

**KG FINANCING METHODOLOGY IN MARITIME INDUSTRY :
GERMAN EVIDENCE**

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Introduction

For decades, the investigation of the determinants of corporate capital structure has been one of the most active inquiries in finance. With respect to that, as the “Kommanditgesellschaft” (abbreviated to KG) is a limited liability partnership with a limited liability company (GmbH) as general partner and private investors as limited partners i.e., as we will be dealing with corporations, we should start by focusing on the corporate finance. For the corporations, the main concern is which financial strategy can be used to maximize the value of the company in a sustained manner in other words the objective of the firm is to maximize its value to its shareholder. Generally, maximization of profits is regarded as the proper objective of the firm, but it is not as inclusive a goal as that of maximizing shareholder wealth. For one thing, total profits are not as important as earnings per share. Managers, sometimes are said to be "satisfiers" rather than "maximizers"; they may be content to "play it safe" and seek an acceptable level of growth, being more concerned with perpetuating their own existence than with maximizing the value of the firm to its shareholders in order to survive over the long run, management may have to behave in a manner that is reasonably consistent with maximizing shareholder wealth.

Here the managers try to achieve the shareholder wealth maximization by means of the following issues,

- Reduction of the financing costs – minimization of cost of capital
- Optimization of the capital structure
- Improvement of the dividend
- Rating policy – credibility for taking the attraction of the investors.

Moreover, firms increase shareholder value when they invest in projects that provide positive net present values (NPV). However, companies not only need a framework that allows them to value new investments, but also a performance measurement system that aligns manager's and shareholder's interests. In addition to that, while capital markets value companies and investments on the basis of future expectations, performance measures and incentive compensation must be based on the past. Therefore, a valuable framework has to take both future expectations and past performance into account.

On the other hand, Stewart (1994)¹ proposes the concept of market value added (MVA) as the correct measure for shareholder wealth. He further articulates the mission of the company is not to maximize its market value but rather its market value added as being a useful market indication by representing the difference of invested capital and the present and future value of the cash flows expected from the capital. If MVA is positive, a firm is creating value, hence, it should be maximized.

As discussed above, for several decades academics have been looking for an efficient performance measure, which not only reflects the effectiveness and efficiency of the firm, but also aligns manager's and shareholder's interests i.e., for measuring and maximizing shareholder wealth Economic Profit (EP), Economic Value Added (EVA), Economic or Shareholder Value Increase (EVI or SVI), and other similar acronyms are becoming more and more popular.

Economic Profit is defined as “ the after tax operating profit less the cost of capital charge for the operating assets” or the return on invested capital (ROIC) over the weighted average cost of capital (WACC), multiplied by the invested capital. Indeed, it's an old method that Stewart Stern & Co reintroduced under the so called EVA[®]. This makes use of principles and measures of modern financial theory (such as the CAPM) in order to arrive at the weighted average cost of capital.

Its advantage is that it's the only performance measurement which links directly with the intrinsic value of the business.

Moreover, there are five ways to increase EVA;

- 1- EVA increases when return on existing capital increases.
- 2- Profitable growth generated when new investments return more than the WACC of the firm.

¹ Erdogan, Oral, Berk, Niyazi and Katircioglu, Erol, “ The economic profit approach in firm performance measurement, *Russian and East European Finance and Trade*; Sept/Oct 2000, 36, p.54-75

- 3- Divestments of activities, whose return is smaller than the WACC required.
- 4- The longer the period where RONA exceeds WACC the more value is created.
- 5- The lower the cost of capital, the higher EVA will be.

Economic profit leads us to the well-known models such as Modigliani- Miller Theorem (1958), Gordon's Model (1959), William Sharpe's CAPM (1964), 1980 DeAngelo-Masulis Theorem, Myers - Majluf Theorem (1984), etc.

In the 1950's, fundamental changes began to occur and alternative financial structures appeared. To choose among them, managers would want to know how choices affect expected net cash flows, their riskiness and therefore how they affect firm value.

In this regard, when we analyze the products of Ship Finance we notice the following ones,

● **Bank Debt:**

- Senior Debt (Corporate secured and unsecured loans)
- Hedging (Interest rates, Bunker Hedging, FFA)
- High yield bond
- Securitisation
- Mezzanine finance
- Project financing
- Leasing (Capital, leveraged and mezzanine lease, Tax based leasing)
- Shipyard subsidies and export credit (State inventions, OECD Agreement)
- Islamic Finance (Ijara model, Musharaka model)

● **Equity :**

- Capital markets (Stock exchange listings, primary and secondary markets.)
- Public and private companies
- Private equity (Private placements)
- Public equity (Governance, IPO, and Rights issue)
- **Limited partnerships (German KG / Norwegian KS funds and other similar funds.)**

- Table1- Sources of Raising Capital in Ship Finance – Source : Martin Stopford, 1997

The ratio by which equity and debt can be used in corporate finance in other words financial leverage or gearing is an important element of the capital structure of any company. In general, the higher the leverage in financing a project the higher the

internal rate of return (IRR) which leads us to the generated return on equity of a project.

Certainly, first step is deciding whether to seek equity capital or debt financing. The firm can issue either debt or equity to finance new investment. With respect to the pecking order theory, debt has the prior claim on assets and earnings; equity is the residual claim (Equity issues will occur only when debt is costly). Profitable firms borrow less because they have more internal financing available. Less profitable firms require external financing, and consequently accumulate debt. For instance, in a perfect market supermarket, the value of a pizza does not depend on how it is sliced but perhaps the value of the firm does depend on how its assets, cash flows and growth opportunities are sliced up and offered to investors as debt and equity claims. As Merton Miller noted “ showing what doesn’t matter can also show, by implication, what does.

Usually companies trying to get equity capital are at a very early stage with little or no real assets. While companies on their way to a steady growth curve use debt financing. The traditional view is that firms consider the costs and benefits of debt and equity then choose an optimal leverage ratio. The more recent view emphasizes costs associated with different providers of funds, rather than with the type of funds provided. However, the Modigliani- Miller Theorem (1958) of Franco Modigliani and Merton Miller showed under what conditions capital structure is irrelevant. In this theory, they state that² in the absence of taxes, bankruptcy costs, and asymmetric information, and in an efficient market, the value of a firm is unaffected by how that firm is financed- i.e., a company’s value is independent of its capital structure – no matter how you slice it. (The pizza example of Merton H. Miller) According to them, the company’s best capital structure is the one that supports the operations and investments of the business. The type of instrument used to finance an investment is irrelevant to the question of whether or not the investment is worthwhile. Having shown capital structure to be irrelevant for the company as a whole, M&M theory then extends irrelevance to the individual investment. In M&M frictionless world, issuing debt to finance a new plant won’t make it a more profitable investment than issuing equity.

² Modigliani, Franco and Miller Merton,” The Cost of Capital, Corporation Finance & The Theory of Investment, *American Economic Review*, 48, pp. 261-97

However, there were critics underestimating the tax benefits of debt i.e, tax deductibility of interest payments where using more debt means less taxes and hence increases the value of the company. Here the only imperfection is taxes.

On the other hand, according to Stewart C. Myers, while setting a standard it has to take into account that there's a capital market out there. Theories about corporate finance can't be spinned without making it consistent with what is going on capital markets. In addition to that internal funds and / or riskless debt involve no undervaluation and, therefore, will be preferred to equity by firms in this situation. Even not too risky debt will be preferred to equity. Myers and Majluf (1984)³ refers to this as “ a pecking order theory” of financing i.e., that capital structure will be driven by firms' desire to finance new investments, first internally, then with low risk debt and finally with equity as a last resort.

In this paper, before starting our examinations in respect of the companies in Germany framework, and its use in shipping industry, it would be better to get familiar with this industry itself.

As 70 % of the earth is covered with water and the world's surrounded by the oceans, this alone is a reason why ships are absolutely indispensable as a means of transport that over 90% of world trade is carried by the international shipping industry. Without shipping, the import/export of affordable food and goods would not be possible - half the world would starve and the other half would freeze. However, ships also offer advantages in an economical and ecological sense. Furthermore, the fleet age structure means that in the long-term, multiple purpose freight ships will offer good employment and profit perspectives.

This improving industry witnesses the increase in gross tonnage of the world fleet by millions of tonnage every year. It plays a vital role in world trade and is the backbone of the world economy that is to say without ships many countries would not be able to participate in world trade.

³ Shyam-Sunder, Lakshmi, and Myers, Stewart C., “ Testing Static Tradeoff Against Pecking Order Models of Capital Structure, *NBER, Working Paper*, No. 4722, April 1994, Cambridge

World Fleet Development						
Mill. dwt						
Start	Tankers	Chemical Tankers	Bulk Carriers	Combined Carriers	Others	Total
1998	268,5	11	260,7	16,9	155,3	712,4
1999	273,2	11,9	260,4	16,1	160,9	722,6
2000	276,0	13,5	264,8	15,2	166,7	736,2
2001	281,3	15,0	274,0	14,6	169,3	754,3
2002	274,9	15,0	287,4	13,8	174,7	765,9
2003	278,8	15,4	295,0	12,6	181,2	783,0
2004	287,9	17,3	303,3	12,2	189,6	810,3
2005	304,1	18,0	320,7	11,7	200,5	855,0
2006	326,9	19,2	341,9	11,7	213,3	913,0
2007	344,4	21,4	365,1	11,3	232,0	974,3
2008	362,1	24,4	392,9	11,3	251,9	1.042,5

The Platou Report, 2008

Moreover, shipping is a world-wide industry which is constantly changing and by nature complex and universal. The dynamics are driven by the growth rates of the trades, the ups and downs of business cycles, as well as a large number of external innovation triggers.

As it's a highly capital intensive industry, the ship finance becomes a very important issue even many governments apply incentive policies by thinking the contribution to the national economy. Historically, for as long as there have been vessels, there has always been the requirement to finance them. Throughout the ages, the funding was either the owners' money which means "equity" or borrowed money in other words "debt". Today these two main elements still exist but the sources of each have evolved in various forms over the last few decades leaving the current ship owner with a variety of financial packages to choose from. To this end, in this paper we will try to find out whether one of these packages called KG funds could meet the financial needs of the shipping companies.

Further, with increasing demand of global trade in the last few years this has made a considerable impact on finance for shipping with the increased demand for vessels. The price of them has steadily increased and financial packages have to be negotiated due to this increase and new regulations that have come into force in the financial markets i.e., KG funds will have to follow up with the new regulations in IFRS and Basel II.

When we try to answer the question of why KG system is so popular in Germany - as over the past 20 years in Germany, the funding of ships by private investors has been a

remarkable success story - we should go back and find out why different methods of finance emerge from the British and German industrial revolutions. Two modes of finance didn't converge more quickly over time. Today, separate so called German & Anglo Saxon Financial Systems persist. Banks (notably, but not only, the Grossbanken) played a more prominent role in funding late 19th century German Industrialization. (The power & importance of German banks)

An analysis of the German corporate governance model revealed many deficiencies, including lax legislation., it didn't have a federal regulatory agency for the securities market. Then 1994, 3 major principles were upheld in the securities market: investor protection, market transparency and market integrity. Market based mechanisms of monitoring and disciplining management serve to direct corporate strategy towards maximizing shareholder value. Reporting Rules in the Anglo-Saxon world are geared to the provision of information about the success of a business, its state of affairs and its future prospects, usually reflected in the "true and fair view principle".

As mentioned above, the loss of confidence in financial statements is an attack on one of the core element of investment decision making which is a good explanation for Johnny Cochran's following phrase " If the statements are not true, what will we do".⁴

Undoubtedly, with a full disclosure, better investments could be achieved. Besides, the management should make the right decisions about their financial strategies. For ship owners, financing newbuilding projects and operating the vessels become more complex due to the changes in the global markets. They have to decide whether to issue bonds, take bank loans or resale and leaseback their ships in order to raise capital especially by off-balance sheet financing. Here, a strong balance sheet is an important consideration for investing in a company's stock and as the studies have shown the strength of a company balance sheet can be evaluated by 3 broad categories of investment-quality measurements;

- Working capital adequacy
- Asset performance
- Capital Structure

As noted by Robert Taggart, Jr. (1985)⁵, "primary attention is devoted to corporations' relative use of debt and equity financing. This has been the focal point of most previous

⁴ Benito, Andrew and Young, Gray, " Financial Pressure and Balance Sheet Adjustment, *Banco de España, Documento de Trabajo*, no.0209

attempts to trace patterns in corporate financing and of capital structure theory as well.” A company’s capitalization describes the composition of a company’s permanent or long-term capital, which consists of a combination of debt & equity. Lower debt and higher equity levels are much more preferable rather than being highly leveraged.(too much debt versus equity)

On the other hand, all over the world banks are willing to finance large ocean going vessels. Therefore, the industry can easily get affected by the actual conjuncture that each country faces. In other words, there are many risks which determine both the preferences of the related parties such as ship owners, banks and investors in respect of financing the new building projects. Firms should have strong financial structures, their financial reports and cash flows have to be satisfactory for borrowing enough capital.

