Chapter 4
The German KG System

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Abstract The German "KG System" is an almost unique national model to finance ships. It has been one of the cornerstones of the resurgence of the German merchant fleet after World War II. Germany counts today the largest container shipping fleet in the world. The vehicle to finance this remarkable growth has been the KG. The article investigates the historical emergence of the model, its various incarnations and practical applications, especially in conjunction with different tax models. Particular focus is put on the combination with the tonnage tax. The article further investigates the fund-vehicles that commonly used the combination of KG and tonnage tax, describes the participants and finally gives an outlook on the prospects of the model.

4.1 KG as Incorporation

The German "KG System[1]" has been a subject of both envy and mockery. As an almost unique national model for financing ships, it has been one of the cornerstones of the resurgence of the German merchant fleet. In a very few years, German shipowners and private investors have built up the largest container shipping fleet in the world. The vehicle for financing this remarkable growth has been the KG system.

[1]This is also referred to as KG-model or simply KG, which have the same meaning.

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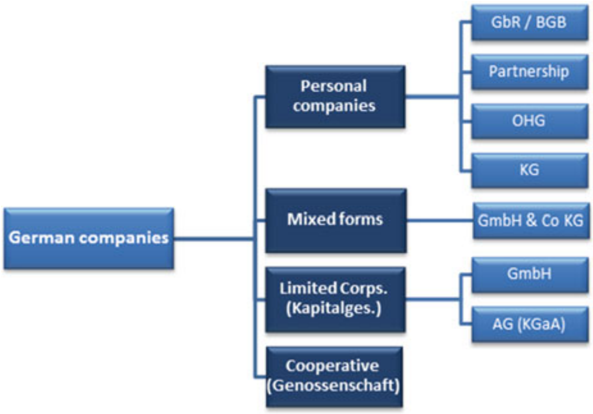

Fig. 4.1 Schematic view of different ways in which companies can be incorporated in Germany

The German “KG System” has been so named with good reason: it is a system that goes beyond the sheer legal incorporation of a single purpose company (SPC). The acronym “KG” stands for Kommanditgesellschaft, one of the possible forms of incorporation in Germany with which the country has been familiar throughout the twentieth century (see Fig. 4.1). The “system” refers to a range of reincarnations of the German tax laws, which made investments in ships and less in shipping as such attractive throughout the decades since the 1950s. The KG system was the catalyst for ship-owners, and manages to attract capital injections from outside the industry itself.

With its merchant fleet practically reduced to zero, Germany’s ship-owners struggled after World War II to restart their businesses. Capital was scarce and limitations imposed by the Allied Forces narrowed the scope of possibilities. The first few ship orders in the 1950s were placed by entrepreneurial owners, sometimes relying on their own financial resources, but often in partnership with some close associates. The centuries-old system of “Parten” seemed ready for a revival. Associates who grouped together to acquire a ship were strictly entrepreneurs, rarely mixing with institutional investors.

When German merchants started to take a financial interest in owning ships on a wider scale, dating back to the eighteenth century, they had formed a small group of individuals or companies who built or bought a ship. They had to bear all costs and responsibilities of acquiring and operating the vessels directly and, likewise, were the direct beneficiaries of the operating results. Bank finance and other forms of financial resources were not available, wherefore the group had to put up on their own all the monies required to buy, equip, and staff a merchant vessel. They also had to have sufficient expertise in actual shipping matters.

It was not uncommon that the largest or sole shareholder in the ship acted as the master at sea. He/she also often represented the cargo interests and was in charge of negotiating and concluding the sale of the cargo at the port of destination.

A modernized form of Partenreederei survived until 2013,[2] though only on a comparatively small scale. In this simple form of ship ownership, each individual stakeholder fully participates in the results of the venture according to his/her share in the company. The downsides of this type of ship ownership include the high capital requirements of the individual participant and that each shareholder ("Partenreeder") is subject to unlimited liability for the corporate debt, albeit only for the quota corresponding to his share of the total.

