people. The case often being one or two individuals owning more than 2/3 of the capital. Consequently the investors are few. All the legal and accounting services will be in principal minimum. The vessel will be initially financed by a first mortgage loan obtaining gearing levels later. As far as the evaluation of risk of investing the fact that the vessel might be without charter increases the risk involved in the project. On the other hand, this fact has the advantage that since the vessel is without charter, the vessel can be more easily sold and the KS be dissolved at any time. The faith and insight towards the initiator of the project as well as toward the company responsible for the commercial management of the vessel is also a desired mean of reducing risk (Heidenreich, 2001a).

The second type of KS although it is by and large of the same legal, accounting and structural set – up as the one we described above, in actual fact it is quite different. This difference involves the employment of the vessel and the trading of the KS shares. This type of KS is considered as a financing vehicle giving the opportunity to an investor to quantify and assess the project more easily. In this KS a vessel or more will be bought with a view to charter her back. It is a structure similar to lease back. The vessels will be chartered back to the seller on a bare boat agreement. The credit worthiness of the charterer is an important factor in the arranging an underwriting company for achieving high gearing in case of a loan, to finance a project thus reducing

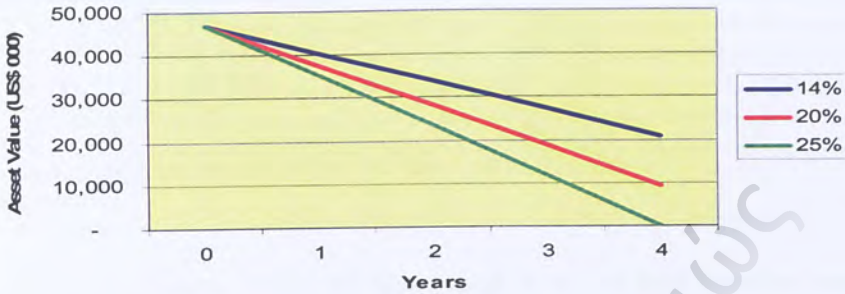
the need for equity and increasing the return on capital committed. This higher leverage implies the better deal between generation of higher internal rate and higher default risk.

The existence of a credit rated charter in the KS secures that the risk assignment in comparison to the previous KS structure because he secures generating a fixed capital inflow during the charter period. In addition, the investors as well as the return profile in this KS type are also different from the general partners, usually a shipowning company. Benefiting from investment over and above the dividend pay out, paid as a result of the charter. It could be a lucrative purchase option in the end of the charter period the only risk that can not be assessed in this case is the residual value risk which is determined by the market conditions.

3.7 THE NORWEGIAN CORPORATE AND TONNAGE TAX SYSTEM.

Both the Norwegian and German KG have been apparently created to provide tax incentives for participating investors in shipping ventures. KS is a tax transport legal entity, meaning that the tax is assessed at the level of individual partners rather than the KS itself. The hyper-accelerated depreciation schedule reaching an annual rate of 25% on a declining balance basis, contributed to the rapid expansion of the KS market in the late 80s. Since then the superseding of the tax legislation in 1992 limited the great deductions on the limited partners' tax return. The latest tax reform, which occurred in 1996, along with the introduction of tonnage tax in Norway, further limited tax advantages. Currently the depreciation allowance rate for ships stands at 14% which represents a significant difference from the 25% rate. Additionally partners in KS partnerships are subject to a 28% corporate tax on their share of the investment scheme's incomes (Lloyd' List, 2005).

Figure 3.3: Effect of Depreciation Rates on Asset Value, Source: Author



Despite the abandonment of the tax benefits, that made KS so appealing to investors the past years, the structure is still marginal tax beneficial both for the arranger as well as for the limited partners. At present investors can take advantage of the tonnage tax if they have a stake larger than 3%, but few investors have such a share of the project. Thus, tax benefits have ceased to be the most attractive point of this investment vehicle. This situation is likely to change due to the intention of the Norwegian government to put Norway on a par with the rest of Europe in terms of tonnage tax levy. Currently Norwegian companies entitled to participate in the tonnage tax regime are levied with a significantly higher tonnage tax burden than the EU average which is around EUR 35,000 per annum for a 15 years old, 50,000 net tons vessel. The computation method of the yearly tonnage tax for Norway is listed below followed by an example.

Net Tonnage

NOK 0 for net tonnage up to

NOK 72 for net tonnage exceeding

NOK 48 for net tonnage exceeding

NOK 24 for net tonnage exceeding

Daily tax per 1,000 net tons (NOK) 1,000

1,000 up to 10,000 10,000 up to 25,000 25,000

Table 3.2. Example Norwegian tonnage tax computation, Source: Norton Rose (2005). *Tax incentives in the shipping industry, (Shipping Briefing)*. Norton Rose

Net tonnage of the vessel:	50,000 tons
For the first 1,000 tons	NOK0
From 1,001 to 10,000 tons	NOK 648
From 10,001 to 25,000 tons	NOK 720
From 25,001 and above	NOK 600
Total	NOK 1,968
Annual tonnage tax : NOK 1,968 \times 365 days = NOK 718,320	
€98,350	

Recently the tax benefits of the KS have ceased to be the most attractive point of this investment vehicle. This situation is likely to change in the future on account of the invention of the Norwegian government to put no way as far as tonnage tax levy is concerned. Currently, Norwegian companies are levied with hefty tonnage tax burden in comparison with EU average which is and EUR 35,000.- per annum for a 15 year old 80,000.- net tons vessel. The following list depicts the computation method.

3.8 EVALUATION FROM SHIP OWNER'S AND INVESTOR'S PERSPECTIVES

KG structures offer the off balance sheet financing and the same applies to KS partnerships providing shipowners with the possibility to minimize to asset exposure on their balance sheet without outstanding commercial control of their vessels. In addition, shipmanagers are provided with 100% financing for the acquisition of newbuilding or second hand vessels without the need of any equity injection from them. Furthermore, the shipowner can use the KS financing to free up equity in order to use it for further expansion in the company.

From the investor's point of view, even though the tax incentives that used to allure KS investors in the last decade have ceased, the dividend yield as well as the potential return to their committed capital is the cornerstone incentive at the present for an individual investor. Especially under the current financial market environment where low interest rates further accentuate the attractiveness of investment projects bearing high IRR. The right sort of deal, well structured, should give investors a competitive rate of return on their investment. The internal rate of return for KS projects is historically about 18% with an annual dividend of

5% (Matthews, 2004). KS is meant for single purpose investments as opposed to ongoing diversified businesses. Until the KS is liquidated, partnership shares can be bought and sold. The secured liquidity of the secondhand KS shares market gives the investor the additional opportunity to exit the KS structure at will.

The future of KS is unpredictable and will entirely depend on the state of the international financial market. Government reforms in the tax legislation converging towards EU footprints stil keep KS afloat catering for the needs for investment of wealthy Norwegian individuals.

Πανεπιστήμιο Πειραιώς

4. LEASING

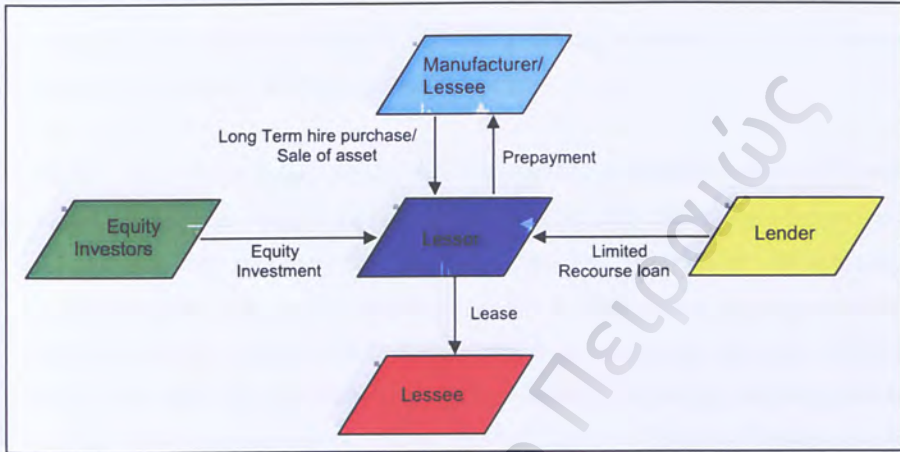
Along with the equity and debt leasing is regarded as the third most important source of financing both in shipping and in corporate capital raising. As far as shipping is concerned, the combination increased charter rates, high asset values and low interest rates (during 2005 – 2008) have helped in the expansion in the ship leasing market especially in sale lease back deals. In this chapter we will explore the application of leasing in the ship finance industry and we will actually analyze the driving forces behind it as well as the pros and cons for the ship owner when selecting the method of financing new buildings or purchasing second hand vessels.

4.1. THE CONCEPT OF LEASING

In all types of leasing, and there are many, the basic concept of leasing is the same. The principal parties involved are the lessor and the lessee. The lessor as the legal owner of the asset transfers the asset to the lessee who uses it for a predetermined period undertaking the responsibility to pay the lessor back in the form of a lease rental. The terms of the lease payments as set upon the signing of the agreement and are usually determined in such a way that will satisfy both parties. When the lease deal ends the asset usually goes back to the lessor, leaving open the option to the lessee to purchase it, if he so desires.