Today, many shipping companies still prefer traditional bank loans in order to finance their newbuilding projects which consist of 80% debt and 20% equity for prefinancing and for post financing, they pay it back in 10 years time or even more with a balloon payment at the end.

Indeed, there’s no well defined target debt-equity mix because there two kinds of equity, internal and external, one at the top of the pecking order and the other at the bottom and furthermore the asymmetric information problem gains importance as it effects both investors’ and firms’ financing choices due to the fact that each funds provider has different knowledge about the company and different ability to picture firm’s behaviour that is to say “The pecking order theory” does show how information differences can effect financing.

However, many early stage companies turn to private commercial financing which is better suited to deal with riskier issues. Equipment leasing companies will allow you to purchase new equipment and pay for it over time, usually three to five years.

There are two main points on which we should dwell; new buildings and the attitudes of the banks in respect of lending. Up to date, it can easily be seen that most of the banks which are the major players in the shipping industry have reduced their credit limits and credit / equity ratio in ship finance. On the other hand, we have to admit that it’s very difficult for owners to use all their retained earnings (equity) for new buildings and second hand vessels. For this reason, when the decreasing interests of the banks are

⁵ Mackie Mason, K. Jeffrey “ Do firms care who provides their financing ”, *NABER Working paper no. 3039*, Cambridge, 1989 pp.3

considered, the industry itself is trying to produce alternative sources. As a consequence, the blank is filled with private equity funds which is one of the most common ways of ship finance in many European countries. Needless to say that, alternative sources - here alternative denotes every other source but bank lending - are necessary because the owners especially in the bulk sector will be ordering more and more as long as they continue having their optimistic expectations.

KG Financing Methodology

In this section, we will try to understand what the main goal of KG Financing Methodology is but before doing that we prefer giving a brief information about the structure of this system first.

2.1 The structure of KG System :

Development of the Maritime Industry in Germany has generated interest in the use of KG Funds in the financing of shipping projects. Furthermore, with the help of the ability of the German owners to access funds available from individual private investors through the use of KG Finance, we managed to see the growth of the German Investment in the industry. The “Kommandit-gesellschaft” (abbreviated to KG) is a limited liability partnership with a limited liability company (GmbH) as general partner and private investors as limited partners. It’s been a financial tool for 30 years and it was originally designed to promote German Shipyards and German Shipping Industry.

This system is based on the creation of a limited liability fund, generally with the sole purpose of investing in a single ship. These funds are constructed in order to buy ships which are expensive assets, and are traditionally bought using a mixture of debt from the bank in the form of a mortgage, and the owner’s own money or equity. The purpose behind the formation of these funds is to bring in private investors to provide some of the equity portion of the deal i.e., to minimize the cost and raise capital sources.

Equity financing deals are seen instead of traditional shipping investment. Money is raised through a mixture of “private investment capital” (usually 35-50% of the total requirement) and bank debt (50-60%). The investment is backed by a charter either directly or indirectly to the “beneficial owner” while the loan is secured by a first ranking mortgage over the vessel. The KG fund will cease to exist when the ship is sold. In general as each fund is for a single vessel there is no standardization. Equity houses

with a high knowledge of the private equity markets act like a pivot while providing shipping funds.

Moreover, a KG fund goes through several distinct phases,

- Creation
- Appraisal
- Placement
- Management
- Closure

Studies have shown that with respect to the above mentioned phases that the funds been through, each equity house has its own standard pricing model where the followings are considered as inputs;

- Price of the target ship
- Its age
- Charter rate
- Residual value
- Required private investor return

In this regard, they could find answers for the level of funds to be raised, the minimum level of investment and the number of private investors required.

Equity houses usually deal with containerships which provide the majority of the KG financed fleet, but multi-purpose vessel & tankers are also well presented.

In general, it's been thought that as containers are one of the biggest transportation vehicles, participating in such a solid investment would be the right choice which then leads us to the KG finance. The real growth of the charter fleet started in 1994 and from then on its share has increased by 2-3% a year. Containerships will continue to offer attractive investment opportunities when linked to long-term charters. And of course, this is the consequence of the German KG system where container ships could be ordered, built, financed and chartered to order with the minimum of fuss (certainly compared with an IPO on Wall Street). A virtuous circle in which liner companies got ships and so far German investors got an attractive and secure return.

Moreover, the confidence of these investors in shipping will continue because so far none of the KG funds have defaulted and the demand coming from China, one of the biggest importer/exporter countries of the world, will keep the rates higher.

In 2004, shipping KGs were the most popular investment for German private funds-22% of the total- which showed that Greece and Norway were not the biggest shipping

investors. In fact, it was Germany. On the first of April they had \$16.7 billion of ships on order.⁶ Containerships will continue to offer attractive investment opportunities when linked to long-term charters.

At the end of 2006, it was noticed that the runaway success of the KG (limited partnership) system had not fully won over Germany's institutional investors to shipping, as the launch of the country's first-ever publicly listed fund demonstrated.

Marenave Schiffahrts AG⁷, the new Hamburg-listed investment vehicle established by Konig & Cie, successfully raised EUR 150m to pump into vessel purchases and other shipping investments. It has emerged that the fund originally sought to raise as much as EUR 250 but instead had to settle for nearer 60% of the target amount.

At the end of 2007, the world container trade increased by 2.3 times the world economic growth with a 12% jump. (Based on world GDP of 5,2 % increase) But for 2008, the container fleet productivity is expected to decrease due to the portcongestion in many European ports, high bunker costs and environmental issues. Without a doubt, the most important factors for the container ship demand will be the performance of the world economy and the exchange rates as Europe will be able to have strong purchasing power of Asian goods by means of a strong Euro.

2.2 Objectives of KG Financing Methodology:

Understanding whether or not the shipping markets are in a period of sustained strength or emerging weakness is essential in order to develop the right lending strategy.

In a traditional ship finance deal, the ship owner and the beneficial user are one and the same. Here, the owner approaches a bank for a mortgage. The bank provides a loan but not for the full purchase price. Generally the loan amount equals to 80% of the contract price. In addition to that, with the time charter at least for 3 years will ease getting a top up loan as well e.g., if a company borrows USD 30mio from a bank for predelivery finance and at the same time charters the vessel for 3 or 5 years it can receive USD 3mio (10% of the loan amount) more as a top up loan.

Sometimes, the owners could not meet their commitments and then they would need to take another loan in order to do so. As a result they may have to handle with the results of the high interest burden of mezzanine finance.

The difference between the loan the bank is willing to provide and the purchase price has to be found by the buyer from their own funds is the "equity portion", the higher the

⁶ Clarkson Research Studies, 2005, 10.02.2008, <http://www.crsl.com>

⁷ Tradewinds, 2006

level of equity the smaller the loan. Although the shipping funds are not alike, they have some common characteristics, for ex. they all provide finance for the equity portion of the deal therefore in a KG fund deal the bulk of the equity the end user has to put in is much smaller (or even zero) The beneficial user charters the ship from the fund or via an intermediate ship owner or manager. The private investors as limited partners are liable only for the amount they've invested.

This approach is closely related to the "pecking order theory" of Myers where firms prefer internal to external funds, and debt to equity if external funds are needed. Debt finance is cheaper than equity finance because equity is more risky than debt. This theory recognizes that the internal sources and external ones are not perfect substitutes in a world of asymmetric information between investors and managers. The former ask for a premium in order to be compensated for the risk that the information given them by managers is not quite candid. The required premium is higher for the equity investors and lower for the debt investors. This has a relevant impact on the firm's investment decisions that insufficient internal sources and difficulties in obtaining bank loans may result in curtailment of investments.

Moreover as he asks in one of his papers "How do firms choose their capital structures?" his answer will be "We don't know" so we have little information about how firms choose debt, equity or hybrid securities they issue".⁸ As a matter of fact, in Myers's (1984) and Myers & Majluf's (1984) pecking order theory, there's no well defined optimal capital structure and therefore no optimal debt ratio exists. They also do not agree with the capital irrelevance of Modigliani and Miller (1958)⁹ where they proved that the choice between debt and equity financing has no material effects on the value of the firm or on the cost or availability of capital and they assumed perfect and efficient capital markets-no taxes, no bankruptcy cost and perfect contracting therefore total cash flows to a firm's financial claimants are unaffected.

Furthermore, we know that the debt ratio reflects the cumulative requirement for external financing and these ratios change when there's an imbalance of internal cash flow, net of dividends and real investment opportunities, e.g., highly profitable companies with limited investment opportunities work down to low debt ratios. If the Total Debt / Equity ratio is above 1 in other words, if borrowing is not useful, the firm will prefer financing with equity. Besides, with external financing this ratio increases

⁸ Myers, Stewart C. (July 1984), "Capital Structure Puzzle", *NABER Working Paper No. 1393*, Cambridge

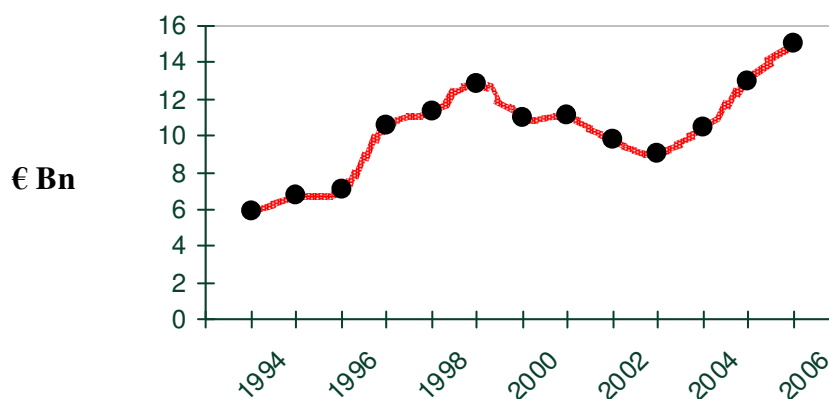
⁹ Myers, Stewart C., "Capital Structure", *JSTOR Vol. 15 No. 2, Spring 2001*, pp.81-102

which causes the risk of company raise and due to that the value of the stocks decreases.

However, in KG System, by being attractive to the private investors with the help of the advantageous taxation system, mostly equity deals are seen. Potential equity investors can continuously monitor managerial actions. Thus, equity financing is preferred for related diversification, and debt financing for unrelated diversification. As a result, the capital structure of a firm is dependent, in part, on the firm's resource characteristics, via its diversification strategy i.e., there's a reciprocal relationship between a firm's financial strategy and its corporate diversification strategy.

Furthermore, in a defence of the German private-investor system against claims that it's becoming uncompetitive, despite criticism from the IPO sector, many of the investments have been calculated using the closed-end funds - where there's a limit on the number of investors that take part. Once all the shares in the limited liability partnership have been taken up the fund is closed and no more trustee / investors take part. They begin by soliciting money from investors in an initial offering, which may be public or limited. The investors are given shares corresponding to their initial investment. The fund managers pool the money and purchase securities. The shares trade on stock exchanges rather than being redeemed directly by the fund. As a consequence, contrarily to open end funds, they can be traded during the market day at any time. In addition to that, although open end funds sell at its Net Asset Value (NAV), buying a closed end fund trading at a premium might mean buying \$ 900 worth of assets for \$ 1000.