The rare examples were chosen by institutional investors and cash-rich individuals during the second half of the previous century, by then often supported by ship-financing banks, which could rely on the financial strength of the individuals or companies behind the owning company.

In this more modern form of the Partenreederei, the stakeholders usually entrusted a professional ship manager to deal with all practical aspects of shipping operations, including chartering. Usually the stakeholders in the modern Partenreederei were no longer identical with the cargo owners. The genuine interest of investors of a Partenreederei was still to simply derive profits from trading.

However, the provision of unlimited liability limited the number of able or interested parties. The traditional system of Parten was an inappropriate model for the mainstream shipping company of the twentieth century in Germany as it could strictly encompass only a single ship. Modern transport, booming trade and the division of labor between continents necessitated larger ships and fleets and thus entailed demands for capital, which asked for new sources of equity and entirely new structures. While the stock market had been tested at the end of the nineteenth century by some shipping companies, German investors remained skeptical of those public markets. The "KG-System" provided the appropriate answer and attracted the needed capital.

4.2 Historic Start with "ABC"

The original idea of attracting a larger group of private investors from outside classical shipping circles was brought to Germany by an outsider. Axel Bitsch-Christensen, often referred to as "ABC", came from Denmark to set up a company in Hamburg.[3] When he moved to start his own passenger liner company in Hamburg, the Hamburg Atlantic Line, he planned to build on the historic success of Hapag and Norddeutscher Lloyd. These two were the leading liner companies before the two World Wars, providing the backbone of transatlantic passenger travel. He acquired

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[2] With the changes to the German Commercial Code *Handelsgesetzbuch* that came into force on 25 April 2013, the incorporation of a Partenreederei has ceased to exist. Those that had been incorporated before can continue based on grandfather clause.

[3] He came in 1952 from Denmark.

the "Hanseatic[4]" in 1958 and planned for an even larger second ship in the early 1960s. With the German economy gaining momentum, the "Hanseatic" was nicknamed the "Traumschiff des Wirtschaftswunders", epitomizing the rapid ascent of the German economy after World War II. Being unable to finance the second ship, planned "Hamburg", out of the cash flow all by himself, he issued a prospectus for possible investors. The target group was a narrow focus group of previous passengers, typically wealthy individuals who had appreciated the amenities of a similar asset. Bitsch-Christensen was successful in raising a staggering DM 30 m from 212 private investors.

However, unfortunate timing resulted in disaster. In 1966, the "Hanseatic" was ruined by a devastating fire in the port of New York. A fluctuating dollar made the bunker very expensive and personnel costs skyrocketed by 70 % in only 4 years. Finally, ABC had underestimated the effects of airplanes on transatlantic travel: Neither business nor leisure travelers remained loyal to ocean travel, abandoning ships for planes. It was little relief to the investors that the bankrupt ship was sold as "Maxim Gorky" to the USSR and played a key role in the movie Juggernaut, which starred Omar Sharif and Anthony Hopkins, and later played host to the Bush-Gorbachev summit in late 1989 in Maltese waters.[5] Apart from the inexperienced private investors, high-profile investors such as Reemtsma, Körber and the state government of Hamburg also incurred significant losses on their investments and guarantees provided to support the project.

Though the first project failed, a long-lasting idea was born: The German shipping industry should from now on collect a large share of the equity it needed from private investors to play a pivotal role in world shipping. The typical vehicle should become the legal form of a Kommanditgesellschaftthus the nickname "KG-model". While the basic legal structure remained steady well into the second decade of the new millennium, the motivation of the investors changed, as was mirrored in the legislation that was adapted. From a purely tax-driven scheme to support the local ship-building industry, it morphed through a phase of massive tax breaks into the local application of tonnage tax to become the major equity source for the German ship-owners.

From the 1960s onwards, the German government decided to cut down on direct help for ship-owners and shipyards, and devised numerous tax-relief schemes. Basically, private investors were encouraged to put their money into ships to gain massive write-offs. Colloquially, this scheme attracted a group of "Zahnwälte" a mix of dentists and lawyers, seeking intelligent ways to reduce their tax burden.