In sale lease back deals, the lessee maintained the ownership of the asset and sales it to the buyer who plays the role of the lessor who subsequently leaves the asset back to the initial owner who then becomes a lessee. The following figure presents the structure of a typical leasing deal

Figure 4.1: Basic Lease Structure, Source DVB Bank



In these transactions the element of risk which all parties have to consider is the essential element. The risk of the lessee defaulting in his rental payment obligation can be expressed as the revenue risk, resulting in the lessor not be fully compensated for the purchase asset. The liability of payment in case the asset breaks down and a question who will then bear the liability is one of the operating risks.

Another risk, is the tax risk occurring due to changes in tax rates and tax laws which will contradict the belief that leasing is treated favourably by tax legislation in many countries. Finally, the residual value risk caused by the ups and downs in the assets market value combined with a possible drop an the end of the lease contract which can happen more often that not in the extremely unpredictable shipping world.

Leasing transactions mainly fall in two major categories, operating lease or finance lease. Operating lease includes short-term leasing structures or deals cancellable during the contract period at the option of the lessee. This option shifts the majority of the risk

elements to the lessor side. Moreover, the lessor is responsible for the maintenance of the asset, which by the end of the leasing period reverts to him as the legal owner of the asset. Therefore the residual value of the vessel also constitutes a risk for the lessor. In the case of shipping, the fundamental purpose of operating lease is to make the vessel available to a charterer for a predetermined period of time and cannot be used to provide financing to the lessee. Generally, operating leasing includes any leasing transaction that does not fall into the finance leasing category.

Finance leases extend over most of the economic life of the asset which in the case of a vessel can be more than 15 years reaching up to 30 years depending on the type of the ship. Under this structure the lessee assumes full responsibility of operating and maintaining the asset. In the shipping industry a finance lease is commonly called a bareboat charter or demise hire. As far as risk is concerned, the basic difference of finance leasing is that the lessee assumes the residual value risk by acquiring the asset at the end of the lease agreement. These contracts cannot be cancelled before expiration or in case of cancellation the lessor is reimbursed for the losses he suffered. Essentially, finance lease is a close substitute for borrowing funds in form of loan. The lessee, at present, enjoys an immediate inflow of cash, since he is either relieved of having to actually purchase the asset, or he receives an actual payment in the case of sale leaseback of the asset. Apart from that, he assumes the responsibility of paying the lease payments in regular intervals, similarly to principal and interest instalments for amortizing loan granted from a commercial bank (Brealey & Myers, 2003, 730). From a purely accounting point of view, a transaction that transfers substantially all risks and rewards associated with ownership of the asset should be recognized as financial lease.

A finance lease in shipping will typically have one or more of the following characteristics.

- ✓ The charterer will automatically acquire title to the vessel at the end of the charter period;
- ✓ The disponent owner may demand that the charterer purchase the vessel at the end of the charter period for a previously agreed price;

- ✓ The present value of all future charter payments at the time the charter is entered into, is equal (or nearly equal) to the then fair market value of the vessel;
- ✓ The charterer has the option to purchase the vessel at the end of the charter period at such a favourable price that it is likely that the option will be exercised;
- ✓ The charter period is for all (or nearly all) of the vessel's remaining economic life;
- ✓ The vessel is of such a special character or configuration that no one but the charterer could use it without it being substantially refitted or converted.

Another interesting point in lease transaction in shipping is the vessel acquisition option at the end of the contract. In other words, hire purchase is a transaction giving the lessee the option to purchase the vessel at the end of a hire period at an agreed price. In lease purchase the essential difference is the absence of such an option.

Arrangements of sale lease back at existing tonnage have been recently increasingly used in shipping. The raise of vessel prices makes ship owners regard these types of transactions as a good way of releasing the capital locked in their vessels, maintaining at the same time the ability to trade the vessel under a long term lease. In this way, a shipping company may choose to raise cash and harvest book gains by selling a vessel while maintaining the operation of the ship at the same time.

Selling a vessel to a leasing company or another investment vehicle such as a company like a KG or a KS and at the same time lease it back in, under a bare boat charterer or a long term charter is one way of doing it. In this transaction lease ownership of the vessel goes to the lessor while all operating rights are kept by the lessee.

4.2. TAX INCENTIVES.

Most of the leasing transactions in shipping are in the form of finance leases. This is due to the tax benefits associated with such transactions in the tax legislation of many countries. As it is expected such countries where tax jurisdictions greatly contribute to the development of tax evasive leasing scheme are UK, Germany, Norway and Japan. Significantly, under German and Norwegian tax legislation, leasing deals are performed

through a investment vehicle which is usually a KG or KS company, which acquires the vessel and acts as the lessor.

In these leasing structures and the associated tax legislation involved in the shipping international environment choosing the most suitable lease structure should depend on the objectives and the needs, such as tax implications on the countries involved in the transaction. Regardless of the tax legislation though, the tax owner is the party upon which the tax will be levied. It is worth mentioning here that the tax owner is not necessarily the same party as the accounting owner, and the economics of leasing are based on this assumption.

In this structure of leasing, the accounting owner who includes the asset in his balance sheet as well as the tax owner who will directly enjoy the tax benefit are under the following rules.

In finance lease transactions the lessee includes the asset in his corporate balance sheet, while the lessor bears the tax levy. In the case of operating lease the tax burden is on the lessor who will also lists the asset in his balance sheet.

The importance of tax incentives for the leasing industry is revealed by the fact that without tax advantages, leasing is in general more expensive than bank debt therefore the benefit from using it is diminished.

Table 4.1: Structures of Lease

Type of Lease	Accounting Owner	Tax Owner
Finance Lease	Lessee	Lessor
Operating Lease	Lessor	Lessor

Source: Lloyd's Shipping Economist

4.3. ADVANTAGES & DISADVANTAGES

A number of advantages both for the lessor and the lessee are offered in leasing. Benefits can differ determined mainly by the type of lease but they can be safely summarised as follows:

Advantages for the lessor:

- ✓ Benefits obtained as a result of the deferral of tax liability arising out of the use of tax allowances merits from depreciating expensive assets;
- ✓ Capitalizing on residual value (operating lease);
- ✓ Fixed cash inflow generated by the lease payments;
- ✓ Return on investment;
- ✓ No requirement for additional security in form of mortgage on other vessels in the owner's fleet, since the lessor is the legal owner of the vessel.

Disadvantages for the lessor:

- ✓ Third party claims and liabilities associated with the legal ownership of the vessel;
- ✓ Risk of damage to the company's public image in case of serious pollution or other damage or loss of life, caused by the leased ship;
- ✓ Lack of effective control over any decisions by the operator 'quiet enjoyment';
- ✓ Residual value risk (operating lease);
- ✓ Uncertainty regarding potential changes in taxation rules;
- ✓ Default risk associated with the response of the lessee towards his lease payment obligations.

Advantages for the lessee:

- ✓ 100% financing for longer periods compared to bank lending, since the lessor intends to depreciate the total asset's value;
- ✓ Full tax allowable lease rentals;
- ✓ Lower financial cost due to lessor's tax advantages partially transferred to the lessee in form of reduced rental payments;
- ✓ Accounting benefit and improvement of financial ratios by the non appearance of the asset on the balance sheet of the lessee (operating lease), therefore highly geared

companies with narrow borrowing limits free up cash and deleverage their balance sheets;

- ✓ Residual value protection (operating lease);
- ✓ Fixed cash outflow, better financial planning.

Disadvantages for the lessee:

- ✓ Lack of flexibility to resell the vessel upon suitable market conditions, due to rigid and binding lease contracts with long tenors (finance lease);
 - ✓ Inability to realize capital gains on the asset employed;
 - ✓ Less prestigious for the company than actually owning the vessels;
 - ✓ Uncertainty over tax benefits;
 - ✓ Prodigious paperwork;
- Need for corporate transparency and sound corporate structure.

To sum it all up in the evaluation of the lease deal from the lessee's point of view the following factors must be taken into consideration (DVB BANK, 2005)

- Availability of equity;
- Lease terms;
- Pricing as it is expressed by lease payments;
- Age and market condition of the asset;
- Flexibility of the contract.

Having established that many leasing structures are tax driven volatility in the leasing market, are closely related to the tax legislation associated with such structures. Furthermore leasing and sale lease back structures are basically depended on the availability of capital in the lessors market.

The declining market environment experienced nowadays, with low asset values and falling spot and time charter rates under pressure, is likely to lead to a further depletion in the market, mainly in the form of leasing capital which can be easily reinvested in the market by acquiring new tonnage. Moreover, new deliveries increase supply thus

pressuring charter rates and asset values further. Assuming that demand will drop ship owners will be forced to sell their expensive boats in low market prices in order to meet their obligations towards their charter and creditors.