The German Closed End Fund Market*

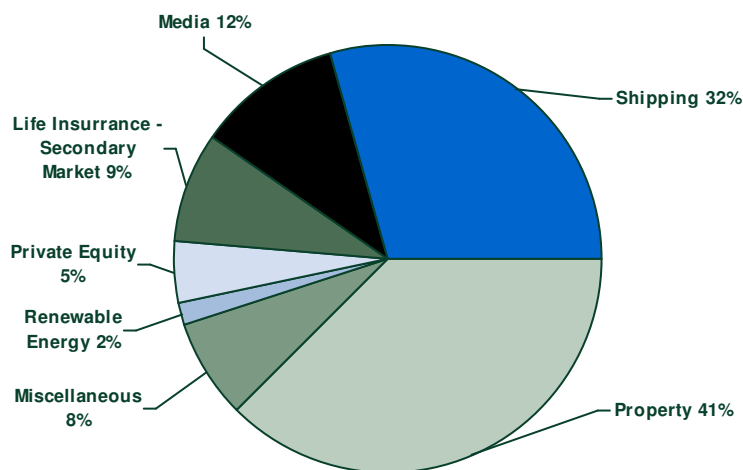


*Source : Loipfinger

On the other hand, CEFs have more financial advantages compared to the OEFs as their fees are usually much lower since they don't have to deal with the expense of creating and redeeming shares, also they tend to keep less cash in their portfolio and they do not worry about market fluctuations to maintain their performance record.

Since 2002, the market for investments in closed – end funds in Germany has benefited from a steady rise in demand. In 2004, in the area of these funds, there was a positive effect from the rise in demand of international logistics markets for shipping tonnage for the growing markets in the Far East, especially China.

Investments of Closed End Funds in Germany – 2004



*Source: Dobert

Furthermore, we should also analyze the role of limited partnerships and why they are particularly effective forms of intermediary in the private equity market.

A private equity security is exempt from registration with the Securities and Exchange Commission by virtue of its being issued in transactions not involving any public offering.

Moreover, the private equity market consists of professionally managed equity investments in the unregistered securities of private and public companies. Professional management is provided by specialized intermediaries called limited partnerships, which raise money from institutional investors and invest it in both publicly and privately held corporations. Until the late 1970s, private equity investments were undertaken only by wealthy families, industrial corporations, and financial institutions investing directly in issuing firms. By contrast, most investment since 1980 has been undertaken by

intermediaries on behalf of institutional investors. The major intermediary is the limited partnership where institutional investors are the limited partners, and professional investment managers are the general managers. The emergence of the limited partnership as the dominant form of intermediary is a result of the extreme information asymmetries and incentive problems that arise in the private equity market. The specific advantages of limited partnerships are rooted in the way in which they address these problems.

Issuers in the private equity market vary widely in size, however, because private equity is one of the most expensive forms of finance, issuers generally are firms that can not raise financing from debt or public equity market. Here, again we see that the assumptions of pecking order theory count.

Agents and advisors are also very important in private equity market who provide information, place private equity, raise funds for private equity partnerships, and evaluate partnerships for potential investors. They exist because they reduce the costs associated with the information problems that arise in private equity investing which again leads us to the asymmetric information.

Although private equity investments are regarded as considerably more risky and more illiquid than other assets, for the institutional investors who can bear such risk and illiquidity, however, the high expected returns are a major attraction.

Funds invested in limited partnerships are illiquid over the partnership's life, which in some cases runs more than ten years. During this period, investors have little control over the way their funds are managed. Nevertheless, the increasing dominance of limited partnerships suggests that they benefit both investors and issuers.

Frequently two types of problems occur when outsiders finance a firm's investment activity; sorting problems and incentive problems. Sorting problems or in other words adverse selection problems arise in the course of selecting investments. Firm owners and managers typically know much more about the condition of their business than do outsiders, and it's in their interest to accent the positive while downplaying potential difficulties (Leland and Pyle 1977, Ross 1977).¹⁰ Incentive or moral hazard problems arise in the course of the firm's operations. Managers have many opportunities to take actions that benefit themselves at the expense of outside investors.

¹⁰ Narayanan, M.P, "Debt versus Equity under Asymmetric Information ", *The Journal of Financial & Quantitative Analysis* Vol. 23 No. 1, Mar 1988, pp. 39-51

Private equity is used in financing situations in which the sorting and incentive problems are especially severe. Resolving these problems requires that investors engage in intensive preinvestment due diligence and postinvestment monitoring.

The efficiency of intermediation depends on how effectively the sorting and incentive problems between the ultimate investors and intermediaries can be resolved. In the private equity market what does matter in addressing these problems is reputation as the market consists of a few actors that repeatedly interact with each other. And for the worst scenario, if they fail to establish a favourable track record, they may subsequently be unable to raise funds or participate in investment syndicates with other partnerships.

In limited partnerships, general partners (in other words senior managers of the partnership management firm) are responsible for managing the partnership investments and contributing a very small proportion of the partnership's capital (most often 1 percent), the limited partners provide the balance and bulk of the investment funds.

Specialization reduces the number of investment opportunities considered and reflects the degree of specialized knowledge required to make successful investment decisions.

The partnership must rely heavily on information that it can produce *de novo*.

Likewise, Myers & Majluf assumed perfect financial markets except that investors do not know the true value of the firm and as a result of this asymmetric information and signalling problems associated with external funding, firms' policies follow a hierarchy, with a preference for internal over external finance and for debt over equity as mentioned above. Here asymmetric information becomes important as we know that investors are interested in the firm's financing choices, because stock prices change when the choices are announced. So we assume that managers have special information and that this information changes financing choices which will be interpreted by investors as good or bad news in other words we face with "lemon problem" as well.

Moreover, the management of the issuing firm typically knows more than outsiders do about many aspects of its business. This information asymmetry, combined with the fact that issuing private equity is very expensive, has the potential to create severe adverse selection problems for investors. In the private equity market, this problem is mitigated by the extensive amount of due diligence and by the fact that alternative sources of financing for private equity issuers are limited. Research indicates that resolution of information asymmetries is the most critical determinant of the choice between private

& public financing. A firm can reduce asymmetry by using private financing sources. It reveals more extensive & proprietary information to sophisticated private investors without fear of competitors gaining access to it, thus resolving the underinvestment problem. The costs of private financing are lower than the excess interest rates the firm would have to pay for public resources.

Convertible preferred stock is the private equity security most frequently issued to investors. Subordinated debt with conversion privileges or warrants is sometimes used as an alternative way of financing the firm: it confers the same liquidation preference to investors as convertible preferred equity and thus, the same performance incentives to management.

Although managerial incentives are a very important means of aligning the interests of management and investors, a private equity partnership relies primarily on its ability to control over the firm to protect its interests.

By investing through a partnership rather than directly in issuing firms, investors delegate to the general partners the labor-intensive responsibilities of selecting, structuring, managing and eventually liquidating private equity investments. However, limited partners must be concerned with how effectively the general partners safeguard their interest.

To sum up, KG Financing Ssystem offers many advantages as follows,

- Issuing houses initiated closed investment funds and sell shares to investors which typically contribute about a third of the capital required for ship financing, i.e. the equity portion. Banks provide the remaining two thirds secured by ship mortgages. (Debt financing at reasonable cost). Here we have to take a look at the most common structure which describes the private equity deals. A 3 layer cake structure consists of the following layers where each layer is different due to their own unique characteristics and has its own risk / reward profile.
 - Layer 1 > Senior debt : Low risk, low cost, short term, least flexible provided by banks usually on an asset basis. For the shipowners and bankers in Turkey, senior debt is the most preferred one due to the lack of high degree of specialised expertise and lack of confidence to the economy and fragile structure of the capital markets which are very indifferent to maritime industry.
 - Layer 2 > Mezzanine debt : Moderate risk, moderate cost, long term, flexible provided by independent funds and on EBITDA multiple basis.

- Layer 3 > Equity : High risk, high cost, long term, most flexible, most expensive layer of capital provided by independent funds and on a multiple of EBITDA valuation basis.

Each layer of capital can be used on its own or in conjunction with other layers.

- Another key reason for the use of the KG funds in shipping is that by financing the ship through a KG fund, the ship remains off the end user's balance sheet. In other words for shipowners and charterers it provides secure off-balance sheet assets, often at a lower cost than other means of financing because of the high proportion of equity involved. That is to say, by selling the vessel -which is already in the fleet- to the KG Fund, the owner writes it off the balance sheet and with this realised equity he can purchase other vessels or on the contrary he may sell the vessel to the KG Fund and charter it back at a lower rate than bareboat. (re-purchase option, long term time charter periods are seen instead of short term time charter as a guarantee.) In conclusion, taking the ships off the B/S reduces gearing of the company allowing it to borrow more.
 - As this system provides up to 100% financing, the owners can grow their business without any balance sheet burden.
 - Most of the financial risks of operating the ship – opex, exchange rate, interest rates, loan performance, etc.- are born by the fund, i.e. the private investors. In addition to that, residual value risk lies exclusively with the KG-owning company. Bundling vessels together cuts administration costs for the the KG house and is a way of attracting major banks, which have the networks to be able to place the funds extremely quickly.
 - For the private investors the fund provides a long term investment with returns on a nearly tax free basis on the basis of the German “tonnage tax” regime.
- and indeed in 2007 KG shipping funds hit a new all time high as well so by taking attraction of the investors and achieving to make them cover some part of the required equity with the help of the tax advantages, managers can minimize their costs and maximize their economic profit at the same time but we have to admit that after five years with persistent high economic growth it seems like 2008 is bringing a slow-down, initiated by the US subprime crisis and its effects on the rest of the world resulting global market turmoil. As the economy is projected to slow down, this should result in continued high building prices. However, should the current turmoil in

financial markets seriously affect the real economy the demand for newbuildings will suffer and most probably there will be delays while delivering them.

Indeed, purchasing a vessel or starting a newbuilding project is very costly, therefore KG Funds try to drive the attraction of the private investors then they could find the required equity portion. In addition to that, with the aid of this system, ship owners can meet their other liabilities such as having contracted other projects, operating / running costs. But in contrast to previous years, banks now often demand a contribution from owners for pre-financing during the construction period. For instance, as Mr. Werner Grossekamper¹¹, the director of Maritim Equity which was launched by financing group Salomon & Partners says “ Shipping banks’ efforts to see more equity capital from owners in new projects is playing into the hands of a new form of KG Financing. The latter wants to provide mezzanine capital for owners where they would attract EURO 100m (\$ 156m) from private investors into a KG fund, which in return provides the mezzanine capital and there’s a strong demand for this way of financing. But to date, only about 20% of the target volume has been committed which is attributed to the “blind pool”¹² concept which is unfamiliar to most traditional KG investors. Werner also adds that owners tell them they could negotiate better margins with banks if they have more equity available.

2.3 Main risks which threaten the success of KG Financing System:

If we summarize the current challenges for this system, we face with the following issues,

- *High newbuilding and second hand prices* : Every day the orderbook gets bigger, the steel prices increase due to fact that newbuilding prices increase proportionally but the demand is still vigorous which pushes the prices to the higher levels.
- *Scarcity of long term charter* : KG structures give shipowners the opportunity to enter into medium to long-term charters at a lower rate than the current high spot market rates. Most KG investors look to a secure long-term return rather than short-term profits. They are, therefore, willing to accept lower charter rates, provided these are fixed for a number of years (usually four to six years for commoditised vessels, but longer for bigger/more specialised vessels) But sometimes it is not easy to arrange a time charter party which lasts for long periods.

¹¹ writes Katrin Berkenkopf in Cologne

¹² Blind pools are arrangements by which companies sell securities – typically through an IPO – without stating specifically how the proceeds will be used. It’s only the investor who is truly blind to the use of his or her money.

- *Uncertain shipping markets outlook* : Although 2007 was a great year for the shipping industry especially for the bulk carriers, we could not guarantee the continuity of this performance.
- *Exposure to political changes (“tonnage tax”)* : On 1st of January 2006, the so called ‘combi model’ where KG structures combine tax benefits from losses with the application of tonnage tax was completely disappeared. This will be examined in a detailed way in the 3rd part of this paper.
- *Rise of interest rates* : Rising interest rates and the weaker dollar are also hurting the KG Groups. If we want to reduce costs and make the investment more profitable, we will have to reduce the cost of the debt e.g., the loan agreements with the banks can be done in low interest rate denominations such as interest rates for Yen denominated loans and increase the expected return but in case that the exchange rate moves out of favor, the dividends that the private investors receive will be reduced.
- *Operational and employment risks* : German owners and managers warn that crew shortages mean wages are likely to rise further and they see little likelihood of a drop in the price of oil.
- *Residual value risk* : Buying an asset will make you become exposed to a bundle of different risks and many of these are not unique to the asset you own but reflect broader possibilities, such as that the stock market average will rise or fall, that interest rates will be cut or increased, or that the growth rate will change in an entire economy or industry. Residual risk also known as alpha, which is determined by the market conditions, is what is left after you take out all the other shared risk exposures. Exposure to this risk can be reduced by diversification. (Contrast with systematic risk)
- *Portfolio diversification* : As each KG fund is for a single vessel, we could not mention a portfolio diversification. For instance, HCI- one of the biggest KG players in Germany and which is believed to be the financier behind most of the ships -does not invest directly in companies, but instead invests in venture capital and private equity target funds. In this fund, HCI puts more than 60% of its investments in private equity sector, while a max of 40% is invested in the venture capital segment. The fund of funds concept offers investors a broad distribution of risk. In comparison with the single ship funds, fund of funds are a larger volume & a spreading of risk with different types and sizes of ships with different shipping lines & charterers.