To attract investors from outside the industry, the investors needed to be shielded from unlimited liabilities. The Kommanditgesellschaft as a personal company needed to be amalgamated with the advantages of a Limited company, the GmbH.

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[4]The 30,000 GT passenger ship had already had a colorful history as "Empress of Scotland", "Empress of Japan", and "Scotland", when it was sold in 1958. It could accommodate almost 1,350 passengers. The usual route for the Hamburg Atlantic Line led from Cuxhaven to New York.

[5]The two leaders discussed the fall of the Berlin wall at this summit.

The 1970s saw the breakthrough of single-purpose companies using a "GmbH & Co KG" structure to shield themselves from the risk and limit the exposure of investors. Wealthy individuals could be attracted due to the unusual tax breaks. Tax deductions were allowed on unlimited losses, making the gain on the tax side often higher than on the profit of the ship operations themselves.

The newly developing, so-called grey financial market attracted a new breed of intermediaries who liaised between ship-owners and potential investors.[6] The well-meant tax incentives created a situation in which the highest loss of a ship in operation could prove most attractive for the loss-seeking investors, who tried to balance high gains in other fields. In certain cases, tax losses exceeding 400 % of the individual investment were declared. These substantial losses were accumulated through a combination of high-leverage bank financing, individual equity financing, accelerated depreciation schemes, and a variety of tax-efficient cost items and fees applied during the early phase of the investment.

However, an important prerequisite for any German ship-owning structure was that the tax authorities had to be convinced that the venture would genuinely aim at making an overall profit. Therefore, the investment plan had to provide for any initial losses to be ultimately set off by profits from trading and disposing of the asset at the end of the investment cycle. Failing that, the entire venture was in jeopardy, set to be viewed as an intentional loss-making structure by the financial authorities. The competent authorities always considered the presumption that some expenses or losses were not eligible for the tax-benefit, and there was a number of cases where the ship investment failed the test resulting in actual, but not tax-effective, losses.[7]

Nevertheless, this new concept proved highly successful, and consequently, specialist syndicators ("Emissionshäuser") accordingly started to offer products to a wider range of investors. Since the profitability of the product was of lesser importance to investors, it was possible to create and charge a variety of upfront fees for putting together the shipping project and raising the equity. The usually front-heavy investment schemes allowed equity brokers to be employed to raise equity from end users. However, the fee-driven nature of this revised investment scheme increased the distance between the actual investor and the investment asset.

The legislators tried to stop the over-optimistic tax incentives and reduced them in the 1980s, as the tax-driven nature of the scheme drove the system to absurd heights: it helped to attract investors with a minimum interest in profitable ships. Shipping projects were supposed to attract investors because of the profitability, not for their loss-making capabilities.

In the late 1990s, the overreaching tax advantages were reduced. Finally, in 1998–99, the tax system was overhauled and fundamentally changed. Following the

[6]Serious early movers in the new market were companies like DIVAG (1968), Conti (1970) and Norddeutsche Vermögen (1975) or Hansa Treuhand (1983).

[7]It should be noted in this context that whilst usually the term "tax loss" is used to describe the effects of this type of investment, it would be more appropriate to call this scheme "tax deferral," as subsequent to the initial losses, taxable profits were to be generated by the ship-owning company.