4.4. THE UK TAX LEASE

In the UK the concept behind the tax lease is the UK based company acting as a lessor buying the asset and leasing it to the lessor who can be a non UK based company. The lessor under the UK tax system is given the opportunity to take advantage of tax depreciation thus reducing the effective cost of borrowing to the lessee in the form of reduction of lease payments.

Savings of about 10% of a ship's cost can be achieved in case a USD 180 mil LNG carrier is bought under the UK's tax lease scheme (Fairplay, 2005)

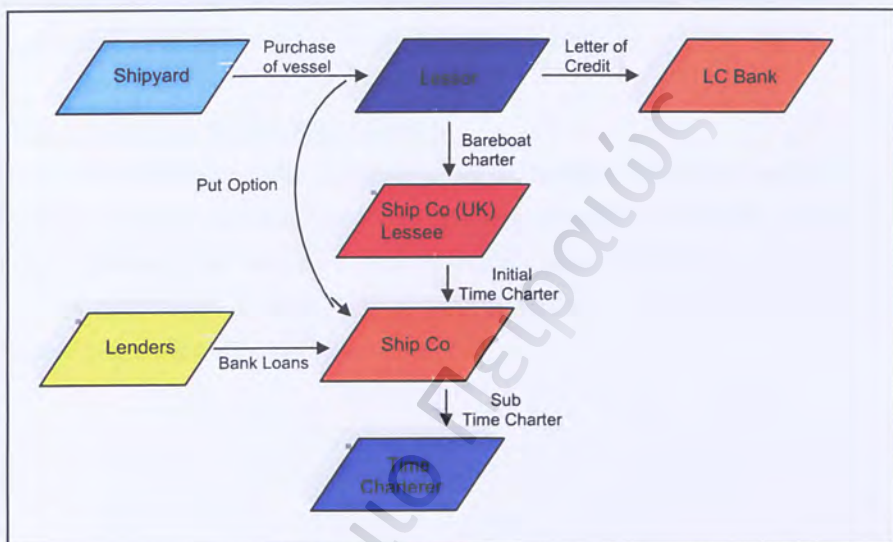
UK tax leases can be both finance leases, where the lessee enjoys full economic ownership of the ship, as well as operational leases, where the lessor bears residual value risk in the vessel.

The market for UK tax leases is a well established investor market, with lessors usually being large UK based banks, through their leasing subsidiary companies. Some of the major players in the market are Lloyds TSB Bank pic, HSBC Bank plc, Royal Bank of Scotland plc as well as DVB Bank AG.

These institutions have abundant tax capacity and by acting as lessors in ship leasing deals they are entitled to 25% capital allowance (UK tax depreciation) in respect of the vessels subject to the lease. Both the lessor as well as the lessee must be UK resident companies, even though essentially the common practice is for the UK lessee to sub-lease the vessel to another overseas located lessee in form of a time charter. The lease term can vary widely from 6 to 25 years. Another point worth mentioning is that this lease structure can provide pre-delivery finance without the need for the physical existence of the asset. In this case the lessor usually will enter into the construction

contract itself and then lease the vessel to the lessee. The basic UK lease structure is illustrated in details in the following figure.

Figure 4.2: The Basic UK Lease Structure, Source DVB Bank



Considering the claim of generous capital allowances to the lessors as ships owners we have to mention that there are certain restrictions. The UK lessor is eligible to claim the capital allowances only if the vessel is used by a lessor liable to pay UK corporation tax. In this way, the capital allowances are kept within the country through direct leasing of assets to non UK ship owners, who usually have UK based subsidiaries, which have been purpose formed to act as the lessee through which the transactions are carried out. Companies that fall under the UK tax regime are not included in these allowances. A normal UK tax regime, however, permits another UK based company incurring expenditure on a vessel to claim these allowances and then the company can lease the vessel to the tonnage tax company. Capital allowances under the tax lease regime are also denied in the case of sale and leaseback of the vessel and this is the main reason why these deals are performed under German or Norwegian tax regimes by using KG and KS structures as lessors. The denial partially also exists when the contract value of the vessel exceeds GBP 40 million which is possible in cases of specialized tonnage,

such as LNG vessels or large container ships (Norton Rose, 2005). In this case finance lessors will be able to claim capital allowances on the first GBP 40 million of expenditure at the rate of 25% per year and a further GBP 40 million of expenditure at the reduced rate of 10% per year. At this point it is worth mentioning that the above described restrictions are not applicable to any lease that qualifies as an operating lease for UK accountancy purposes (Watson, Farley & Williams, 2002).

4.5. EVALUATION OF UK TAX LEASES

UK tax leases have different evaluation depending on the lessors or the lessee's point of view. The lessor is mainly concerned with a pre and after tax margin. The lessee, on the other hand, in addition to the standard evaluation factors (Lease terms, pricing, ect..) as presented previously base his evaluation on net present value (NPV), benefit and internal rate of return (IRR) savings.

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Table 4.2. Evaluation of UK Tax LEASES, Source DVB BANK

Advantages	Disadvantages
<ul style="list-style-type: none"> - Attractive benefit - No restrictions on the jurisdiction of incorporation on the shipping company and the flag of the vessel - Flexible and short term - Operation control of the asset remain with the lessee - No additional equity investment is required from the shipping company 	<ul style="list-style-type: none"> - Lessee bears tax risks (Lessor's tax indemnity) <li style="padding-left: 20px;">Require UK substance - High transaction cost - Suitable for companies with strong credit

Some additional advantages and disadvantages of the UK tax leases, are presented in the table No 4.2.

4.6. SALE & LEASE BACK

Leaseback, short for sale-and-leaseback, is a financial transaction where one sells an asset and leases it back for a long-term; therefore, one continues to be able to use the asset but no longer owns it.

Leaseback arrangements

After purchasing an asset, the owner enters a long-term agreement by which the property is leased back to the seller, at an agreed-to rate. One reason for a leaseback is to transfer ownership to a holding company while keeping proper track of the ongoing worth and profitability of the asset. Another one is for the seller to raise money by

offloading a valuable asset to a buyer who is presumably interested in making a long-term secured investment.

Shipping companies are trying to find issues of how they can extract value from appreciated assets, while they are still retaining control in their fleet. The sale and leaseback is the method which the vessel is sold to a financial owner, or another vessel owner who re-lets it back to the sellers for some period of time. Maritime sale and leaseback deals, often complex cross border transactions, are worth looking at in light of the recent firm market environment – where lessors can easily become comfortable with residual risk. Irrespective of overall market strength the 100% financing afforded through leasing is a powerful inducement.

We can find in the picture herebelow the Sale and Leaseback Financing Scheme:

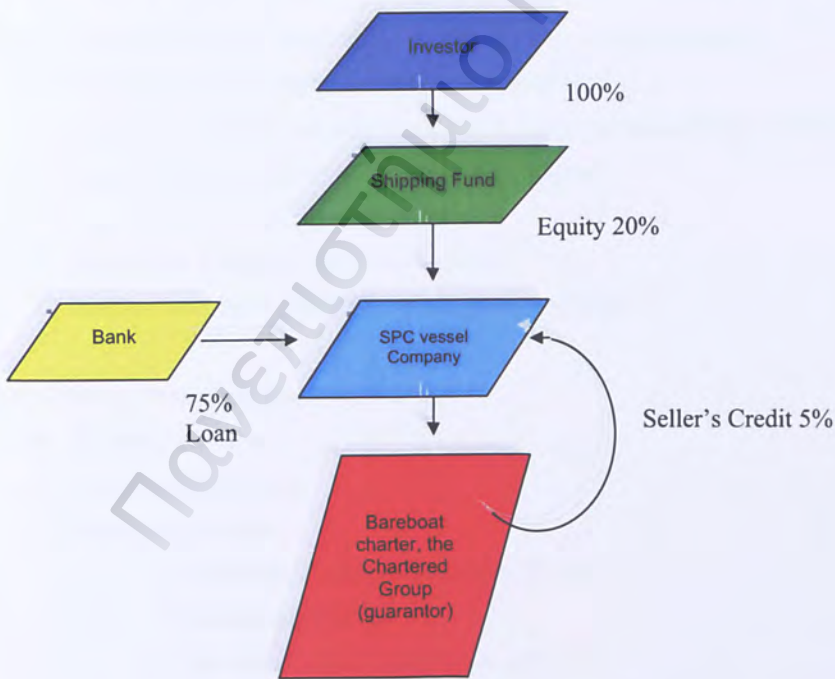


Figure 4.3. Sale and Leaseback Financing Scheme, Source: Naftotrade, Quality Maritime of Transport.