- *Alternative investment opportunities for private investors* : As equity shares can not be traded easily when compared to the other methods, private investors incline towards alternative investment opportunities.
- *Full placement guarantee by the equity houses* : It's another cost which is added to the expenses of the fund, which are then borne by the investors.
- *Ship Finance alternatives such as IPO or Islamic banking* : When we look at the alternatives for debt financing, we come across with the followings,
 - Leasing
 - Mezzanine
 - Private equity funds : Strong shipping markets, combined with the success of some public shipping companies in the Wall Street, have been a luring factor for private equity investors to probe into the shipping world.
 - Capital markets
 - IPOs
- *Full placement guarantee by the equity houses* : It's another cost which is added to the expenses of the fund, which are then borne by the investors.
- *Product diversification of KG houses - KG houses becoming international*
- *Fees & Transfer of Risks* : In traditional shipping finance transactions we can deal with some of the fees such as agency fees, commitment fees, arrangement fees, up front fees etc. When we look at the KG schemes we also notice certain fees in the form of agio, which is usually 5% of the investment. Also all the costs that the ship operator has to pay for can be transferred to the private investors. As a result, the KG funds should raise more than the purchase price of the vessel. Thus, the investors will be willing to participate in these structures.

Here, we come across with a serious problem especially when we consider the credit crunch we've been through which means what used to be taken for granted is no longer the case. The global credit crunch also left a mark on most of the finance houses' results as the contribution from private equity, which was heavily influenced by fluctuation in the capital markets. Therefore, KG (limited partnership) financiers admit, they're finding it impossible to access new loans and are scrabbling around to find any bankers who will give them credit. minimum because due to lack of confidence banks quitted working together on syndication and in addition to that, as a result of the rising vessel prices they started to follow a very conservative view of shipping investment projects. As prices rise, bankers have increased leverage and cut margins. Alike KG houses,

owners and managers are also said to have faced financing problems for larger orders but it is unclear to what extent. According to optimists the credit ripple may not reach many KG houses for some time because they are locked into deals with finance in place. Many vessels on their books will not be rolled out before 2008 & 2009.

There are banks willing to lend relatively small amounts, which they do not need to syndicate with other lenders, so for the owners of small projects it's easier to get a go ahead but for the remainder as the crisis has driven up the refinancing costs, it will be hard to do so and as a result many deals may fail. But this situation appears to be forcing some players to price risks on a more realistic basis.

Reading between lines, what at least some of the bankers seemed to suggest was that money is available, just not on terms most ship owners will be able, or willing, to meet. And further, with a huge amount of demand and as a consequence, an orderbook looming across the industry, there seems to be no way the usual shipping lenders will be able to provide sufficient liquidity to get all ships built. Some banks are said to be stuck with loans because they were priced during the summer and can not resell them. The issue has been aggravated by the subprime-mortgage crisis dislocating the interbank market. The main question is where the money might come from, if not from the familiar shipping lenders who had been only too willing just nine months earlier, before the US sub-prime mortgage crisis shook the market. The cost of borrowing has gone up and fees have increased more than the margins.

On the other hand, as banks are passing along their own cost of capital, terms have tightened otherwise. and many of them are back to old-style financings where they're more picky and speculative deals won't happen. Some of the German KG's took the banks to task for suddenly stressing quality and equity claiming that the deals for KG houses were not always top quality but banks did them somehow and in fact they've been doing quite well. The bankers main retort to the above mentioned claim is that although they've been doing the business with the KGs, we should take a look at the margins in the past and the fees the banks got from them., implying they were slim at best in the days when owners had the upper hand. There are several examples which demonstrate that rising costs put pressure on KG ships. For instance, German chemical tanker operator (CST) and manager is buying back four chemical tankers from KG finance group Lloyd Fonds after rapidly rising vessel operating costs threatened the performance of the ships's funds. How? They originally purchased the tankers in 2003 with five-year charters back to Maersk at a going rate of around \$ 13.500 per day and

refinanced them with Lloyd Fonds. But crew costs have risen by 40% to 50% and lube-oil prices have gone up between 100% and 130% in the past two years and so.

In this case, the buy back is due over escalating costs, particularly for crewing, which meant dividends from the vessels' KG funds were set to be squeezed.

Time-chartered tankers have been worst by the cost crisis but the issue will become a major test for KG companies' relations with shipmanagers in other sectors, including containerships, over the next few years.

At the moment, the most common view is that a temporary lull in lending for newbuilding contracts and s&p deals will bring prices down to more realistic levels, and markets will be better off for cooling down¹³ as the market for large loans is closed but some of the banks are trying to get advantage of the situation. For instance, HSH Nordbank, one of the biggest banks in Germany was the first bank to state publicly it was cutting off its new lending as it was caught out by the credit crunch and suddenly found out it could not syndicate big loans with other banks and finance houses. They had underwritten \$20bn and wanted to sell part of it into the market but there was no way to securitise so they stopped taking new business to avoid problems with equity ratios under Basel I. Other bankers in Germany say that, if you're in the open market to pick up Money, it would be between 10 and 20 basis points average higher and it seems with the player going out of the market at the moment – HSH Nordbank – people are willing to pay that extra for new loans which implies that with HSH Nordbank temporarily out of the picture, the remainders are taking more loans and before the end of the year they will have a lack of time or capacity to take much more.

Here what gains importance is the banks' capital ratios and the new Basel II equity-ratio rules which will allow shipping banks to release more funds but there will still be a lack of liquidity until confidence returns implying refinancing and mezzanine capital are not available due to a lack of investment confidence. The main object of these two accords is to harmonize the bank credit system, by establishing a common method for calculating the capital requirements or capital adequacy of banks. According to the capital requirements, on the lender's side, capital adequacy is fundamental to solvency of the banks as the banks need capital to protect against the risks taken through lending exposures, in case of a default. For the borrowers, capital adequacy is important in bank

¹³ Tradewinds Magazine; Article "Cooling down in financing not all bad", 2008, <http://www.tradewinds.no>

lending as well, due to the fact that it has a direct affect on the margin that the banks charge, which is the main determinant of the borrowing cost for the client. As a general rule, the higher the risk a credit exposure bears, the higher the risk-weighting from the bank, therefore the more expensive the loan will be always in terms of margin charged by the bank.

The implementation of the **Basel II Accord** (1st of January 2008) will result in a noticeable diversity in credit terms and conditions. Undoubtedly, this will lead to higher bank loan margings for most shipping credits. The reason is that the banks have to tie up a lot more precious equity for the loans to customers who are less credit-worthy in other words who have poorer rating. So the rating is becoming more and more important for bank customers and will be essential for access to the capital market. Basel II permits the banks to rely upon their internal credit and risk assessment systems to estimate their own capital adequacy according to their own credit exposure.¹⁴

In addition to the following risks mentioned in Basel I, the operational risk will be one of the most important part of Basel II.

- Credit Risk
- Market Risk
 - o Interest rate risk
 - o Liquidity risk
 - o Exchange rate (currency) risk.

On the other hand, we know that the KG structure is more like a lease with the final user of the vessel separate from the ownership, but with the user getting the full benefit of the vessel as if it was the owner through contractual means. In the case of the lease versus debt alternative finance of equipment acquisitions, the sell-side perspective reduces to a comparison of tax accounting and financial accounting treatments of the alternatives. The buy-side perspective reduces to an examination of expected buy-side perceptions of financier investment risk. This leads inevitably to familiar conundrum; lease finance is generally more favourable from the seller-side perspective in its tax, income statement and balance sheet implications, but senior debt is perceived by the buy-side to be less risky for financiers and is priced at a lower cost of capital. That's the reason why IFRS also threatens one of the attractions of KG Ship Finance, requiring the inclusion of

¹⁴ 22.01.2008, <http://www.bis.org>

“Financial Leases” on the balance sheet as a liability i.e, the owners could not benefit from off balance sheet financing.

In conclusion, although the KG schemes- in the form limited liability partnerships which are discussed in a detailed as above- have many pros, we should admit that there are also some issues like the new tax and bank regulations, the fluctuations in the capital markets to the global turmoil (credit crunch) which threatens their performance in other words the continuity of their success.

Although once invested, the equity capitalist will be having an active role in the decision making of the company as your partners., when you borrow against your equity - that is to say you have something of value that the lender can instantly liquidate- lenders would not be interested in becoming a partner instead they are in business to make money from their money, letting you use it for periods of time. Alike equity financing, there are various methods of debt financing. For instance, borrowing from banks which will always be the least costly source for your financing, relies on two variables, the collateral that secures the loan, and your ability to repay the loan. You might have enough collateral, but if your business is losing money, the bank can't expect you to handle the added expense of loan payments.

2.4 Ship finance in other countries:

As we mentioned in the previous section, structuring models in respect of the shipping finance become variable by means of commercial banks, ship mortgage banks, investment and merchant banks, finance houses, brokers, leasing companies and shipbuilding credit schemes. Therefore, we will focus on alternative financing sources in ship finance rather than KG in different countries and try to answer why these countries do not prefer using this tax- based partnership.

When we glance at the current situation, we can easily say that finance is becoming an increasingly globalized business and financing structures are also more and more based on future cash flow of special projects. Frankfurt, Singapore, Hong Kong and possibly Sidney are leading financial centres as well as New York, London and Tokyo. But as we are analyzing the maritime industry, it is more and more Hamburg that leads the field because German Banks (they account for 60% of global ship finance.) have a specialised expertise in shipping finance although some of them have been hit by the global credit crunch due to the rising costs and the margin squeeze with which they work started alarming.

Now let's look at some of the countries which are the major players in the maritime industry,

Norway:

In Norway, the Norwegian ship finance model called KS financing structured as limited partnerships-which resembles to German KG structure in many ways- keeps on growing strongly as it has become very popular alternative used by shipowners worldwide. The majority of the purchased vessels by Norwegian limited partnerships have been fixed on long term bareboat charter where depending on the creditworthiness of the charterer, the arranging or underwriting company of the deal will achieve high gearing in case of a loan to finance the project, thereby reducing the need for equity and increasing the return on committed capital, however, the flexibility of the finance structure also includes asset play projects and vessels on time charter. Here the risk assessment is achieved due to the existence of the credit rated charterer who secures generating a fixed capital inflow during the charter period.

The market experience shows that it is mostly used for financing of second hand vessels aging 15 years.

Furthermore, more than 70% of the required amount for the acquisition of the vessel is raised by senior bank debt - the KS deal can achieve higher bank financial leverage. Higher leverage implies a trade-off between generation of higher internal rate of return and higher default risk.

Future trends for KS partnership will be related to the tax legislation of Norway as the convergence tonnage tax towards EU average, will positively affect the demand for KS Financing which is competing with KGs. So with the significant support of the Norwegian government in form of lucrative tax allowances, the KS market will expand and be competitive in the international shipping market.

Islamic Finance:

As searching for alternative sources in shipping finance, we should also mention Islamic Finance which has become very popular in the recent years. Islamic banking has the same purpose as conventional banking except it operates with the rules of Shariah (Islamic rules on transactions) and the basic principle is sharing profit and loss and the prohibition of usury.