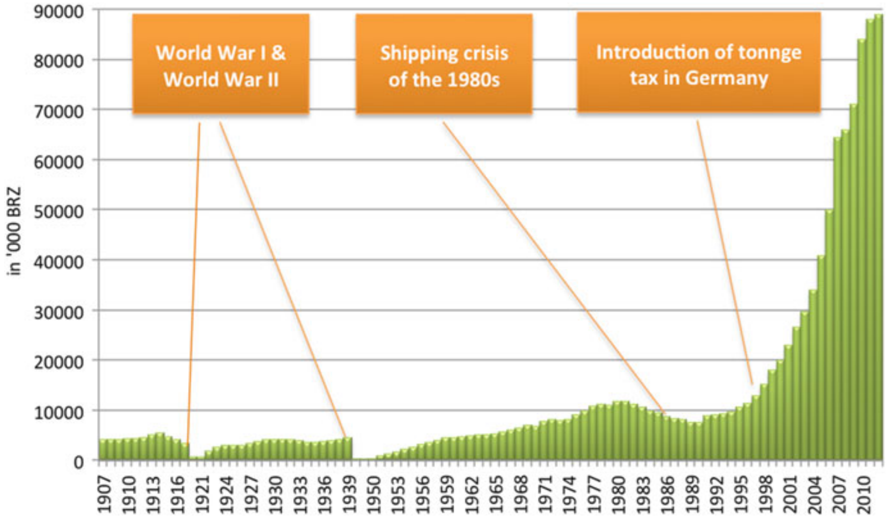

Fig. 4.2 German merchant fleet in gross tonnage. Clearly visible is the almost exponential growth rate after the introduction of tonnage tax in 1999. Other factors like China's entry into the World Trade Organization (WTO) helped emphasize the effect. Significant drops in tonnage occurred at the end of both World Wars, and during the severe shipping crisis in the 1980s. *Source*: VDR

example of other European maritime nations, Germany introduced the tonnage tax. Finally, in 1999, the introduction of the tonnage tax saw the continuous application of the KG-system. Loss-making was no more an option as investors needed a profitable project to be on the upside of the tonnage tax. In 1999, the Pauschale Gewinnermittlung, commonly known as the German tonnage tax, was implemented with the aim of eliminating tax efficient losses from ship investments. However, in return, investors could enjoy the benefit of having profits from the investment being taxed based only on the physical size of the shipping asset. As this nominal tax was limited and well-defined, usually between 1 and 3 % of the expected income from trading, profits from ship investments were often perceived as "tax-free".

This change in taxation deprived investors from continuing to be able to reduce their tax bill, yet it gave ship investments through the KG scheme a unique position in comparison to other standard means of investment like public stocks, real estate or cash deposits, which were all still liable to standard normal taxation.

While a significant number of doomsayers expected the German fleet to be driven out of the country as a result of the change in taxation laws and operating profitably out of Germany did not seem possible any longer, the opposite materialized: the German merchant fleet has increased almost tenfold in the first two decades of the tonnage tax (see Fig. 4.2). Investors came in droves and enabled German owners to build the largest container fleet in the world.

The combination of a Kommanditgesellschaft (with a shielding GmbH) as a legal form plus the application of the tonnage tax enabled a high number of investors to

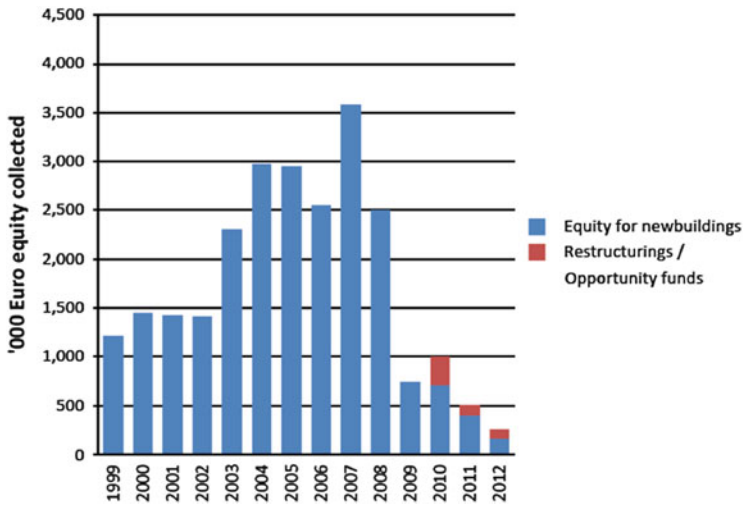

Fig. 4.3 The equity collected from investors through Emission Houses since the introduction of tonnage tax. Since 2010, a sizeable amount was collected from restructurings or opportunity funds. *Source*: VGF

participate in a single ship. The exact structure used in the boom in the first decade of the new millennium is further described below. A large number of investors, estimated to be upward of 500,000, was attracted to the shipping industry. In the year 2007 alone, some € 3.5 billion went into the equity side of ship orders (see Fig. 4.3). Altogether, investments from the private side since the mid-1990s added up to some € 30 bn.