Process:

- Sale of the vessel
 - MOA
- Lease Back
 - Bearboat Charterer
 - Charterer's Undertaking
 - Security
- Buy Back
 - Option Agreement
- Additional
 - Charter Guarantee
 - Charterer's Agreement
 - Account Pledge

The requirements from the shipping funds point of view are the following:

- ✓ Counterparties: Reputable Companies, track record
- ✓ Corporate Structure: Transparency Shareholding structure (Group – Holding Co)
- ✓ Control: Ability to control the own invested capital
- ✓ Age: young to middle aged assets
- ✓ Guarantees: Corporate support, asset cover
- ✓ Employment: Time Charter Contract of Affreightment

Requirements from the Banks' point of view:

- ✓ Know the customer
- ✓ First Priority Mortgage
- ✓ Financial Covenants
 - a) Minimum Market Adjusted Net Worth
 - b) Maximum leverage
 - c) Working Capital Greater than zero

The Advantages and Disadvantages of a sale and leaseback transactions are the following:

ADVANTAGES:

- Increased Liquidity (Finance 100% of the m/vs'assets)
- Confidentiality
- Management's control
- Evenly spread repayment

DISADVANTAGES:

- High Cost of Capital (effective interest rate 8%)
- High Exit Cost
- Long Term Time Charter or CoA
- Inflexible exit scenarios
- Financial Covenant (Debt Ratio)

Finally, as the main aim of a shipping company is to provide additional financial flexibility, shipping companies use the sale and leaseback transactions in order to achieve that.

5. BONDS

Another form of going access to the capital markets is issuing bonds. It has been deemed as a useful tool for raising capital when a company is not able to finance all its financial need under normal commercial terms. It might on the other hand, mean that a company resorting to the bond markets has exhausted both its commercial borrowing capacity and its off-balance, leasing ability. Bonds issuing is deemed to be the most expensive type of raising debt bearing high cost as expressed by coupon rates.

Bonds are written-down debt obligations incorporate many characteristics such as the way the interest is paid, the market they are issued in, the currency they are payable in, protective features and their legal status. Bondholders are entitled to receive semi-annual or annual interest payments which are known as coupon payments, until the maturity date when they receive the par value of the bond. Underwriters, mostly investment banks, issue bonds for issuers due to the considerable fee income involved.

There are different types of bonds and several ways to describe bonds. Table 5.1. presents the basic bond types along with a brief description of each type.

In shipping the main types of bonds found for issuers and investors are high yield and convertible bonds which are both as presented in this chapter.

5.1. BOND RATINGS

To evaluate a good issue assessments should be made of the character of management involved and the real quality of valuable assets.

The main tool for investors in helping to choosing a good issue, however, is the rating awarded to the issuer by two major US rating agencies, Moody's and Standard and Poor's.

The relative quality of most traded bonds can be judged from bond ratings given by Moody's and Standard and Poor's as presented in Table 5.2. Bond ratings are judgements about firm's financial and business prospects. There is no fixed formula by which ratings are calculated. Nevertheless, investment bankers, bond portfolio managers, and generally everyone who follows the bond market closely, can get a fairly good idea of how a bond will be rated by looking at a few key numbers in the firm's balance sheet, such as debt-equity ratios, return on assets and earnings to interest ratio (Brealey and Myers, 2003, 685).

Table 5.1: Types of Bonds

Bond Type	Main Features 1
Agency bonds	Agency bonds are issued by agencies of the U.S. government, as well as government-sponsored entities (GSEs). Principal and interest payments on the loans are passed through to bondholders and so agency bonds are referred to as pass-through securities.
Asset-backed bonds	Asset-backed bonds are based on an underlying pool of cash flow-producing assets that tend to be generally illiquid and private in nature.
Bearer bonds	Bearer bonds exist in physical form as certificates with coupons attached representing interest and principal payments. They are also known as coupon bonds.
Callable bonds	A callable bond is a bond containing a provision that allows the issuer to buy back the bond at a price greater than the bond's face value before the maturity date.
Convertible bonds	Convertible bonds (also known as converts) are corporate bonds that give the bondholder the right to exchange (convert) the par amount of the bond for another form of security, usually common stock, at a pre-stated price or share-per-bond ratio during a specified period.
Corporate bonds	Corporate bonds (known as corporate) are debt obligations issued by U.S. and foreign corporations. The five main classifications of corporate bond issuers, representing various sectors of industry, are public utilities, transportation companies, industrial corporations, financial service companies, and conglomerates.
High-Yield bonds	The defining characteristic of a high-yield corporate bond (also known as a junk bond) is the credit rating, as assigned by one or more of the bond-rating agencies. The weaker a company's financial position, the more it must pay to borrow money.
International bonds	An international bond is a debt security received in exchange for money loaned to a foreign government or corporation. Many overseas companies sell international corporate bonds, and many foreign governments sell international government bonds to U.S. investors.
Municipal bonds	Municipal bonds (known as mains) are debt obligations issued by cities, counties, states, and other government entities to raise funds that are used for projects such as building schools, roadways, hospitals, sewer systems, and other infrastructure projects that benefit the public.
Treasury inflation protection securities	Treasury inflation protection securities (TIPS) are a bond issue of the U.S. Treasury in which the principal amount (par) is adjusted for inflation. Interest is paid semi-annually and is calculated using the adjusted principal amount.
Variable interest rate bonds	A variable interest rate bond (also known as a floating rate bond or floater) bears an interest rate that is subject to change periodically according to changes in a specified benchmark rate. This differs from the traditional bond, which carries a fixed rate to maturity.
Zero-coupon bonds	Zero-coupon bonds (sometimes called zeros) are bonds that don't pay periodic interest. Instead, they are sold at less than their face value, which is considered a discount or a deep discount.

Table 5.2. Credit Indices, Source: Standard and Poor's

Investment Grade Credit index required issue rating designations		Speculative Grade Credit index required issue rating designations	
Standard & Poor's Ratings Services	Moody's Investors Services	Standard & Poor's Ratings Services	Moody's Investors Services
AAA	Aaa	BB+**	Ba1
AA+	Aa1	BB	Ba2
AA	Aa2	BB-	Ba3
AA-	Aa3	B+	B1
A+	A1	B	B2
A	A2	B-	B3
A-	A3	CCC+	Caa1
BBB+	Baa1	CCC	Caa2
BBB	Baa2	CCC-	Caa3
BBB-*	Baa3	**unless the issue also has a CreditWatch listing with Positive or Developing implications	
*unless the issue also has a CreditWatch listing with Negative or Developing implications			

Ratings are opinions of future relative creditworthiness and are intended to provide objective, consistent and simple measures. In other words, they are an indication of the likelihood that a company will repay its debt on due time which effectively is a measure of credit risk. Ratings improve the flow of information between investors and issuers. Generally, there is an information asymmetry between the borrowers and the lenders, as naturally the borrowers know more about their companies. Rating agencies help reduce this asymmetry of information. Furthermore, -the investor's cost of gathering, analyzing and monitoring the financial positions of the borrowers is reduced. Accordingly, the overall market efficiency for both borrowers and lenders is improved (Alizadeh and Papapostolou, 2004).

The highly risky nature of shipping is reflected in the standard and Poor's ratings since they fall under speculative grade. The fact that the majority of shipping companies is rated below "BBB" level is due to a number of factors.

5.2 HIGH YIELD “JUNK” BONDS.

Standard and Poor's or Moody's created a grading system to reflect the relative credit quality of bond issuer, being the leading credit rating agencies dealing in credit ratings.

The highest quality bonds are "AAA" and the credit scale descends to "C" and finally to "D" or default category. Bonds considered to have an acceptable risk of default are "investment grade" and encompass "BBB" bonds and higher. Bonds "BB" and lower are called "speculative grade" or below "investment grade" as it came to be known in the bond market, "high yield" or finally "junk" bonds.

In the high yield market the investor is willing to take additional risk generated by the below investment grade rate of the issuer, by asking higher coupon payments, therefore higher return on his capital.

When purchasing a high yield potential the risk involved which the investor undertakes some high yield alternatives can be identified.

Valuating high yield bonds is another interesting point, representing both the cost for the borrower on the one hand and the return of the lender financial on the other.

Pricing bonds is determined by the yield premium fluctuates influenced by a number of industry specific as well as macro – economic factors. Generally speaking the main determinants of yield premiums fluctuation are the credit rating of the issuer and the time to maturity.

5.3. EVALUATION OF HIGH YIELD BONDS

Opting for high yield bonds used to raise capital from the debt markets instead of bank debt, the ship owner has to bear in mind the following features of high yield bonds.

Advantages:

- Long term capital up to 7-10 years enables the ship owner to match long-lived shipping assets to long-term financing;
- Better chances for the ship owner to survive a short term market recession with a greater safety margin than senior debt financing, since the capital needed for bond holders debt service is less than that for loan amortization and fixed over a longer period;
- No principal amortization, allowing the ship owner to employ more capital generated by cash flows by reinvesting his earnings;
- Less and more flexible covenants offering operational flexibility (no maintenance covenants with respect to net-worth or debt service e.g. hull-to-debt ratio);
- Broad investment base more willing than the banks to finance a highly leveraged company;
 - No interference of bondholders in day-to-day operations;
- Success in the bond market for a ship owner is based more on the actual project and cash flow than his own equity base;
- Ability to extract in a single financing large amounts of USD 100 million or even more;

Less expensive than equity mainly due to the fact that bonds rank prior to equity in a default case, therefore less risky than equity.

On the other hand, along with the above mentioned advantages there are also some drawbacks which should be taken into consideration prior to the decision of raising capital through high yield bonds.