In an Islamic mortgage transaction, instead of loaning the buyer money to purchase the item, a bank might buy the item itself from the seller, and re-sell it to the buyer at a profit, while allowing the buyer to pay the bank in installments. Moreover there are no

penalties for late payment. Therefore, the bank asks for strict collateral in order to protect itself against default. There are several approaches used in business deals e.g., Islamic banks can lend their money to companies by issuing floating interest rate loans. The floating rate of interest is pegged to the company's individual rate of return. Thus the bank's profit on the loan is equal to a certain percentage of the company's profit. As a result, the Islamic finance industry continues to grow exponentially worldwide and latest estimates show that global Shariah-compliant assets have crossed \$ 500 billion mark. Since its modern day re-emergence nearly 35 years ago, this religion based financial system has positioned itself as a growing force to be reckoned with in the global financial arena. For instance, it's without a doubt that the Islamic finance sector in the UK has gone full steam ahead. Islamic finance is predicted to play a greater role in shipping however they have to improvise new products to meet the needs of private endeavours. Then it will be more suitable to shipowners. For instance, investors are to get the chance to take a stake in the industry's first ever Islamic shipping finance fund following preparations for a sale of shares in Alislami Oceanic Shipping. Dubai Islamic Bank which provided the base equity for Alislami Oceanic, is in the process of preparing a private placement that would see the stake sold down to local Dubai investors.

UK Tax lease:

This system involves a UK based company acting as a lessor buying the asset and leasing to the lessee which can be a non UK- based company. UK tax lease can be both finance leases, where the lessee enjoys full economic of the ownership of the vessel, as well as operational leases, where the lessor bears residual value risk in the vessel. Moreover, the market for these leases is a well established investor market, with lessors usually being large UK based banks, through their subsidiary leasing companies and as a result it is the second most important source of lease equity after the German KG structures.

On the other hand, although no additional equity investment is required from the shipping company, this system has some disadvantages like*,

- Lessee bears tax risks
- Require UK substance
- High transaction cost

- Suitable for companies with strong credit
- Only used for pre-delivery financing of vessels

*DVB bank

Again the future development of this system will depend on the key developments in the UK tax law.

Greece:

Greeks, who control nearly 20% of the world's merchant fleet, mostly specialised in oil tankers and carriers that transport bulk commodities, own their fortune on buying ships cheaply and selling them dear. Thus, they have an impressive record of spotting the peaks and bottoms of the market. As a consequence, this leads to the continuous growth of ship finance and the increase in lending irrespective of the number of banks that have entered or left the sector- in fact there have not been second hand vessels and any dramatic changes in the nationality of the banks involved. Furthermore, this leading group of banks which are international (non-Greek) banks with a Greek presence, showing an impressive rise in their loan portfolios. Today, the increase of banks' exposure reflects lending based on the newbuilding and second hand vessel prices.

Greek maritime companies have also floated their stocks on the stock exchanges and are listed on the New York Stock Exchange. Soon, there may be many more, combining the trends of listing and consolidation, and increasing internationalisation, signs, perhaps, that the Greek think the market is near a top. However, when Greek companies went public they occasionally paid off their bank lending but as they expanded they returned to banks for more finance. Another factor in the growing volumes is the rising value of the fleet being financed.

Banks complain of shrinking margins in shipping-lending but have increased the other types of business they do with owners, most noticeably in derivatives and hedging as the desire of outsiders to get into a booming ship industry has fed the growth of futures. Therefore, the most dramatic growth has been in shipping futures, which allow shipping companies to lay off risks- most popular ones are forward freight agreements (FFAs) to deliver goods to a particular route at some point in the future.

As well as becoming more diversified, risks are also being managed by making the Greek fleet younger which will lead them to a better condition.

Moreover, one side-effect of the increase in transparency has been to attract more outside investors into the industry. Traditionally, shipping finance came from plain vanilla bank loans, secured against ships. Bankers such as Royal Bank of Scotland, are

still the major players in the market but new sources of finance are emerging. Financial instruments, such as asset-backed securities, are increasingly popular, especially in Germany, where investors (chasing a local tax break) have a lamentable habit of entering a market just as it becomes a bubble. According to Lloyd's Shipping Economist¹⁵, such new sources now account for 60% of global ship-financing.

More and more finance players are continuing to court Greek shipping. Greasing the wheels of the world's biggest Merchant fleet calls for plenty of cash but whether it comes through traditional ship financing from banks, the public market or private equity, there seems little shortage of support for Greek owners.

Representatives of Germany's KG shipping funds were in town to woo Greek owners to a meeting organised by classification society Germanischer Lloyd. It's said the funds can handle deals of between \$ 300m and \$500m with 60% to 70% financing for 15 years.

A number of Greeks have also already done deals with Norwegian KS (limited partnership) companies, which have bought ships and chartered them back.

But the majority of Greek financing is still raised in the traditional way and market players do not see this changing, even though shrinking margins, the growing size of loans and the long-awaited impact of the Basel II capital requirements are perhaps altering lending policies to some extent.

Bank cautiousness saw front-loaded payments becoming the norm, to the extent all available cash flow is occasionally demanded for the first one to two years in order to reduce residual exposure. Also a secure one to two-year time charter is cited as a requirement.

Bankers themselves maintain that they are taking a cautious approach to lending because of red hot ship prices, despite the expanding portfolios they control. But since 2001 there has been an annual average growth of 23% in lending Greek shipping and it's believed that volumes will continue to grow, partly as a result of continuing newbuilding orders.

In addition to that, tonnage tax is also applicable in Greece. For ships which fly the Greek flag pay no corporate income tax. Instead these ships are entitled to a shipping tonnage tax calculable by reference to the category of ship, its age and its tonnage (as measured in koros) Greek tonnage taxation system covers any of a shipowner's income

¹⁵ Lloyd's Shipping Economist, Vol.75, March 2008

that is derived from that shipowner's use of his Greek-flagged ship(s) for commercial purposes. However, interest from bank deposits comprised of fares and other monies derived from the commercial use of ships is not deemed to constitute income from shipping activities, and is therefore taxed under the general rules of income taxation.

IPOs (Initial Public Offerings):

In the ship finance, IPO's have been increasingly used in recent years as an alternative source of raising capital, partially due to the internationalization of world equity markets which has created a better environment for the utilisation of equity markets as a source of shipping finance.

Because of certain characteristics of the maritime industry where the market is so volatile and as it's a capital intensive industry it requires commitments of capital, the emergence of the public market as a major source of capital has been slow. Moreover although the shipping stocks give investors a play on energy, commodities markets & the overall growth of the world economy, due to the lack of experience and confidence these stocks received little enthusiasm from the investors.

The shipping industry is generally considered an under-performer on the great majority of the world stock exchanges. The main difference between the other industries and shipping regarding to investors' returns is that, although many industries have similar volatility compared to shipping, earning peaks appear more regularly to recoup the investors for the troughs. However, despite the adverse market conditions with low returns on equity and employed capital, the raising of equity by shipping companies in the public markets has evolved significantly over the past 20 years.

As a consequence, instead of KG's, as far as the equity side is concerned, IPOs and private placements are the most common alternatives for ship owners wishing to raise funds to cover their equity side. Through IPOs ship owners can access large volume of funds and rapidly expand, without having to collateralise any assets. But the inflexibility in terms of timing and market liquidity of an IPO forms the main drawbacks of this method in other words, besides having certain advantages such as being the least expensive source of equity and having access to relatively large volume of funds, it has some drawbacks as well;

- Cost of preparation, documentation :direct costs such as legal fees, accountants' fees, printing fees and underpricing of new shares
- Managerial inflexibility and disclosure
- Strict legal regulations

- Strict financial scrutiny
- Lack of liquidity can result in volatile stock price performance
- Dependence of the company's market value on external market factors.

New business will be easier in Asia than the U.S because Singapore-based initial public offering (IPO) companies have higher equity levels than New York-listed owners. IPOs in the US are likely to lose the five-year grace periods some have had on 50% leverage levels and will need to start reducing loans from day one.

In Singapore, one of the leading and fastest growing regions in the shipping finance market, under the Maritime Finance Initiative, shipping investment vehicles receive tax exemptions on dividends and capital gains and a 10% concessionary tax rate applies to qualifying income of ship-investment managers.

Even the German market has shown greater liquidity with various fleet IPOs as well as open funds.

The recent poor performance of the local stock market has created hopes that the units will prove popular among investors. Although the current financial climate is a challenge people say ship investments are still an extremely interesting asset class to professional and wealth managers not least because long-term ship investments have been proven to outperform major stock markets but if shipping rates stay on this high level throughout the rest of the year and increase in next 2 years, we will also see an increase in the earnings of shipping stocks.

In conclusion, we should look at the trends of the world especially Asian countries which trigger the evident enthusiasm in shipping by means of continuous growth and the increase in demand .

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Focusing on Corporate Governance Regime in Germany

Up to now, we discussed about the KG Methodology in maritime industry but we haven't mentioned the importance of the corporate governance regime because When we try to answer the question of why KG system is so popular in Germany, we should go back and find out why different methods of finance emerge from the British and German industrial revolutions. Two modes of finance didn't converge more quickly over time. Today, separate so called German & Anglo Saxon Financial Systems persist. Banks (notably, but not only, the Grossbanken) played a more prominent role in funding late 19th century German Industrialization. (The power & importance of German banks) Therefore, in this section we will try to focus on Germany itself and find out the differences between German & Anglo Saxon Financial Systems.

3.1 The Corporate Governance Regime In Germany:

The internationalization of business and financial markets, the rise of institutional investors, the harmonization of legal rules in the context of the European single market project and the transformation of businesses practices and strategies pose significant challenges to national corporate governance regimes which are a core element of national political economies.

Furthermore, corporate governance research usually distinguishes between internal and external corporate governance mechanisms. The former operate via the institutional framework of the firm. Within the corporation, the board of directors constitutes the main device for monitoring management. External control is exercised by market sources and by outside actors. Besides, the state shapes the structures and the

functioning of the different governance mechanisms primarily through company law and capital market regulations.

Moreover, German corporate governance used to be a prototype of the inside system where ownership concentration is generally high, and the relationships among firms are often characterized by cross-shareholdings and cross-directorates. As patient capital is provided by bloc holders and long-term bank credits, the market valuation of the firm is less important for corporate policy. German company law lays down strict, mandatory rules which govern the internal structures and procedures of corporate decision-making. German experts and market players felt that the bad international reputation of the German regime stemmed to a significant extent from the lack of knowledge about the German two-tier system and its peculiarities. Then they began to ask whether Germany is ready for the demands of the global market place. An analysis of the German corporate governance model revealed many deficiencies, including lax legislation., it didn't have a federal regulatory agency for the securities market, had stock exchanges in Berlin, Bremen, Dusseldorf, Frankfurt, Hamburg, Hannover, Munich and Stuttgart. Financial internationalization and European regulatory harmonization put the German corporate governance regime under pressure to move towards a market-oriented, Anglo-Saxon. Then 1994, 3 major principles were upheld in the securities market: investor protection, market transparency and market integrity. So throughout the early 1980s, increasing globalization of operations forced Germany's largest stock companies to seek additional sources of capital. As a result, they decreased their traditional reliance on (German) bank financing and increased sales of debt (bonds) and equity shares to domestic investors.

On the other side, Germany's capital market is neither as large nor as dynamic as the US capital market. Due to liberalization in Germany (indeed, throughout the EU) the recent boom on Wall Street, the percentages have probably increased in all of the above countries, but in general one can still assume that Germans remain more risk averse than Americans. Whereas Germany's total stock market capitalization accounts for just 25% of German Gross Domestic Product (GDP), US stock market capitalization is more than 100% of US GDP. This is due to two major factors; first, the inflow of foreign capital into the US and second, the wide range of US individual and institutional investors, especially pension funds.

Since 1990s, the regulatory framework for international corporate governance has undergone a series of statutory and self-regulatory reforms, which brought a moderate degree of convergence to the Anglo-Saxon model. German regulation has moved towards Anglo-Saxon standards on transparency, board independence and accountability to all shareholders, although the German provisions on board independence are considerably less stringent than those applying in the US and the UK.

3.2 The Differences between Anglo-Saxon Model & German Model:

Most countries on continental Europe such as France, Italy and Germany possess a macroeconomic model called “continental capitalism”. On the other side, an Anglo-Saxon economy or Anglo-Saxon capitalism (so called because it’s supposedly practised in English-speaking countries (such as the UK, the United States, Canada, New Zealand, Australia and Republic of Ireland) is a capitalist macroeconomic model in which levels of regulation and taxes are low, and government provides fewer services. These economies are more liberal and free-market oriented than other capitalist economies.