The Kommanditgesellschaft, as a type of incorporation, consists of one or more partners (Kommanditisten), who may be persons or companies. Their internal liability for the KG debts is limited to the nominal value of their individual share of the KG's registered capital (Kommanditkapital) and their third party liability is limited to the amounts listed in the German corporate registry (Haftkapital). It is not uncommon to limit the third party liability to only 10 % of the internal liability.

In addition to that, at least one other partner being a Komplementär is needed, who again may be a person or company and whose liability for the KG debt is by definition unlimited. There are no legal minimum requirements for paid-up capital within a KG structure.

To avoid unlimited liability for corporate debt to the Komplementär as well, the typical corporate structure for German ship-owning entities and other closed end funds often features a company acting as general partner or Komplementär, rather than a person. To that end, a Gesellschaft mit beschränkter Haftung, or "GmbH," which is a limited liability corporation company, is chosen, which, by default, is able to limit its liability to its share of paid-up capital. The minimum requirement under German GmbH law is a paid-up capital of EUR 25,000. To limit liability even further, it is permissible since 2008 to have an "Unternehmergesellschaft (haftungsbeschränkt)" as a general partner, which is a small GmbH aimed at small start-up companies with a minimum paid-up capital of EUR 1 only.

The result of these liability limitation options is a ring-fenced structure, requiring very little upfront cash equity tailor-made for a single purpose investment.

When a GmbH is acting as a general partner to KG, the correct legal term to be used is "GmbH & Co. KG", thus indicating to the public that all partners in the corporate structure enjoy a limitation to their individual liability. Hence, when market participants mention the phrase "KG finance" or "KG owners", they actually refer to a corporate structure only, which is not only common in ship-owning entities, but is widely used for other types of businesses throughout Germany.

Together with the change in tax rules in 1999, the investor base interested in investing in the expanding market of closed-end shipping funds broadened as well. No longer were ship investments a domain of the wealthy segment of Germany's population; even individuals with below-average incomes thought it attractive to invest.

4.3 Forms of Funds

4.3.1 Single-Ship-Fund

The original fund was constructed to invest in a single asset. It has remained the predominant form of investment vehicle in the KG market.

4.3.2 Savings Fund

As of the mid 2000s, some special funds based on continuous monthly equity collections rather than front-end equity investments were set up to raise equity for ship investments from individuals, who had only limited free cash available for investing every month. It was marketed similar to a savings plan.

4.3.3 Fleet Fund (Flottenfonds)

To cater to the strong increase in demand for ship investments, syndicators started to put together groups of ships within the same funds (Flottenfonds[8]), usually using a holding structure, owning several single-purpose ship-owning entities. Whilst in

[8] The "Flottenfonds" refers to a fleet of two or more ships.

the beginning, these funds commonly comprised ships of identical age and make, later on different types and sizes of ships were grouped together. In doing so, the syndicators purported to reduce the comparatively higher risk of investing in just one particular shipping market by entering, for e.g., tankers, dry bulk carriers and container vessels into one investment fund.

4.3.4 Fund-of-Funds (Dachfonds)

This vehicle had been copied from other fund markets. The umbrella fund invests only in other funds, not directly into ships.

4.3.5 Opportunity Funds

This type of fund had been motivated by the financial and shipping crisis and was conceived for the first time in 2009. It had the goal of collecting money from investors either for additional required equity in existing funds or as a possible way of buying up financially distressed tonnage. Commonly blind-pool structures were chosen i.e. at the time of fund-raising, the actual target assets were described, but not identified.

4.4 Participants

A typical modern KG company may feature the following participants to be able to finance one or several assets.