Disadvantages:

- More expensive than bank debt;
- They lack flexibility, since once issued it is very difficult and costly to be modified or restructured;
- Increased demand for corporate transparency, report and monitoring of the company (especially since the late 90s);
- Endangerment of the company's profile, stock prices and reputation, in case of failed or flawed executions;

- Require well projected long-term adequate cash flow to meet the coupon payments.

Therefore, the owner is obliged to operate in the time charter market, which deprives him of taking advantage on upturns of the spot market.

The high yield bonds issuer will have to ensure in order to be successful and reap the maximum benefits from the yield market that the company enjoys the following financial profile.

- Public listed company on a major exchange, with tradition of full disclosure and significant analyst coverage.
- Dominant player in a niche industrial shipping business with high barriers entry;
- Low exposure to the spot market;
- Average age of fleet less than 10-year maturity of the bond, so low fleet replacement requirements;
- All commercial and technical services are provided by competent in house staff; Existence of a sound management and business plan with no asset play orientation;
- Reliable track record since a history of bad behavior is usually a sign of the future developments (unscrupulous ship owners tend to remain so); Reasoning and understanding why the ship owner really wants to tap the bond market (American Marine Advisors Inc., 1998).

5.4 CONVERTIBLE BONDS

As its name suggests, a convertible bond is a bond that gives the holder the right to "convert" or exchange the par value of the bond for common shares of the issuer at some fixed ratio during a particular period.

Bonds are fixed income securities; convertibles are fixed income securities which permit the holder the right to acquire a common stock of an issuer under specific conditions set by the bonds. The holder has the sole right to convert at will.

Usually, a convertible security offers other options such as the right of the issuer to call the issue or the right of the holder to put the security to the issuer. The terms for such optional transactions are stated in the indenture.

As far as ranking is concerned, in a default situation converts are usually subordinated debentures, meaning that 'senior' claims, for instance long term debt issues and bank loans, have to be settled before the convertible holders receive any payment (Marine Money, 2005).

Table 5.3: Convertible Bonds Value Determinants, Source: Marine Money, 2004

Variables	Direction	Impact on Convertible Value
Underlying stock price	Higher Lower	Positive Negative
Volatility of stock returns	Higher Lower	Positive Negative
Dividend yield of stock	Higher Lower	Negative Positive
Interest rates	Higher Lower	Negative impact on bond component but positive impact on option values Positive impact on bond component but negative impact on option values
Yield spreads relative to treasury yield	Higher	Negative (may indicate increasing default risk)

Their conversion feature also gives them features of equity securities. They have a coupon payment and are legally debt securities, which rank prior to all equity securities in a default situation. Their value, like all bonds depends on the level of prevailing interest rates and the credit quality of the issuer. Moreover in the case of convertible bonds, according to a conducted study by Prasanth Prasannakumar for Marine Money (2004), the value of the issues is also influenced by a number of variables presented in the table below.

5.5. BENEFITS AND DRAWBACKS FOR ISSUERS AND HOLDERS OF CONVERTIBLE BONDS

Issuers of convertible bonds sell to provide a higher current yield to investors and equity capital upon conversion.

Investors, on the other hand, buy convertible bonds to gain a higher current yield unless downside, trying to maintain their bond value in a case at a sudden drop in the common share price.

The main advantage for the issuing company of a convertible bond is the lower cost than conventional bonds as well as the less restrictive covenants. Moreover a company can sell equity at a better price through a convertible offering than a direct issue (Marine Money, 2005).

The disadvantages, on the other hand, are related to the ups and downs of the underlying stock. If the stock value goes dramatically up, the issuer might choose to postpone financing and issue equity directly, for instance through a public offering. If the stock drops after the issue of the convertible, conversion can most be forced resulting in the company be burdened with more debt than initially planned, assuming that the bond holders will keep their bonds without converting them into equity. These alternative options make it difficult to assess whether a company issuing a convertible bond is actually raising equity or debt.

From the bond holder's point of view, the benefits enjoyed are better safety of principal caused by claims on assets senior to equity holders and relative stability due to pre – determined coupons.

Another significant advantage is upside potential meaning the option to participate in increasing stock prices.

In conclusion, a convertible bond offers a relative downside protection in a decline market giving the ability to share in a rising of a bullish market.

The latter can be of particular importance in the shipping industry being riddled with extreme ups and downs.

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6. MEZZANINE FINANCING

Another form of financing in shipping is mezzanine financing, which is a mixture of debt and equity financing, encompassing merits, from both debt and equity financing. Debt financing is characterized by the fact that mezzanine loan is amortized over a set period and the payments have priority over payments to equity holders, something like plain vanilla financing in which case the Bank provides debt the form of a loan. It is important to say that this layer of debt is subject to owner's principal or senior bank borrowing. The characteristics of equity, are associated with the fact that the mezzanine provider is also entitled to a share of the capital gains of the project while in case of preference shares assigned to the mezzanine provider, failure to maintain repayments, by the borrower does not constitute default. This is ideal for companies hoping to raise quick capital to help their growing and already successful business without paying interest. What are more mezzanines is a form of expensive debt since it requires significant capital to start with.

6.1. BASIC STRUCTURE OF MEZZANINE FINANCE SCHEME

Mezzanine financing covers the gap existing between the amount available from the first mortgage – based finance and the amount that a ship-owner is able to inject as equity into the project. Obviously it constitutes an addition to senior bank debt. The benefit from this project, despite the higher risk involved, due to being subordinated to senior debt, meaning that repayments and security can be postponed, mezzanine provider can gain much higher interest, a large front end fee and has a ability to seek a measure of asset control. In most cases this control is in the form of equity kicker in which the mezzanine provider takes an equity stake in the borrowing company at a future date at a fixed future price.

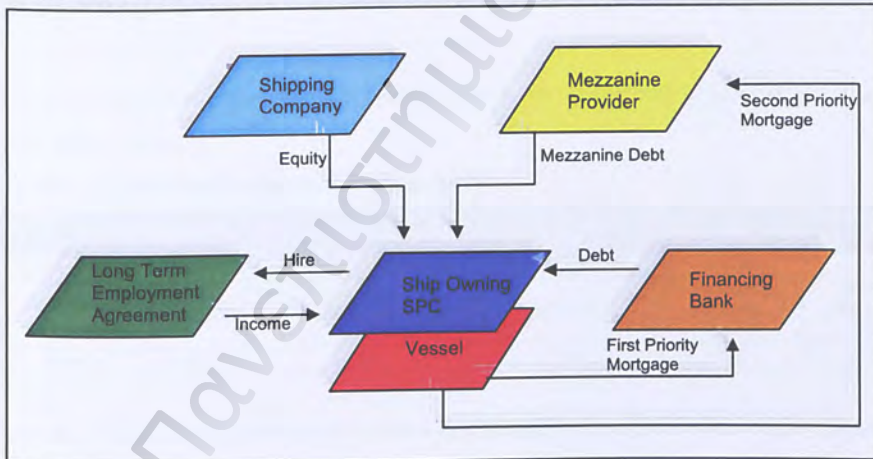
The equity kicker offers the mezzanine provider the chance of realizing a profit on a potential increase in the market value of the vessel upon termination of the project. Equity kicker is measured as a percentage, either from the proceeds realized in a sale of

a ship, or the prevailing value of the vessel which is over and above the straight line depreciated book value of the asset.

As far as pricing of mezzanine finance is concerned, this type of finance is burdened by a cost that significantly exceeds senior debt (200 – 300 basis points {bps} over LIBOR) constituting less than expected return on equity which can be up to 15%. The cost for the borrower is comprised by an annual income generated by interest payments and potential capital gain upon exceed of the project generated by the equity kicker (DVB 2005).

This structure is similar to senior debt as far as flexibility is concerned. Mezzanine finance can be tailor made to meet the specific needs of an individual owner. For example, it can be structured with balloon repayment, moratoria, equal or unequal installments ECT, although the basic structure of a mezzanine finance deal will be in the form of the following figure:

Figure 6.1 MEZZANINE FINANCE BASIC STRUCTURE, Source: DVD Bank



The basic components of mezzanine finance are the credit risk and residual value risk involved. Credit risk is much higher than a senior loan on account of the fact that if there is a default or liquidation of the borrowers business, the consequent obligations, rate below those of a senior bank loan.

It is of particular importance to signify here that the credit risk is magnified by the fact that mezzanine financing provides an expensive layer of subordinated debt in excess of the senior debt, increasing in this way the break – even point of the project. Operating cash flows from vessels may sometimes be insufficient to adequately cover both senior and subordinated charges, thus putting the whole business plan at risk. Residual value risk is associated with the fluctuations of the market value of the vessel at a loan period.

Risk mitigation is achieved through evaluation of the project before the provision of mezzanine debt in order to appraise the generated cash flow and secure that it will cover the operational expenses as well as the debt service. As far as residual value risk is concerned, a back-end fee, which is irrelevant to the residual value of the vessel, may replace the equity kicker. This can be applicable in the case when the vessel is specialized, therefore not considered as a liquid asset, having as a consequence market value upon exit to be hard to estimate. Another case where back-end fee can be used is when the vessel is financed at a high point in the shipping cycle, i.e. above average market value, and expectations are for market value to substantially decrease (DVB Bank, 2005).