In the literature, two ideal types of corporate governance regimes can be distinguished; market-oriented “outsider” systems and network-oriented “insider” system. In the outsider systems of Anglo-Saxon countries, share ownership is widely dispersed among a multitude of investors who generally have an arm’s length relationship with the firm and rarely intervene into its affairs while German corporate governance system used to be a prototype of the insider system where German company law lays down strict, mandatory rules which govern the internal structures and procedures of corporate decision-making, i.e., here regulations are higher.

Moreover, the internationalization of business and financial markets, the rise of institutional investors, the harmonization of legal rules in the context of the European single market project and the transformation of businesses practices pose significant challenges to national corporate governance regime. Due to these factors and general concerns about the insufficient dynamics of the German economy, the regulatory framework for internal corporate governance has undergone a series of statutory and self-regulatory reforms, which moved the German regulation towards Anglo-Saxon standards on transparency, board independence and accountability to all shareholders but not with regard to the institutional structure. Internal governance still operates on the basis of a two-tier board system with parity co-determination for large companies.

However, in one of her speeches Angela Merkel has told to Financial Times that Continental Europe should take the lead in devising new rules for financial markets because the Anglo-Saxon model of regulation has failed, and the largely Anglo-Saxon organisation of financial markets undervalued the growing weight and importance of the euro zone. She also added that although Europe has developed a certain independence thanks to the euro, in terms of rules, the transparency guidelines and the entire standartization of financial markets, they still have a strongly Anglo-Saxon-dominated system. Furthermore, as she thinks about the relationship between capital and risk she would welcome new capital adequacy ratios for banks, linking the amount they must put aside to the level of risk in their portfolios. Besides, “compared to industry, where people have a deep understanding of the products they deal with, financial markets are a lot more opaque. That has to change so that a country like Germany, which still produces a lot of industrial goods, does not have to carry the economic risks.”¹⁶

Throughout the early 1980s, increasing globalization of operations forced Germany’s largest stock companies to seek additional sources of capital. As a result, they decreased their traditional reliance on (German) bank financing and increased sales of debt (bonds) and equity shares to domestic investors. One obstacle, however, prevented German joint stock companies from directly raising capital in the U.S, the largest capital market in the world. Regulations of US Securities and Exchange Commission (USSEC) stipulate that a joint stock company may list its shares on the NYSE only if discloses financial and other information in accordance with US GAAP or IAS adjusted to US GAAP. German law required, however, that if a German company switched to US GAAP or IAS , it would still have to disclose financial statements according to German GAAP where ‘hidden reserves’ are permitted which will create a problem in terms of the accounting principles of Anglo-Saxon model.

As we can easily notice in the case of accounting, the US imposed its standards and regulatory requirements on foreign private issuers, thus coupling market power with direct political pressure.

¹⁶ By Lionel Barber, Bertrand Benoit and Hugh Williamson in Berlin. Published : 10 June 2008 23:30

In conclusion, we should think whether the gap between the Anglo-Saxon economic model & the continental one is really that big. On closer inspection, there are as many similarities as there are differences. More importantly perhaps, there are signs of convergence.¹⁷ Differences between these models are illustrated by taxation and welfare state which will be examined in the next section.

¹⁷ Barysch, Katinka, Centre for European Reform, 2005

The role of taxation

4.1 What's the Main Role of The Taxation System?:

Up to now, many studies have been made in order to understand whether the taxes affect financing decisions, what their role is. Although it's believed that taxes must be important, little support has been found in empirical analyses. As Myers (1984) wrote, "I know of no study clearly demonstrating that a firm's tax status has predictable material effects on its debt policy. I think the wait for such a study will be protracted."¹⁸ Furthermore, we can easily notice that financing with debt instead of equity increases the total after tax dollar return to debt and equity investors and should increase firm value. Many countries tax corporate income with different ratios which is an important source of revenue e.g, German tax authorities wish to see the KG system income driven rather than tax driven and in addition to that the government would prefer to see savings re-directed to domestic investment (rather than to overseas shipbuilders) or consumption.

Moreover, the specification of value of incremental debt relative to equity includes measures of tax status, the probability of costly bankruptcy, the potential for investment inefficiencies due to moral hazard, and signaling costs of equity. In this section, we are only going to analyze the relationship between tax shields and the incentive to use debt. In theory, firms with low expected marginal tax rates on their interest deductions are less likely to finance new investments with debt and tax should matter only to the extent that they affect the marginal tax rate on interest deductions. Thus, firms favor debt that if they borrow money from the bank, they will have to make interest payments in order to meet their obligations but as the interest is a tax deductible expense it will

¹⁸ Mackie-Mason, Jeffrey K., "Do Taxes Affect Corporate Financing Decisions?" , The Journal of Finance, Vol. XLV, No. 5, December 1990

receive a partially offsetting interest tax shield in the form of lower taxes paid. Tax claims also impose benefits and costs on security types. So, the most important rule is that interest paid is tax-deductible for corporations while dividends paid are not. Firms with different tax prices on interest deductions will then have different debt ratios. Here what investors can't know is the size and duration of future interest tax shields as debt is not permanent and fixed. In respect of trade-off theory predicting the managers can exploit valuable interest tax shields, we come across with the opposite relationship between high profitability and low debt. In general the common view is that high profits mean low debt and vice versa i.e., debt capacity depends on the future profitability and the value of the firm, high profitability means that the firm has more taxable income to shield and that the firm can take more debt without risking financial distress. If we accept this, we should admit that a value maximizing firm should never pass up interest tax shields when the probability of financial distress is high. Besides, a firm facing a low enough tax rate would also use equity because investors pay more taxes on debt interest than on equity income.

The marginal tax rate may determine the level of investment i.e does affect financing decisions and as Graham (1996)¹⁹ finds evidence that changes in long term debt are positively and significantly related to firm's effective marginal rate. Again this shows that taxes effect financing decisions at least at the tactical level. Furthermore, Miller (1997) pointed out that the corporate tax advantage to debt could be offset by personal disadvantages as well.

Furthermore, the rising importance of financial activities has two important implications for the future of the capital income taxation. First, to the extent that financial companies have greater flexibility in responding to tax incentives, the difficulty of chasing capital income in order tax it can only get harder. Second, tax systems designed for non-financial companies may not work well especially when applied to the financial sector.

Economic changes such as the growth of financial services & the dispersion corporate profitability present additional challenges to existing corporate tax rules.

For instance, adoption of new tax policy may induce a change in the level of investment or in a shift in the location of that investment just like Germany has been through. The present tax on tonnage no longer offers investors an incentive from the tax point of view

¹⁹ Myers, Stewart C, "Capital Structure", *JSTOR Vol. 15 No. 2, Spring 2001*, pp.81-102

which a threat for KG funds which have become products offering an attractive yield, involving the willingness of the investors to share the entrepreneurial risk.

Moreover, the vast majority of leasing transactions in shipping is categorized as finance leases. The reason behind this observation is the tax benefits underlying finance leasing transactions according to tax legislation in many countries like The United Kingdom, Germany, Norway and Japan where tax jurisdictions significantly contribute to the development of tax incentive leasing schemes. Under German and Norwegian tax-legislation, leasing deals are performed through an investment vehicle, which usually is a KG or KS company. These deals offer tax allowances and benefits through depreciation. On the other hand, what we should remember is that without tax advantages, leasing is in general more expensive than bank debt therefore the benefit from using it is diminished.

4.2 Examining the Effects of Taxes:

While making a financing/investment decision choosing one of the above mentioned sources of raising capital, firms and investors take the taxes into consideration. In other words, the success of these sources significantly depends on the tax legislations of the countries. In Appendix 1 & 2 you will find a detailed information in respect of the German Combi Model & Tonnage Tax Model.

As we mentioned in the previous sections, although Baskin says the opposite, the pecking order theory does not explain the influence of the taxes on financing decisions.

With respect to that, further analysis should be made in order to state the importance of the taxes on the cost of capital. For example, the existence of corporations as intermediaries in the investment decision is important not only because of the role of corporations in the pooling of individual risks and the question of management incentives vis-a-vis stockholders, but also because tax systems commonly tax such corporations as independent entities. Much of the complexity in the analysis of the impact of taxes on the cost of capital may be traced to this fact.

Although Modigliani and Miller²⁰ showed that all equity financed company is worth the same as an all debt one, i.e., the value of a leveraged firm and the value of an unleveraged one should be the same, however, many governments allow a tax deduction on interest, creating a bias towards debt financing to achieve the lowest weighted average cost of capital (WACC). Because of the tax advantages on debt issuance, it will

²⁰ Modigliani, Franco and Miller Merton, "The Cost of Capital, Corporation Finance & The Theory of Investment, *American Economic Review*, 48, pp. 261-97

be cheaper to issue debt rather than new equity (this is only true for profitable firms, tax breaks are only available to them). At some point however, the cost of issuing new debt will be greater than the cost of issuing new equity. This is because adding debt increases the default risk and thus the interest rate that the company must pay in order to borrow money. By utilizing too much debt in its capital structure, this increased default risk can also drive up the costs for other sources as well. Management must identify the optimal mix of financing, the capital structure where the cost of capital is minimized so that the firm's value can be maximized.

Moreover, capital used for funding a business should earn returns for the capital owner who risked his/her savings. For an investment to be worthwhile the projected return on capital must be greater than the cost of capital.

By taking all the above mentioned factors into consideration, we examined the capital structures of several companies in Germany. We analyzed the WACC ratios then we found out that the ones who preferred KG financing were able to lower their weighted average cost of capital ratios by benefiting from the tax advantages.

WACC = c > weighted average cost of capital %

K > total capital invested in the going concern;

K also equals $D + E$ where

D > total debt & leases (including current portion of long term debt notes payable)

E > total market value of equity and equity equivalents

b > required or expected rate of return on borrowings, or cost of debt %

y > required or expected rate of return on equity, or cost of equity %

T_c > corporate tax rate %

$$c = (E/K) \cdot y + (D/K) \cdot b(1 - T_c)$$

Between 2003 – 2007 these companies lower their WACC ratios from 12,5% to 9%. As a consequence, the managers succeeded to make more economic profits.

Furthermore, for a given financial policy for each firm, both tax and risk preferences will influence an investor's choice between debt and equity, as well as specific portfolio held. Investors who would prefer to hold only equity for tax purposes may nevertheless hold some debt because a portfolio containing only equity may be too risky just like the

structure of KG financing method. So the equity portfolios of investors will vary systematically with their tax rates. In this regard, as the KG financing is a tax driven system, the private investors want to benefit from these tax advantages in fact that's the main reason of the popularity of this system.

4.3 Tonnage Tax System and Its Effects:

4.3.1 German Tonnage Tax Regime

Undoubtedly, the reason behind the dynamic development of Germany's ship financing market was the government's tax policy. Germany has high corporate income tax rates and has never been considered a tax-efficient financial center. Nonetheless, it offers significant fiscal concessions to corporates through co-ordination centers, holding companies, and a number of special corporate income tax regimes. In the 1990s the possibility of allocating losses made ships an interesting investment for persons with a high income, and a booming market for investment fund models developed through the KG / issuing houses.

In KG finance, 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) As the KG Fund is "tax transparent, tax on relevant profits and losses is applied on the investor level any profit or loss flows straight through the KG fund and is spread out among the general partner and the investors in proportion to their stake in the KG fund.

The main reason an investor takes part in a KG fund is to maximise their tax allowances in short term and taking profits in long term. Tax loss allowances and accelerated depreciation "Allowances" are made to encourage investors, usually in the form of tax rebates. In fact, German tax system is known as 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, and additionally 5,5% solidarity contribution due to the reunification of Germany. Nevertheless, the KG itself is not the taxable entity for the German income tax purposes but rather the individual partners at their personal tax rate. The high level & multifold nature of personal taxation in Germany and therefore the benefits available from maximising tax allocations by investing in KG funds remain substantial, despite proposed reforms to simplify the tax system and reduce taxation levels. So any income – negative or positive – may directly be transferred to the respective limited partners. These partners may then set this income off against other types of income (The KG therefore creates an initial loss which is a book loss). As a

result, combined with historically strong returns of KGs (with an average annual post-tax return of 15 per cent on equity) and the lack of alternative tax-driven structures in the German market has led to an increasing number of KG structures. The maximum amount of costs allowable occur in the early part of KG fund's life.

On the contrary, German tax authorities wish to see the system income driven rather than tax driven and in addition to that the government would prefer to see savings re-directed to domestic investment (rather than to overseas shipbuilders) or consumption. Following the so called "paragraph 2b" changes to German tax law, projects must be clearly intended to make a profit. In the past the projects were structured to yield a return to the private investor after tax savings, but new projects must derive income from the investment itself. Nowadays, many KG equity houses have calculators on their websites to give a before and after taxation picture for the private investors.