4.4.1 Ship-Owner/Ship Manager

The ship-owner even though this terminology may be confusing in the KG-world or ship manager, often having both functions, aims to expand his/her fleet or replace existing tonnage. He/she is either unable or unwilling to provide all equity necessary to obtain full finance to acquire or order ships. In his/her function as ship manager, he/she often takes care of the full technical and commercial management, including accounting, of the vessels in his/her fleet. In addition to that, the ship-owner/manager, in most cases, provides the corporate management of the ship-owning entities as well, which in itself creates a conflict of interest. However, the ship-owner/manager regularly takes a share in the ship-owning entity that is often comparatively small. Importantly, the ship-owner/ship manager is in most cases the initiator of the project.

4.4.2 Ship Financing Bank

The bank provides the third party finance based on shipping projects, usually between 50 % and, in former boom markets, occasionally up to 90 % of the vessel acquisition cost. Most KG-model ships were financed in the place by German shipping banks. A special feature of the German ship financing banks was, past tense intended, to pre-finance the cost of building a ship, the equity, and sometimes even the cost of raising equity, bringing the German banks' exposure often in excess of 100 % of the ship acquisition cost and ship value. In lieu of security, the bank got a first preferred mortgage on the asset and an assignment of all earnings and insurance proceeds. Where pre-financing of equity or other cost was involved, additional securities like placement guarantees were demanded by the bank. However, the bank did not intend to take an equity stake in the KG company.

4.4.3 Syndicator/Emission House

The syndicator is entrusted with the task of raising equity in the German market.[9] The syndicator produces the offering memorandum to the investment market and either directly, or through equity brokers, collects equity from investors. Frequently, they have to provide placement guarantees to the ship financing banks in cases where investors are sought only after the ship acquisition has taken place. Often the syndicator, in addition to taking a small share in the ship-owning company, owns a controlling share in the ship-owner/manager, the corporate management company (Komplementär) and/or the trustee, which leads to various conflicts of interest at different levels of the structure.

4.4.4 Trustee

Representing the interests of the shareholders, the task of the trustee is to act for and on behalf of the shareholders of a ship-owning KG. By definition, the trustee should be in every respect independent from the syndicator, which, however, frequently is not the case. Taking a small share in the ship-owning company is common for the

[9]Some of the more prominent syndicators are Conti, HCI, MPC, Lloyd Fonds, König & Cie. and Nordcapital.

trustee. Often he/she acts as full representative of the investors towards the other participants in the ship-owning company ("Treuhandkommanditist").

4.4.5 Equity Broker

The equity broker directly acquires equity from individual investors. They either operate alone, or as part of an equity broking pool. In certain cases, they provide equity placement guarantees toward the syndicator or the ship-financing bank. The equity broker may or may not take a share in the ship-owning company.

4.4.6 Advisory Board

In many cases, an advisory board is formed from within a ship-owning KG structure, with the task of advising and controlling the management of the KG company. More often than not, the advisory board comprises those equity brokers who raised the largest part of the equity. The advisory board is elected by the KG shareholders during the annual shareholders' meetings. Its term is normally for fixed periods of between 1 and 4 years. The advisory board usually cannot overrule the management's decisions. However, the board is entitled to be given access to all documentation and information pertaining to the KG structure. Members of the advisory board commonly are shareholders of the KG company. However, in most cases, there is no general requirement to that effect. Quite often, the trustee is entitled to having an own representative present during advisory board meetings, but does not participate in resolutions taken by the board. Frequently the Komplementär has the right to nominate one of its own persons to the advisory board.

4.4.7 Ancillary Service Providers

Further participants in modern shipping KG ventures include legal advisors on contracts, memoranda of agreement, articles of association and bank documentation, auditors to verify the offering memorandum and later to oversee the investment process, tax advisors to safeguard a tax-efficient structure, and public notaries to file the various kinds of inaugural and statutory corporate documentation. None of them usually takes a share in the ship-owning structure.