The following table depicts the relation between risk and return in comparison to equity and debt financing

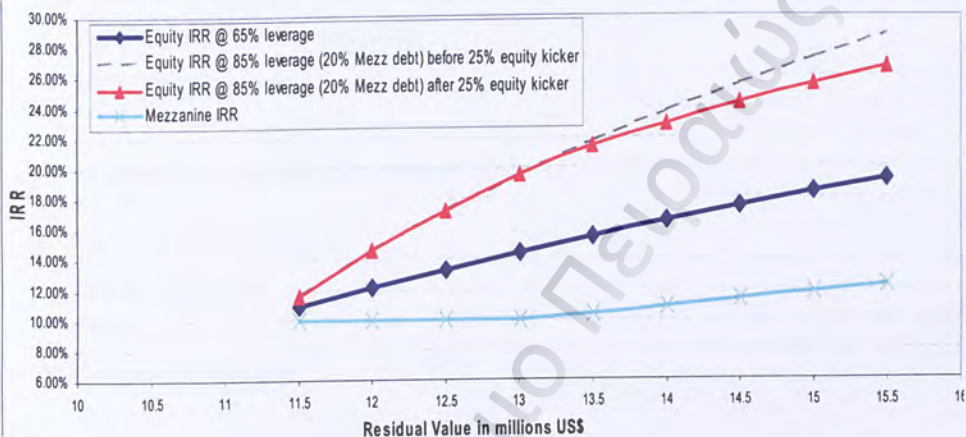
Table 6.1: Risk-Return Relation, Source: Author

	Risk	Expected Return	(P) of achieving Expected Return	Upside Participation	Downside protection
Senior Debt	low	LIBOR+(100 - 200) bps	high	none	full
Mezzanine Finance	medium	10% +/-	medium	limited (Equity kicker)	limited (Back-end fee)
Equity	high	15% +	low	full	none

As this table shows, mezzanine finance is situated between debt and equity financing. When it comes to senior debt, the financier is hedged through various covenants and collaterals from a market decline and as a consequence the risk is low. In case of a bull market though there is no participation in the upgrading of the market in the case of debt financing. On the other extreme point we find equity whereupon the equity provider and enjoys full profits in a bullish market while his is utterly unprotected in the case of a bear market.

The mezzanine financier is partially protected through instruments like the back end fee and through his priority over equity holders in case of default. As regards profit participation mezzanine finance through the equity kicker provides the financier with a “stake” in the potential profits generated.

Figure 6.2: Equity and Mezzanine IRRs versus Residual Values, Source: DVD Bank



All in all, it is obvious that the increase in the risk is followed by the analogous return escalation on the grounds that the financier is asking higher compensation in terms of expected returns on capital employed depending on the degree.

6.3 EVALUATION OF MEZZANINE FINANCE FROM LENDER'S AND BORROWER'S PERSPECTIVES

This transaction offers to both parties involved certain advantages. These advantages are listed below followed by the potential disadvantages in shipping. The main advantage, constituting also the basic incentive, is the higher gearing and return on equity. This effect is presented in the following figure where equity financing is used for the project of the product tanker acquisition as described in Table 1.2. When topping up 65% senior debt leverage with 20% mezzanine financing the following effect on IRR is

observed, always in respect to the residual market value of the vessel. The residual value of the vessel is essential since it is the determinant of the equity kicker as described above.

Advantages for the mezzanine finance borrower:

- ✓ Higher gearing;
- ✓ Higher return on equity;
- ✓ Significant up-side participation;
- ✓ Tax deductible interest payments;
- ✓ Easily tailor made debt.

Disadvantages for the mezzanine finance borrower:

- ✓ Very expensive debt;
- ✓ Higher breakeven;
- ✓ Balloon risk;
- ✓ Dividends restriction.

Advantages for the mezzanine finance provider:

- ✓ Higher returns than traditional debt;
- ✓ Second priority mortgage over the vessel;
- ✓ Application of financial covenants;
- ✓ Right to restrict dividends / request cash build up.

Disadvantages for the mezzanine finance provider:

- ✓ Higher credit risk due to subordination to senior debt;
- ✓ High reliance to counterparty;
- Limited fallback cushion; consequently Mezzanine debt risk can be converted into equity risk.

As a general remark, the following parameters should be taken into consideration by all parties involved, when evaluating the mezzanine finance project (DVB Bank, 2005):

- Ship owner creditworthiness / Financial Strength;
- Vessel employment / Charterer due diligence;
- Cash flow generation;
- Break-even level;
- Dividend strategy;
- Interest rate risk;
- Sector analysis / order book;
- Asset liquidity;
- Residual value risk/Equity kicker;
- Currency risks;
- New building risk;
- Technical risks.

A ship owner when he uses the form of mezzanine borrowing ascertains that in this way he maintains most of the control of the asset involved. Bearing that in mind, problems such as the ships' residual value or the distribution of revenue in the enterprise itself can arise and cause stress points especially in the shareholders agreement. What is more, on the grounds that a mezzanine provides an expensive layer of subordinated debt, operating cash flow from vessels can be often insufficient to provide adequate cover of both senior and subordinated charges thus endangering the whole venture.

Consequently, mezzanine financing is of limited use in the shipping industry, and the existence of disputes such as who undertakes which risk and who gets what rewards, prevent further growth of its utilization. In the current market conditions furthermore, with plenty of liquidity available, using such an expensive formal debt, is naturally limited.

Despite that, private investors and financial institutions are still attracted by the higher returns of the risk undertaking and borrowers seeking to find another form of financing than that from regular resources to top up his financial needs or looking for ways to

attract equity investors to their projects could be possible users of mezzanine finance in the future (Kokkinis 2005)

Mezzanine finance bridges the gap between debt and equity and sets the level of capital between senior debt and equity. It is an option of financing growing shipping companies and can play a significant role in financing middle market ship companies that have a track record of generating strong consistent cash flows.

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7. SHIP BUILDING CREDIT.

Apart from the credit provided by governments or state owned agencies, this type of credit is an alternative way of raising capital through debt. Especially in the construction of new building vessels mainly in the past it has been an important source of financing.

It provides credit to the potential ship owner arising from the supplier of the vessel either in the form of shipyard credit directly or through state loans from credit agencies indirectly.

Below we are examining both cases.

7.1 HISTORIC DEVELOPMENT OF SHIPBUILDING CREDIT

There has always been a competition between shipyards to provide favorable credit. In the 19th century UK ship builders were offering to reliable and credit worthy clients covering 25 – 30% of the vessels contract value. This amount was amortized over 3 to 5 years. In the 20th century due to the fact that shipbuilding was seeing by many governments as a very important industry, they subsidized and gave every encouragement for such development. First of all, Germany and France trying to attract business from the British ship yards offered very favorable credit terms to ship owners. Denmark followed the same strategy in the 1930s (Stopford, 1997, 200). In the early 1960s the emergence of new major shipbuilding centers like Japan, later in the 1990s Korea and recently China shifted the industry towards the South East Asia.

Traditionally, shipbuilders in all the above mentioned countries systematically offered finance to their customers, with the support of their governments. Government-subsidized schemes enabled yards to offer to their customers fixed rate financing for their new buildings. Subsidized credit caused disequilibrium to the markets by undercutting fair competition. For instance, in 1962 the Japanese shipyards launched an export credit scheme under which they were offering credit to their customers up to 80% of the contract value of the vessel, amortizing over 8 years, bearing an interest rate of 5.5%. This policy was the trigger for a period of fierce competition between Japanese, Korean and European shipyards (Stopford, 1997, 216). The period 1979-1982

was the peak of this phenomenon. Additionally, as illustrated in the graph below, during the last years, Chinese shipyards have increased the competition even more by obtaining significant market share.

However, the increasing number of specialized banks eager to provide new building finance, greater flexibility provided by lending banks and last but not least, the gradual association of governments subsidizing such deals in the 1990's, not of course forgetting to mention low interest rates, have in unison combined to render shipyard financing less widely available today than in the past.

The regulation and gradual reduction of subsidies in shipbuilding was mainly facilitated by the intervention of the Organization for Economic Cooperation and Development (OECD), whose role will be further analyzed in this chapter. OECD through several agreements has formed the current framework of shipyard financing where the provision of credit is coordinated by export credit agencies under governmental control or state owned banks. Export Credit Guarantee Department in the UK, Hermes in Germany, COFACE in France and Finnvera in Finland are some of the most active export credit agencies which coordinate the credit on behalf of the respective governments, provide financial guarantees and offer interest rate support. KEXIM bank in Korea and EXIM bank in Japan are the most noteworthy banks providing shipbuilding credit services (Stopford, 1997, 200).

In addition, these institutions provide refund guarantees for example; in case the shipyard fails to perform the owner will get back all his until then paid in installments even if the yard goes bankrupted.