A KG fund is also deemed a tax advantage structure if the forecast of loss exceeds 50% of the subscribed capital in the initial loss phase. The scheme will not be allowed if the return on capital employment after tax is more than 100% of the return before tax, which would mean that the investment is maximized the greater the tax loss. This again would show the proposed scheme is based on tax loss rather than deriving income.

The standard model acceptable to tax authorities and investors shows a vessel with guaranteed employment, usually in the form of fixed charter (at least 3 years)

Furthermore, tax loss allowances and accelerated depreciation within the first two years of a fund have meant that a substantial proportion of the initial investment could often be claimed against tax. 8,33% which is the ratio for standard depreciation was supplemented by the special or accelerated depreciation of 40% of the cost of a newbuilding in five years. So 82% of the cost of the vessel could be depreciated in the first five years as well. At the same time, the double linear depreciation was attractive as it meant KG schemes could be designed with front-loaded costs in the first two years, and the losses meant that no tax was payable by the KG fund during that period. This element was combined with tonnage tax to create the so called 'combi' model, where the KG maximised depreciation before switching into tonnage tax. Until January 1, 2006 it was possible to issue a fund that combines depreciation in the first 3 years of the fund, followed by the placement of the ship in the tonnage tax system. The double linear depreciation allowance ends in 2006 that the combi model will be phased-out and this brings to a close the benefits of the model. From then on, the KG will only be able to opt

for tonnage tax treatment starting with the purchase of the vessel or starting ten years after the purchase.

In November 2006, Germany's coalition government arrived at an agreement over key company tax reforms which will reduce the overall corporate tax burden, currently one of the highest in the world. The ruling coalition parties also agreed to introduce a 25% capital gains tax from 1 January, 2009 which will replace the current system whereby capital gains are subject to personal income tax, which can be as high as 42%. This will apply to income from earned interest and dividends, and private investors' share sales.

The alternative to taxation on the profit / loss statement is German tonnage tax system which was effectively introduced from 1st January 1999. All income & profits are not used as a basis for establishing the amount of taxable income, taxable profits, tax base or tax liability of a German resident company has been elected to be taxed on a tonnage tax basis rather than income or profits (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 profits calculated according to the normal corporation tax principles of the relevant company) i.e., under the tonnage tax regime, income tax is not calculated on the basis of the KG's actual profits, but rather on the net tonnage of the ship. This leads to a negligible tax on the KG's profits.

The number of days within the relevant financial year that the ship is operating in international trade (365 days), multiplied by the number of each full net 100 tons, multiplied by the following amounts:

- a. EURO 0,92 for net tonnage up to 1.000
- b. EURO 0,69 for net tonnage exceeding 1.000 up to 10.000
- c. EURO 0,46 for net tonnage exceeding 10.000 up to 25.000
- d. EURO 0,23 for net tonnage exceeding 25.000

For example,

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
Annual Tax :	197,80 x 365 = 72.197 EURO

* Norton Rose (2005), “*New Opportunities for KG Finance in Shipping?*”

The major KG players like MPC Capital and Nordcapital operate their own ship-management companies in Germany to benefit from that country’s tonnage tax but Lloyd Fonds has used a number of shipowning partners to launch its funds.

Finally, it’s clear that the tax benefit that German investors have enjoyed in the past has caused a thriving base to deem shipping investments to be a safe and a good venture.

4.3.2 UK Tax lease:

Furthermore, in England, most of the companies use UK tonnage tax to attract domestic investors who can benefit from tax reductions on profits from UK-registered vessels. Here, the lessor through its ability to utilise tax depreciation under the UK tax system, is able to reduce the effective cost of borrowing to the lessee expressed through a reduction in lease payments. The UK based institutions (major banks and their subsidiary leasing companies) have abundant tax capacity and by acting as lessors in ship deals they are entitled to 25% capital allowance (UK tax depreciation) in respect of the vessels subject to the lease. Currently under the UK tax regime the lessee enjoys tax benefits but also bears all tax risks, although these terms are bound to change in 2006. Indeed, there are some restrictions. More specifically, the UK lessor is eligible to claim the capital allowances only if the vessel is used by a lessee liable to pay UK corporate tax. Additionally, companies that fall under the UK tonnage tax regime are exempted from these capital allowances. Moreover, 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. Therefore, the key developments in the UK tax law will determine the future market standings.

4.3.3 Norwegian Tonnage Tax:

For the Norwegian KS partnerships-exactly like the German KG structures- were initially driven by tax incentives for the participating investors. Again here, KS is a tax transparent legal entity, meaning that the tax is assessed at the level of individual partners rather than the KS itself. The superseding of the tax legislation in 1992 limited the great deductions on the limited partners' tax return. The latest tax return 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. Investors can take advantage of the tonnage tax if they have a stake larger than 3% thus tax benefits have ceased to be the most attractive point of this investment vehicle. But 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.

The computation method of the yearly tonnage for Norway is as follows,

a - NOK 0 for net tonnage up to	1.000
b - NOK 72 for net tonnage exceeding	1.000 up to 10.000
c - NOK 48 for net tonnage exceeding	10.000 up to 25.000
d - NOK 24 for net tonnage exceeding	25.000

When we use the same example with the KG tonnage tax, we found NOK 718.320 as the annual tonnage tax which equals to 98.350 EURO > 72.197 EURO

The effect of a convergence with the EU standards on KS structures will be indirect but significant, since even though KS mechanisms are not subject to tonnage tax, the general partner which is usually a limited company will face tonnage tax on its share of the KS.

It must be added that Germany also has a surplus of investor ready money, but which can't be accepted for investments under the Norwegian model for existing tax law reasons with regard to capital income in Germany.

Finally, even in India, we notice some governmental policy obstacles which need to be overcome in order to allow Indian ship owners to tap into this attractive form of financing by using foreign capital:

- 1- Remove the withholding tax on bareboat (and even time) charter hire paid abroad
- 2- Abolish withholding tax on interest payments overseas
- 3- Abolish the dividend distribution tax, making it easier for Indian owners to attract foreign equity
- 4- Lighten the tax and social security burden on Indian crews serving on Indian registered ships
- 5- Remove charges, such as service tax, and fringe benefit tax that Indian owners have to bear. Only in India do such charges get levied against one's shipping community.

In conclusion, Germany tries to become more attractive for the investors by offering tax advantages, then they can improve their industry as well as their economy.

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Empirical Study

Up to now, we tried to understand the general terms of the KG Financing Methodology as well as stating its pros&cons and other alternative sources. But as the main scope of this paper is to investigate the determinants of corporate capital structure, we should focus more on pecking order theory which was also mentioned in the previous sections in order to find out whether the maritime industry follows the prescriptions of this theory or not. Now, we will try to see whether what we know suits to what we receive from our empirical studies.

First of all, we will analyze the financial statements of several companies in maritime industry in Germany, both the ones financed with KG System and the others preferring alternative raising capital methods by taking the followings into consideration;

- D/E ratio,
- EP i.e., EBITA,
- Shareholder wealth,
- Invested capital,
- Profitability,
- Cost of capital by using CAPM

Previous capital structure studies have used the pecking order approach to understand the debt versus equity trade-off . In fact, capital structure theory has traditionally focused on the optimal leverage (optimal levels of debt and equity). Most companies use debt to finance operations. By doing so, a company increases its leverage because it can invest in business operations without increasing its equity. Here a high debt/equity ratio generally means that a company has been aggressive in financing its growth with debt. In addition to that, this ratio depends on the industry in which the company operates. For

instance, capital-incentive industries such as shipping tend to have a debt/equity ratio above 2.

Although Modigliani and Miller (1958) concluded that the debt-equity mix made no difference, this view was slowly being modified by several studies in other words the “borrow all you can” which results debt level to be greater than the debt level that maximizes stockholders’ market value, leads us to the trade-off model.

In static trade-off theory, firms trade off the tax benefits of debt for increasing cost of financial distress. For instance, Baskin²¹ says that ignoring other factors, capital structure logically becomes determined out of a static trade-off between the tax advantage of debt and the risk of bankruptcy and with increased understanding of the consequences of asymmetric information, it is possible to cast pecking order behaviour as the rational response not only to tax and transaction costs, but also as a signaling equilibrium.

Although the traditional trade-off model is useful for explaining corporate debt levels, pecking order theory is superior for explaining capital structure changes.

Moreover, while the trade off model implies a static approach to financing decisions based upon a target capital structure, pecking order theory allows for the dynamics of the firm to dictate an optimal capital structure for a given firm at any particular point in time.²² Studies in respect of the pecking order theory have showed that debt ratios are positively related to the need of funds (growth) and negatively related to the availability of internally generated funds (profitability) That is to say that profitable firms, with high needs for tax shields and low probabilities of default, have actually been shown to borrow less.

²¹ Baskin, Jonathan, “ An Empirical Investigation of the Pecking Order Hypothesis ”, Financial Management, Spring 1989, pp. 26-35

²² Brealey R.A, and Young C.M (1980), “ Debt, Taxes and Leasing- A Note, The Journal Finance 35, December

As a summary,

TRADE OF THEORY	PECKING ORDER THEORY
Conforms with value maximizing construct	Considers managerial motivations
Assumes a relatively static capital structure	Allows for a dynamic capital structure
Considers the influence of taxes, transaction costs and financial distress	Considers the influence of financial slack and availability of positive-NPV projects.
Ignores the impact of capital market " signals"	Acknowledges capital market "signals"
Ignores concerns regarding proprietary data	Acknowledges proprietary data concerns
Cannot explain many real-world practices	Explains many real world practices

In the lights of the above mentioned factors and with respect to the indications of the results of our examination, we will be able to say that although the equity financing deals are much more expensive as it is riskier, several German companies achieved to drive the attraction of the private investors who benefited from the tonnage tax system with KG methodology and managers reached their objectives of minimizing their costs of capital and maximized the shareholders wealth.

The data and Results:

The sample period will be 2003 -2007 and 60 firms with 5 year history from which we will compute the following values,

Formulas which were used :

- $EP = \text{Operating profit} - \text{Taxes} - \text{Cost of Capital}$
- $D/E = \text{Total Liabilities} / \text{Shareholders equity}$
- $\text{Shareholder wealth} = \# \text{ of common shares outstanding} \times \text{the market price per share}$
- $\text{Invested capital} = \text{Total assets} - \text{Current Liabilities}$
- $\text{Profitability} = \text{Earnings before interest \& tax (EBIT)} / \text{Sales}$
- $\text{Cost of capital} = \text{required rate of return}$

$$k = \text{Risk free rate} + \beta (\text{Market risk} - \text{Risk free rate})$$

The reason why we choose the period between 2003-2007 is closely related to global conjuncture where the freight rates were continuously rising, making the number of the newbuildings & sales increase proportionally as well. Moreover, there's a high correlation between global economic growth and growth in tonnage demand.²³ Based on data from 1992 to 2007 as much as three quarters of the annual changes in tonnage demand can be explained solely by global economic growth. Strong global economic growth and favorable geographical distribution have more than doubled the tonnage growth rate from the 1990s to this decade: 3% to 6.5% .The peak was reached in 2004, but the next three years have only been marginally weaker, with modest upturn from 2006 to 2007. In 2007, the shipbuilding industry experienced an ordering spree we have never seen before. Healthy freight markets fuelled demand for tonnage in all segments and new record high ordering of bulk carriers and container vessels were the most noticeable.

With respect to that, we analyzed the financial statements of 30 shipping companies who used KG Financing system, and other 30 firms who didn't prefer this system in order to raise capital. The financial statements of these 60 companies were taken from HSH Nordbank records.

YEAR 2003 – 2007	KG Financed Firms	Other Financing
Total : 60 Companies		Methods
EP – EBITA in EURO mio	9,134	7,927
D/E %	3,016	3,654
Shareholder wealth in EURO mio	322	287,140
Profitability %	0,5864	0,3551
Invested capital in EURO mio	137,356	121,453

When we look at the results of our analysis we can easily notice that firms who preferred KG Financing method, they achieved to minimize their cost of capital and increased their shareholders wealth.

²³ The Platou Report 2008, 15.03.2008, RS Platou Group [_http:// www.platou.com](http://www.platou.com)

Moreover, as the equity deals were used in KG financed companies, their D/E ratio is smaller than the one of the others. As a matter of fact, the amount of the economic profit was much higher.