4.4.8 *Investor*

The investor aims to invest in an asset-backed venture and expects security from the asset plus above average net proceeds from the investment. Depending on the details of the setup of the ship-owning company, the investor may take an indirect share in the ship-owning company then represented by the trustee acting as "Treuhandkommanditist", which would grant a certain level of anonymity as the investor in this case will not be recorded in the corporate registry. Or he/she would take a direct share in the KG company and be listed in the corporate registry. Given the multitude of service providers involved in the KG structure, the investor has few other tasks to look after than signing the KG documentation, effecting the payment of his share, and often issuing a power of attorney to the trustee, enabling the latter to effect the registration (and later changes to the same and/or deregistration) of the investor to and from the corporate registry.

It has been fashionable at times for investors to leverage their own equity by financing their KG share through specialized banks, often being able to achieve a rather high leverage of up to 90 %. In doing so, investors would be able to leverage an already highly leveraged investment even further.

4.5 Strategic Approach and Key Features

Contrary to the majority of other leading ship-owning nations, the modern German KG system for ship investment is not primarily directed at deriving profits from asset play, but rather at generating steady cash flows from operating the assets, preferably under time charter contracts. KG funds were not set up for fast action on the market but for a long, steady, and predictable investment period (see Table 4.1).

The steady nature of the investment projects equally led to a relatively illiquid second-hand market for KG shares. If investors needed or wanted to divest (in the typical cases of inheritance, divorce or change of investment allocation[10]) this could prove difficult. Several Emission Houses thus offered secondary market platforms for their own investors. Meanwhile, public platforms have also gained traction.

As described above, the "KG-System" became a formula for success in 1999, when the tonnage tax was introduced in Germany. Today, these two components are being considered two sides of the same coin, which has resulted in the historical boom—the fleet expansion in the country—ever since. For the sake of completeness, the tonnage tax component is briefly described below.

[10]This could also comprise profit realization or tax optimization.

Table 4.1 Key advantages and disadvantages of investing in modern German KG shipping funds

Advantages	Disadvantages
For investors	
Investment possibilities starting from € 10,000 and lower	There are usually little or no financial reserves available to structure it, making it vulnerable in times of crisis
No own shipping expertise necessary for investor	Low level of transparency
Vehicle for realizing high-volume transactions for syndicators with little or no own equity	Comparatively high cost of equity acquisition
Comparatively high leverage financing possible without additional securities outside of the investment target	Syndicators have no own transportation requirements
Detailed and all-encompassing contractual paperwork	Multiple conflicts of interest among key organs of the funds
Favorable tax environment: ROI + tonnage tax usually brought better returns than other closed-end funds	Little or no influence on corporate and ship management for investors, particularly disadvantageous in times of crisis
For ship-owners	
Investment with long-term horizon	Limited possibilities for asset play
Commercial control of the vessel(s)	Numerous and varying shareholders for every ship
Growth opportunities beyond the base of ship-owner's equity	Country-specific model
No cross-collateralization	
Transfer of financial risk to investors while retaining his/her position as "ship-owner"	Moral obligation to contribute disproportionately in the rescue of distressed assets

4.6 Tonnage Tax

When tonnage tax was introduced through §5a of the German income tax law, the lawmakers had two major goals in mind: first, it was to draw a line under the various forms of subventions, tax-breaks and tax-schemes that had supported shipping since 1949. Secondly, it was to harmonize German tax laws with international and particularly European taxation. As the EU has set out clear guidelines about the applicability of tonnage tax regimes in member-states, the framework was closely defined. Thus, tonnage tax has become the standard way of taxation in the maritime European countries. After Greece, the Netherlands and Norway led the field with the introduction in 1996, followed by Germany (1999), the UK (2000), Denmark, Spain, Ireland, Belgium and France (all 2002), Lithuania (2006), Poland and Slovenia (2009), Cyprus (2010) and Finland (2011).

Despite its nomenclature, tonnage tax is not a tax as such. It is a way of determining the individual taxation of people and entities that fall under income tax. In other terms: it defines the amount that is being taxed with the normal tax rate. The tax rate is not changed, only the amount of income is alternatively defined.