7.2. THE ROLE OF OECD

In order to understand the development of the shipyard credit scheme, it is essential to elaborate on the function of OECD as well as its effects on the industry.

OECD groups 30 countries including some of the most important shipbuilding nations like Korea, Japan and all the EU member states. The aim of the organization is to produce internationally agreed instruments, decisions and recommendations to promote

rules of the game in areas where multilateral agreement is necessary for individual countries to make progress in a globalised economy (OECD, 2005).

The maintenance of a level-playing field and progressive establishment of normal competitive conditions in the shipbuilding industry, by setting guidelines for shipbuilding credit provision, was the primary objective of OECD when implementing the Understanding on Export Credit in 1969. With the same scope a General Arrangement for the Progressive Removal of Obstacles to Normal Competitive Conditions in the Shipbuilding Industry (1972) and General Guidelines for Government Policies in the Shipbuilding Industry (1976) were concluded over the years. But their effectiveness was limited because of their non-binding nature. OECD Understanding on Export Credits for Ships sets guidelines for OECD members as to the amount and duration of credit which can be offered to finance new ships in member countries and also sets minimum interest rates for such loans. The Sector Understanding is a "Gentlemen's Agreement" among the Participants, therefore not legally binding upon them. The terms included in the Understanding have been periodically renegotiated. The most important changes are presented below.

In 1981 the OECD understanding (OECD, 2005) required that:

- The repayment period would not exceed 8.5 years from delivery;
- The repayments should be equal installments at regular intervals of normally 6 months and a maximum of 12 months;
- ✓ The buyer should contribute at least 20% of the contract price of the ship by delivery;
- ✓ The interest rate should not be less than 8%.

The most important turning point was in 1994 when, with respect to the GATT principles, it was proposed that the Understanding on Export Credits for Ships would become legally enforceable by being included in the Agreement Respecting Normal Competitive Conditions in the Commercial Shipbuilding and Repair Industry. This

Agreement provides a set of binding, legally enforceable disciplines addressing both subsidies and injurious pricing practices. The agreed terms have not been implemented yet, since the self interest of many shipbuilding nations, particularly the United States of America dictates the rejection of the legally binding OECD agreement. The new terms will not abolish state loans but eliminate subsidies and other soft credits.

The main provisions of the new OECD terms (OECD, 2005) are as follows:

- ✓ The repayment period must not exceed 12 years from delivery;
- ✓ The repayments should be equal installments at regular intervals of normally 6 months and a maximum of 12 months;
- ✓ The rate of interest must not be less than the Commercial Interest Reference Rates (CIRR) set by each country in relation to its own currency (i.e. basically the base rate for each currency), plus one per cent (to reflect the commercial cost of borrowing for a first class borrower).

The latest development related to the OECD understanding was the revision of the terms agreed on the 5th of July 2005. The new Understanding on Export Credit for Ships which is an annex in the Arrangement on Officially Supported Export Credits is again Gentlemen's Agreement among the participants; not an OECD Act. The credit terms upon which the participating countries - the United States of America is among them - agreed are listed below (OECD Trade Directorate, 2005):

- ✓ The maximum repayment term, irrespective of country classification, is 12 years after delivery;
- ✓ The participants shall require a minimum cash payment of 20% of the contract price by delivery;
- ✓ The principal sum of an export credit shall be repaid in equal installments at regular intervals of normally 6 months and a maximum of 12 months.

Under the current circumstances shipbuilding credit is offered with terms that vary from country to country. Negotiations among the involved in the industry states -especially South Korea and EU - have recently led, under the pressure of WTO to an agreement for reduction of subsidies. However a new Shipbuilding agreement with legal nature

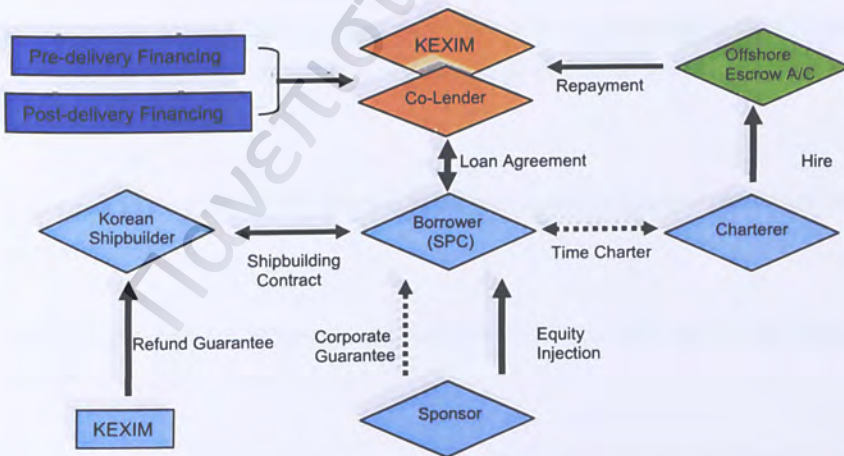
and widely accepted will be renegotiated by the end of 2005 with the involvement of both OECD and non-OECD members forming a Special Negotiation Group (SNG).

7.3 STATE LOANS

A significant source of finance of new ships have been loans from state credit agencies or stated on banks to finance the purchase of new ships by foreign or domestic buyers. The export /import bank of Japan was the first state on bank to do so in early 1950's and early 1960 's. currently state on banks like the export / import Bank of Korea offered structured finance for ships guaranteed by the government. The structure of such a loan agreement is presented below.

This state loan is offered to foreign shipping companies usually with the legal structure of a special purpose company (SPC) indenting to buy ships build in Korean ship yards. The repayment of this financing mostly depends on the cash flows generated by the ship through out of the long period offered with limited requires to the parent companies to the SPC's. The long structure is illustrated below:

Figure 7.1: KEXIM Structured Finance for Ships, Source, the Export – Import Bank of Korea



Kexim along with a co – lender arranges the loan agreement covering both pre and post delivery financing. The borrower SPC has to provide at least 20% of the vessel's contact value as equity, before the first drawdown (in accordance with the above mentioned rules). This equity is offered by the parent company. The amount drawn is bearing a fixed rate of CIRR on the date that KEXIM receives formal loan application from the SPC. There is also a commitment fee of 0.30% p.a. upon the undrawn amount. the repayment can be amortized up to 12 years from the vessel delivery with quarterly or semiannual equally installments something slightly different from the OCDE terms (six month intervals with the maximum of 12 months). The installments originate from the vessel time charter. The loan is secured with a first priority mortgage over the vessel, corporate Guarantee and first priority assignment of charter, earnings and insurance (KEXIM, 2005).

Kexim offers a refund guarantee to the borrower, occurring in the case of the shipyard going in default under the shipbuilding contract and repays, usually with a modest amount of interest the progress payments made by the ship owner.

8.4. SHIPYARDS CREDITS

In Japan and Korea, it is the ship yard itself which usually extend credit to the buyer rather than the state or Bank. At least part if not all of the yard credit however, may be subsidized in one way or another by a government agency such as the Export / Import Bank of Korea (KEXIM).

According to the 1994 OECD terms if implemented, such subsidies should not be available.

The basic principles of shipyard credits as examined here, using an example from South Korea.

In the case of South Korea, where a supply credit is offered the builder will usually have an agreement with KEXIM for the Bank to buy one of the two series of the provisory

notes, issued by the buyer, representing part of the bank credit. Kexim subsidizes in effect the ship owner's interest costs by assuming a responsibility indirectly for granting credit to the ship owner by the supplier. In case KEXIM does not buy all of the notes representing all of the shipyards credit, the remainder will normally still be offered at a fixed rate interest, but the builder will bare contract the cost making the fixed rate available either by raising loans himself at floating market rates of Interest or, more often than not by selling the notes to a commercial bank.

The buyer making a down payment of, let us say 20% plus the cost of any entrance ordered during construction which is paid in installments during the construction period of enters the contract while the remaining balance of the contract price (80%), is paid by installments plus the interest over a number of years. This 80% is the shipyard credit available to the ship owner and constitutes differed payment of the contract price charged with interest.

A shipyard credit is usually evidenced by one or more series of promissory notes with maturity amounts depended on the differed installments of the contract price and dates when these payments are due. The promissory notes normally bear interest at a level lower or at least equal to the market rates and interest at the time of the ship building contract and will normally comply with the OECD understanding.

Normally the builder expects the notes to be secured. For example, Korean and Japanese ship builders usually require that the notes will be guaranteed by a First Class international Bank. Less common way of securitization is a first mortgage over the vessel granted by the buyer upon delivery. The builder may also require that the Bank will issue a formal letter of commitment to the builder undertaking to extend guarantee upon the delivery of the ship and the issue of the promissory notes of the buyer.

The Bank Guarantor will enter into a guarantee facility agreement with the buyer in which the buyer will agree to indemnify the Bank Guarantor against any liabilities or losses under any letter of commitment and under the Guarantee itself. The guarantee facility will normally provide the security; if the bank Guarantor considers himself at

risk as from issue of the letter of commitment he may seek a pre – delivery assignment of the shipping contract and any refund guarantees from the buyer. The bank guarantor will take a mortgage of the vessel on delivery as well as assignments of the earnings generated by the vessel, insurances, and requisition compensation and possibly an assignment of any specific charter party. The guarantor may also require additional collateral security from the ship owners.