Further, we continued our analysis by taking the financial statements of König & Cie. GmbH & Co. KG, one of the biggest KG equity houses, into consideration in order to understand the effects of both KG funding and taxes. This company was established in 1999 and has a shareholding structure as follows;

- König & Cie Treuhand GmbH (100%)
- Saxonia Treuhand GmbH (50%)
- König & Cie Real Estate GmbH (100%)
- König & Cie New Energy GmbH (100%)
- König & Columbia GmbH (40%)
- König & Cie Private Equity GmbH (50%)
- Scorship Tankers GmbH & Co . KG (50%)
- König & Cie Reederei GmbH (100%)

As of the end of 2006, König & Cie. had issued 50 public funds in the following sectors;

- Shipping
- Secondary market life insurance
- Real Estate
- Private Equity
- Renewable Energies

A total of some three billion euros have been invested since 1999. In 2006, they were able to place EURO 191,2 million in equity for their new closed end funds and total investment volume came to EURO 592,2.²⁴ Moreover the ship sales effected in the past year secured attractive returns for their investors. At the end of 2006, it was noticed that the runaway success of the KG (limited partnership) system had not fully won over Germany's institutional investors to shipping, as the launch of the country's first-ever publicly listed fund demonstrated Marenavo Schifffahrts AG²⁵, the new Hamburg-listed

²⁴ König & Cie. GmbH Co. KG , Annual Report and Performance Record 2006

²⁵ Tradewinds, 2006

investment vehicle established by Konig & Cie, successfully raised EUR 150m to pump into vessel purchases and other shipping investments. It has emerged that the fund originally sought to raise as much as EUR 250 but instead had to settle for nearer 60% of the target amount. They have many containerships in their portfolios as Containerships “ Made in Germany” & built in quality shipyards ensure security for this market scheduled disbursements averaging 7% pa as per 2007, which are almost tax-free, make investments extremely attractive.

In our analysis the investment volume is defined as the sum of equity and debt. Equity includes in addition to limited liability capital, silent partnerships and, generally the premium of 3% or 5% to be paid. On the other side debt comprises mortgage loans & as appropriate, the current account commitment. If the tax basis has been changed to tonnage tax for shipping companies, the difference seagoing vessel is shown in % for the so called combination models.²⁶

Here, taxable profits calculated as a lump sum in accordance with Section 5a EStG was shown for the shipping which have already opted for tonnage taxation, the income form commercial operations in accordance with 15 EStG was shown for other companies.

With respect to the above mentioned factors, we will look Cumulative Model Portfolio of König & Cie. which displays 46 funds (35 ship funds, 4 Dutch real estate funds, 2 wind form funds and 5 life insurance funds) When we compare each fund by taking tax relief / burden.and the investments value factors into consideration, we can see that ship funds create more tax relief than the others. Under the tonnage tax regime, the tax benefits of ownership flow through to the individual investors and the KG's income tax is based on net tonnage rather than corporate profit, leading to a much reduced tax burden.A German shipping company may opt between the general tax system and the Tonnage Tax system. This choice is binding for a period of at least ten years. After this period, the shipping company can renew its choice.

As 31.12.2006	Investment Inc. Premium	Contributions	Taxes (Relief/Burden)
Ship Funds	3.666.000	3.461.000	839.013
Special Funds	525.000	465.000	49.117
Real estate Funds	420.000	420.000	4.017
Regenerative Funds	210.000	210.000	114.433

²⁶ For your easy reference please see Appendix 1 A & 1 B

Moreover, we should mention the advantages of the German flag because of its low requirements. With the help of the tonnage tax system, the ships can also fly Marshall Island flag as well. This is an important factor because for example a ship flying Turkish flag will be entitled to several requirements especially when we consider the taxation. For that reason many ships use Maltaese or Marshall Island flags.

On the other side, the expanded presentation of the capital lock up is utilised to clarify the positive effects of unscheduled amortizations of the (ship) mortgage loans for the fund company thus for each individual investor. The utilization of surplus cash to reduce prematurely the long term debt improves the future opportunities of the fund company. The importance for the investors lies in the increase in the profits of the fund company due to reduced interest payments in the future. Assuming an investment of EURO 100.000 plus any applicable Premium, the capital lock up shows the amount which is tied up in investment after disbursements, tax reductions or payments & unscheduled amortization.

Furthermore, a mean value of 57,60% in relation to paid in capital results for capital lock up II for all funds. The capital lock up II for all 35 ship funds averages 52,33% in relation to the originally submitted contribution including Premium. An average of 44,43% of the invested capital had been returned to investors in the form of disbursements and tax deductions by 2006.

Besides, the fund company disburses profits to the investors from realised cash surpluses. Investors could also realise startup losses typical for the investments of the investment companies & deduct part of these costs from taxable income.

Investment	Actual
Investment volume	283.639
Fund Capital	126.011
Initiator Capital	1.103
Total debt incl. current account	156.526
Ø tonnage tax difference , Tr. 2003 in %	-7.1
Ø tonnage tax difference , Tr. 2004 in %	-9.9

Source: König & Cie, MT Cape Baker Suezmax Tanker Flottenfonds I

Tax differences are measured using the applicable peak tax rate of the specific year plus 5,5% solidarity surcharge and 9% church tax.

As mentioned above, the investment portfolio of König & Cie. consists of 4 markets segments of closed end investment companies. These investments are made through two companies;

- the Erste Dach Investment GbmH & Co. KG
- the Zweite Dach Investment GbmH & Co. KG

in which the investor participate in a ratio of 70 to 30 in relation to the total limited liability of capital of two companies.

Due to the capital intensity of ships, it has always been usual to include private capital in their financing as well. As a consequence of this tradition, ship investments have developed as a major of capital investment in Germany. Here they offer investors above average opportunities for earnings as an entrepreneurial participation. The earnings result in particular from the charter rates & from the sale of the ships. Moreover, as soon as a shipping company has changed to tonnage tax, the payments from the sale of the ship are made to the investors in a ship investment.

Furthermore, when we look at their balance sheet we notice that liabilities due to banks is really high.

According to the above table, we again see the practical examples of pecking order theory on financing decisions i.e. making investments as Total debt > Fund Capital and that the M&M theory disregarded the effects of taxation but unlike that theory we can not say that capital structure is not irrelevant.

In conclusion, our empirical study proves that between 2003-2007, the firms in Germany who made good use of this financing method in order to raise capital, realized their objectives. Moreover, König & Cie as one of the biggest equity houses, buy & build many vessels by using these techniques and up to now they achieved their goals.

CONCLUSION

This study investigated the KG Financing Methodology with respect to its place in the financing hierarchy and the corporate governance regime in Germany which is quite different from the Anglo-Saxon model. By discussing the role of taxation, we have stressed that it is just the tax exemption that gives the KG Financing a superior rank in pecking order model. With the help of the tax advantages, managers can minimize their costs and maximize their economic profit at the same time. Here, what we have demonstrated is that while making a financial decision, choosing any of the sources of raising capital, firms and investors indeed take the taxes into consideration. In other words, the success of these sources significantly depends on the tax legislations of the countries. We simply say that the main goal of Germany has been to become attractive for the investors with the huge contribution of shipping to the national economy.

Our empirical results show that KG financed firms have had higher economic profits and with respect to the theory of firm they realized their objectives by achieving to minimize their cost of capital and increasing their shareholders wealth. Although the results of M&M Theorem might seem irrelevant (after all, none of the conditions are met in the real world), it really shows us something important that is, capital structure matters precisely because one or more of these assumptions are violated. It tells us where to look for the determinants of optimal capital structure and how those factors might affect optimal capital structure. According to the theory of firm, managers increase shareholder value when they invest in projects that provide positive net present value (NPV). However, companies not only need a framework that allows them to value new investments, but also a performance measurement system that aligns manager's & shareholder's interest. Here we should take "Economic Profit" – which tries to indicate

to what extent and where economic value is generated- into consideration. The market value of a firm is given by;

Equity + Debt = E+D = V, therefore the objective of managers is the maximization of the firm's value i.e, of its share price (assuming no agency problems).

Finally, as discussed in the previous sections of this paper, the performance of the KG funds are totally correlated with the global economic growth and growth in tonnage demand (especially for containers and tankers as we are dealing with the KG) i.e., the shipping industry is a 100% international drive business. For instance, as 2007 was a great year for shipping industry with respect to increasing freight rates and vessels' values (both newbuilding and second hand) due to the positive signs for the world economy, strong rebound of world trade and remarkable performance of China with a huge increase in demand, the capital requirements for the shipping industry have risen significantly. In addition to that, according to the statistics, as two thirds of the world fleet is over 15 years, the demand for bulkers, capesizes and other size categories including handies will continue increasing. However, as we're currently living through the biggest banking crisis since the Great Depression, an uncertainty has enveloped all industries and especially those that are capital intensive and fundamentally bank-debted, which are the words that exactly define the maritime industry. Thus, shipping finance starts to have an important role and the sources of raising funds to finance shipowners' investment plans have varied in recent years e.g traditional bank debt including yard credit or via innovative financial arrangements such as leasing, sale-leaseback arrangements, mezzanine financing, equity offerings KS and KG structures and high yield bonds.

The outcome suggests that while private investors have now wholeheartedly embraced the shipping market through the KG System, here the main concern is whether the KG system in truth is a solid and perpetual vehicle for both the capital market and the shipping industry as such. In the recent years for the financial institutions, our answer would be yes. These institutions such as banks, and their agents i.e., brokers, enjoy good earnings from the investor market with incentives to collect and sell equity to the syndicating companies with mortgage instruments to attach.

However, rising concern about over capacity in some sectors, high prices & increasing pressure on debt financing to the global credit crunch lead some of the banks and shipowners in a difficult position. Due to the financial crisis, the performances of the

equity houses won't be as high as of today. In this regard, the KG funds will not be that advantageous for all the related parties. Besides the extra cost factor which has limited the number of projects that can be developed, another problem is that the political system of tax driven benefits to support the shipping industry, not really matches the transformation which has taken in place in the dry-cargo and container shipping market and moreover, owners make good use of the advantages of flying German & Marshall Island flags which are exempt from taxes. For that reason, Germany has become more attractive for the ship owners. As a matter of fact, without these advantages of taxes, the KG system will lose much of its attraction.

Up to now, the value of the vessel's contract price -or in some cases market value- has been the most crucial factor determining the percentage of the loan, although other factors such qualitative and quantitative criteria contribute to the overall assessment of the transaction. However, with the new regulations Basel II, the banks will be more reluctant in their lending policies especially towards companies with high leveraged and not strong balance sheets, i.e., while we are analyzing the KG schemes, we extracted another disadvantage of this system from the paper that it's more easily available for the highly capitalized ship owners with strong balance sheets. These are also the ones that are estimated to be affected the least by an increase in bank margins due to Basel II implementation i.e., companies with track records of managing ships will also find it a lot easier to raise finance than totally new start-ups because of the above mentioned factors- as it would be riskier.

On the other hand, we should also analyze well the market conditions and possible risks which could occur. For doing such an analysis, we take the "Beta"- which describes the sensitivity of an instrument or portfolio to broad market movements and has been employed primarily in the equity markets – into consideration and as beta is above 1 which stands more risky than the stock market, it's needless to say that shipping industry has a $\beta > 1$.

Finally, with the help of KG methodology which was originally designed for the taker-, the one to make use of the ships, and to build new vessels, this has of no doubt been a great undertaking, which above all has shown the world that Germany holds a superior force to build solidity. This system has worked well for years-thanks to the tax advantages and the strong banking system in Germany-as a matter of fact, it has been profitable for the investors and the other participants in each and every transaction. But this may not last forever because of the variable market conditions. Moreover, the

success of the KG System depends on the tax legislations and the performance of the shipping industry (the freight rates, s&p prices etc.) i.e., global economic growth because in case that a possible financial crisis, the current demand will fall and as a result neither bankers nor investors will be interested that much in the industry as before. Furthermore, without the tax exemption system which gives the KG Financing a superior rank in pecking order model, Germany won't be able to attract the investors and as a consequence, the national economy will be damaged.

To conclude, the determinants of the optimal capital structure will keep on being the main concern for the corporate finance as a result of the managers' main objective of minimizing the cost of capital and maximizing the firm's value.

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