The basis of the taxation—and this is the anomaly—is not based on the profit from operations of the ship but rather on the tonnage of the asset. The principle being, that the taxation basis is set relatively low, but remains unchanged for 10 years. No matter if the ship makes a profit or accrues losses, the tax on the constantly defined "income" is always due. Tax deductions for losses are no longer possible. Therefore, in years with positive income, the rule is rather advantageous for the investors in shipping KGs, as was the case until 2008. In years of negative income, the fiscal benefit can become very large, as steady taxes are due despite losses, as was the case for many ships since 2009.[11] In colloquial terms, the tonnage tax is as some kind of "flat-rate-tax", a bet for the investor that more years are positive than negative while the ship operates under tonnage tax.

When introducing tonnage tax, the lawmakers also had in mind that the net fiscal effect should be positive[12] while the scheme was also supposed to have a measurable positive impact on the maritime cluster. Thus, some conditions apply for any ship to be able to come under tonnage tax:

- The company head office needs to be in Germany,
- It applies only to merchant vessels in international trade (including tugs and some research ships)
- The ship needs to be in the German ship registry for at least 183 days per year
- The employer function for the ships officers needs to be carried out from Germany
- Once attributed, the tonnage tax is binding for 10 years

The tonnage tax applies also to some collateral business under very narrow guidelines.

Calculation of Tonnage Tax

The practical calculation of the tonnage tax is almost identical to most other European countries. An illustrative example assumes an investor with a share of € 100,000 in a fictitious capsize bulker named "Paula". The investor has an income tax rate of 35 %.

The basis for the calculation is the net tonnage (NRZ) of the ship. The "Paula" has a gross tonnage of 175,000 GT. This translates to a net tonnage[13] of 58,083 NRZ. The total equity investment in "Paula" is € 20,300,000.

The calculation of the applicable tax base (per day) is done in four steps, taxing the smaller tonnage heavier than the larger tonnage, as per Table 4.2.

[11]However, the historical returns for ships under the KG-system have been positive for more than 94 % of the projects from 2000 until 2011, with an average capital growth of 11.3 %.

[12]The latest study conducted by the government from 2006 showed in that year alone a fiscal net benefit from shipping of € 167 million even in booming years for the industry. The net benefit has been much larger since the downturn.

[13]Nettoraumzahl or NRZ.

Table 4.2 Current tonnage tax levels in Germany

NRZ	Euro/100 NRZ	Taxable profit (in Euro)
100–1,000	0.92	9.20
1,000–10,000	0.69	62.10
10,000–25,000	0.46	69.00
>25,000	0.23	76.09
Total		216.39

Assuming that the ship has been in the German register for the full year, this defines the flat profit as $365 \times 216.39 =$ €78,982.68 p.a. This flat rate does not depend on the days the ship was in operation. For the investor with a share of 100,000 from 20,300,000 (or a little less than half of a percent), this defines a taxable income of €389,077 in respect to the investment. With the assumed tax rate of 35 %, the tax due—independent of the income situation of the ship—is €136,18. The effective tax rate is typically below 5 %.

4.7 Outlook

At the time of writing, the KG model for German ship financing is subject to severe challenges. A number of single-purpose ship-owning companies have filed for insolvency. The combination of the worldwide financial crisis, the shipping crisis, and the delivery of the ships ordered during the boom times between 2003 and 2008 have resulted in a vast oversupply of tonnage, which will take years for the markets to digest.

Whether the German ship finance model through KGs as such will survive this perfect storm remains an open question. Most market participants expect at least an extended drought in German private equity and supply of bank finance to the shipping industry. When eventually the equity markets will turn their attention back to shipping, private investment through KGs is unlikely to take up its role as the dominant source of equity for the German shipping industry.

However, it is important to note that the KG as a structural setup—in tandem with the tonnage tax—is not in question. They are both on a reliable and comparable basis. The tonnage tax has proven to be of benefit to the government. What may change is the type of investors who feel comfortable about using the system for the allocation of investments and the size of their investments.