In the case of Korean shipbuilder, they usually ask for the promissory notes to be issued in two series (e.g. once series representing 24% of the contract value and the other representing the remaining 56%). this is due to the fact that KEXIM will be committed to the builder to purchase the larger series of notes from the builder on or shortly after delivery. The builder will then often seek to sell the remaining series of notes to a commercial Bank (Baker & Sofianopoulols 2001).

The government can also interim in shipping shipbuilding credit by offering guarantees or even interest rate subsidies. By obtaining Government guarantees, the ship owner is able to raise capital through a commercial Bank, which will use the Guarantee for securitization. From the shipyards point of view the provision of government guarantees on ship building credit agreements with particularly favorable terms compared to the market's standards, are generally accepted as a significant comparative advantage for the ship yards themselves, an attraction to a broader market segment. In addition to that the subsidization of interest rate has been used to compensate for the difference between the fixed agreed rate on the law and the current market trade. (Stopford 1997, 217). Lately, these schemes have also been under dispute and are due to be abandoned in case of agreement under the terms of OECD as presented above.

8. CONCLUSIONS

As we already mentioned from the very first chapter of this dissertation, most shipping transactions are still financed through traditional mortgage – based term loans either bilateral or syndicated through the Banks. This is obvious as long as Banks have the flexibility to satisfy the needs of the customers as well as – before the recession that we face the last 2 years – the large amounts of funds that only through syndications can be raised.

Up to this moment, the value of the asset – vessel is the most crucial factor determining the percentage of the loan. However, due to Basel II, which started on 2007, Banks are more reliable on numerical results of the financed companies than before. That drives the Banks to be more reluctant in their lending policies especially towards companies with high leverage and not strong balance sheets.

Due to the fact that Banks attract – and will always do - most of the shipping companies to be financed, new ways are not liable to be raised, but the alternative sources that already exist are more likely to be improved, especially during present times when liquidity is limited.

On the other hand, the most expensive method for a shipping company to be financed is bond and mezzanine financing, both of which are expensive options not only for the ship manager, but it is highly risky for the banks also.

Until 2008, the enough liquidity that the market had, financiers, could eager to invest in shipping without necessarily being able and willing to actually operate the vessels themselves. Nowadays, this is impossible because of the globally lack of liquidity.

In times of economical booming, the high yield and convertible bonds can apply to companies that can demonstrate strong growth strategy and sufficient returns on equity.

Whatever the financial situations however, equity, by IPOs and private placements are the most common alternative sources for ship managers when they wish to raise funds to cover their equity side. The IPOs can provide to the ship managers a rapidly expand of their company without collateralizing assets. But the main drawback of this method is the inflexibility in any terms of timing and market liquidity.

A few words in regard to the German KG and the Norwegian KS structures. It transpires that in case of a sharp market declination, like the one that has occurred during the last couple of years, they have proved to be unable to meet their promised yield.

Concluding, we can assume that the only real new method of shipping finance is the Sale and Leaseback financial method. It is the most suitable source of financing in order for the shipping companies to increase their profits. However, whatever the global economy stands, banks will remain the traditional source of financing the shipping companies.

Glossary

Accelerated depreciation

Any depreciation method that produces larger deductions for depreciation in the early years of an asset's life. Accelerated cost recovery system (ACRS), which is a depreciation schedule allowed for tax purposes, is one such example.

Agent

A party appointed to act on behalf of a principal entity or person. In context of project financing, refers to the bank in charge of administering the project financing.

Amortization

The repayment of a loan by installments. The redemption of bonds or loans by annual payment from a sinking fund. In the case of ship mortgage loans, the lender is looking to the contractual or anticipated operating cash flow of the mortgaged vessel to amortize the loan.

Arrangement fee

A fee usually charged by a bank over and above the interest payable on any loan advance.

Asset-based financing

Methods of financing in which lenders and equity investors look principally to the cash flow from a particular asset or set of assets for a return on, and the return of, their financing.

Asset value

The realizable value of the assets upon sale. **Asset play**

A company with assets that are not believed to be accurately reflected in its stock price, making it an attractive buy or play.

Audit

An examination of a company's accounting records and books conducted by an outside professional in order to determine whether the company is maintaining records according to generally accepted accounting principles.

Balloon

A contractual payment for a specific amount intended primarily to reduce the amount of periodic installments of principal on a loan. The balloon is added to the final installment at which time it is not infrequently refinanced.

Basis point

One-hundredth of a percentage point (0.01%). **Bear market**

Any market in which prices exhibit a declining trend. For a prolonged period, usually falling by 20% or more.

Book value

The value of a company's assets as stated in the balance sheet. Because of the market fluctuations which may occur in the second-hand prices of ships, estimates of shipping companies' net worth usually involve the adjustment of book value to take account of the market value of their vessels.

Bridging loan

A short-term advance pending the borrower's receipt of funds from another source. **Bull market**

Any market in which prices are in an upward trend. **Bullet loan**

A loan, the principal of which is repayable in each entirety upon maturity, with interest only being paid in the interim. It is analogous to a corporate debt issue without a sinking fund.

Cash flow

The pattern of the flow of cash within a business over a period of time. It is usually established by adjusting the net profit for all non cash items (principally depreciation) and profits/losses on capital transactions (e.g. ship sales), thereby arriving at operating

cash flow, and then adding and deducting items relating to the inflow of capital, the purchase of assets for cash and the repayment of debt.

Collateral

In UK parlance, additional security distinct from the primary security. In US parlance, a synonym for security.

Common stock

The US term for the equity of a business. The UK equivalent is ordinary share capital.

Covenant

In a loan agreement, a lender will typically see to impose certain conditions on the borrower, designed to prevent or give advance warning of a significant deterioration in the borrower's creditworthiness during the life of the loan.

Debenture

An acknowledgement of indebtedness, usually including a charge on the assets of the company.

Default

Failure to repay a loan or an overdraft as promised. In other words failure to make timely payment of interest or principal on a debt security or to otherwise comply with the provisions of a bond indenture. A breach of a covenant. In context of project financing, a technical default signals a project parameter is outside defined or agreed limits or a legal matter is not yet resolved.

First mortgage

A mortgage which is not subject to any prior mortgage. This is the primary form of security in shipping finance.

Guarantee

The assumption of responsibility for payment of a debt or performance of some obligation if the liable party fails to perform to expectations.

Hedging

The use of market mechanisms by the trader or operator of a business to obtain protection against losses through price fluctuations.

Issue price

The price at which stock or share are issued to the public. The may or may not be the same as nominal or par value of shares.

Joint venture

A temporary partnership established for a specific purpose or project. **LIBOR** London Inter Bank Offer Rate. LIBOR interest rate fixings for a variety of currencies are determined each day at around 11:00 hours London time. These rates are used to determine the floating rate payments on a wide variety of derivative instruments.

Liquidity

The ability to immediately meet ones financial commitments. In the case of shipping companies, this should entail the maintenance of substantial balances of cash and short term investments, since the relationship between current income and short term payables may quickly become adverse.

Maritime Lien

A right attaching to a ship and or its cargo relating to a liability connected with a voyage. Enforcement of a lien may lead to the arrest and sale of the vessel.

Moratorium

An agreement between creditors and an insolvent debtor that payment will not be enforced for a specific period.

Mortgage of ship

A legal, registered instrument of security giving the right of possession to the mortgagee. More than one mortgage may be registered against one ship, each mortgage being ranked according to priority by time of registration.

Off-balance sheet

Borrowing that does not appear on a company's balance sheet as a liability. **Plain vanilla**

Plain vanilla is a general term used to indicate simple, non-contentious finance, together with a mortgage and an assignment of earnings and assurances.

Project finance

Finance arranged to appraise, initiate and execute a major capital project. Usually provided by a syndicate of financing institutions, it will be based on repayment from contractually assured project cash flows without recourse to the project participants.

Residual value

The value of an asset at the end of its useful life. For a ship, it is scrap value.

Subordinated loan

A loan that, in the event of liquidation, ranks after the claims of ordinary creditors and prior only to the interests of the ordinary shareholders.

Syndicated loan

A larger loan for a major project or fixed asset acquisition, which is arranged by a consortium of banks under a lead manager.

Venture capital

Capital rose for the start-up of a new business venture. The high risks associated with such investments are reflected in the high rates of return which are targeted. It has been thought that shipping projects might attract venture capital, but the required rates of return are generally beyond those which shipping is capable of generating in the long run.

Working capital

In broad terms, working capital may be defined as a company's current assets less its current liabilities, i.e. the net liquid resources required to meet short terms trading

obligations. The amount of working capital required by shipping companies varies according to the type of business being conducted.

Yield Premium

Descriptive of the excess yield that one bond may carry in relation to another. This premium can be ascribed to the extra level of yield demanded by investors to compensate for a perceived higher level of risk.

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