8

Structured Finance in Shipping

Ioannis Alexopoulos and Nikos Stratis

8.1 The Changing Landscape of the Ship Financing Market

A key characteristic of the shipping industry is that it is highly capital intensive. The international shipowning community is at all times in need of significant amounts of capital in order to fund its fleet modernization and expansion strategy as well as to refinance its existing trading fleet. Traditionally, shipowners have satisfied their ship financing requirements through their own (or family and friends) equity resources as well as on bank debt finance, which represents the cheapest form of external capital when compared to other alternative sources. With China formally entering the World Trade Organization (WTO) in 2001, the international shipowning community was faced with an increased demand for its services, as it was called upon to assist fueling and facilitating the so-called BRICs' (Brazil, Russia, India and China) tremendous growth.

The period 2001–08 was a period of strong fundamentals and growth in the world economy, and trade and shipping was playing a key role in the

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M.G. Kavussanos, I.D. Visvikis (eds.), *The International Handbook of Shipping Finance*, DOI 10.1057/978-1-137-46546-7_8

globalized environment. In order to meet the increased demand for shipping services, international shipowners embarked on an impressive fleet expansion and modernization process, placing a large number of newbuilding orders in Japan, China and Korea.

This tremendous fleet growth was primarily funded by bank debt and, more specifically, largely by European banking institutions. German, Scandinavian (Norwegian and Swedish), French, UK and Dutch banks dominated the ship finance industry during the period 2001–08, committing significant amounts of capital at very attractive (for the shipowner) leverage and pricing terms. During the peak of the dry-bulk shipping freight market (May 2008), competition within shipping banks had squeezed margins to levels below 100bp, whilst financings to the tune of 80–85 % of the vessels fair market value was becoming the norm. The strength of the freight market, combined with readily available, cheaply priced debt finance, as well as the abundance of equity from the (US predominately) capital markets were fueling a continuous increase in asset values which had reached bubble levels.

That period of irrational exuberance had to somehow end and this happened very suddenly and violently on 15 September 2008 with the collapse of Lehman Brothers as a result of the mortgage subprime crisis in the USA. The Lehman collapse with its catastrophic effect on the global interbank market and the world trade and economy as well as the subsequent European sovereign debt crisis had a transformational impact on the ship financing industry. Traditional European shipping banks, which had been bailed out by their countries' respective governments, were no longer committed to the shipping industry. Since 2008, most global ship financing banks, the majority of which are European and which traditionally supported the international shipping industry, initiated a significant deleveraging, as most of them did not have adequate capital to support properly the capital-intensive shipping business.

During the period 2008–15, a number of traditional shipping banks either exited shipping altogether or started gradually running down their portfolio and reducing their overall shipping exposure. Regretfully, the ensuing gap has not been adequately covered by new shipping banks entering the market; there have been few newcomers, some of them from the USA and Australia. In view of the limited availability of "plain vanilla" senior debt finance during the post-Lehman collapse period, the international shipowning community intensified its efforts to diversify its capital structure, exploring and successfully tapping alternative financing structures.

Korean, Chinese and Japanese (to a lesser extent) government controlled financial institutions and export credit agencies (ECAs) represent an alternative

capital source that was successfully tapped by the international shipping community. These institutions were quick to step in and support shipowners with their newbuilding programs in their respective countries. Furthermore, other alternative financing structures such as leasing and mezzanine finance have been largely explored during the last six years and have been employed in complementing shipping companies' capital formation. These forms of capital have always been available to shipowners but, during the pre-Lehman collapse period, they were largely ignored as the shipping community tended to favor cheaper, simpler and readily available bank finance.

Overall, in this unstable shipping and ship financing environment, where traditional debt finance sources have become scarce, shipowners have adapted and become more flexible and creative in order to ensure their companies' viability and growth. Structured finance instruments (i.e. complex financial transactions), and in particular ECA-backed ship finance, leasing and mezzanine ship finance, have assisted in this direction and are analyzed in this chapter.

8.2 ECAs

8.2.1 What Are ECAs?

ECAs are mostly government-controlled or quasi-governmental organizations whose role is to support their respective home country's export of goods and services by extending export finance structures. In view of the government's involvement, export finance is driven by the country's export policy and is fundamental for its economy, as it encourages manufacturing, industrial output and employment. Especially during periods of financial turmoil and slowing economic activity, necessary government support for the domestic industry is achieved through the involvement of ECAs as they may constitute the necessary catalyst to boost trade and stimulate exports.

Export credit finance has long been used as a source of capital in project finance as well as asset finance facilitating exports in a number of industries, such as telecommunications, technology, oil and gas, mining and metals, infrastructure, power and energy, and transportation (civil aviation, the offshore industry, cruise and maritime). ECAs of major shipbuilding countries have supported the international shipowning community for many years by funding their newbuilding programs in the ECAs' home countries. A list of the most important ECAs for the maritime, cruise and the offshore shipping sectors is provided in Table 8.1.

Table 8.1 The most important export credit agencies for the maritime, cruise and offshore shipping sectors

Area	Country	Export credit agencies
ASIA	Korea	Korea Trade Insurance Corporation (K-SURE)
		The Export–import Bank of Korea (KEXIM)
	China	China Export & Credit Insurance Corporation (SINOSURE)
		Export–import Bank of China (CEXIM)
	Japan	Nippon Export and Investment Insurance (NEXI)
		Japan Bank for International Cooperation (JBIC)
EU	Germany	Euler Hermes Kreditversicherungs-AG (HERMES)
	Norway	Norwegian Guarantee Institute for Export Credits (GIEK)
	France	Compagnie française d'Assurance pour le commerce extérieur (COFACE)
	Italy	SACE S.p.A. Servizi Assicurativi del Commercio Estero (SACE)
AUSTRALIA	Australia	Export Finance and Insurance Corporation (EFIC)

8.2.2 ECAs' Role in Ship Finance

Prior to the financial crisis and in particular during the period from 2000 to 2008, the role of ECAs in ship finance was rather limited. During that period traditional debt financing sources were readily available (on a large scale and attractively priced) from international as well as local shipping banks to fund shipowners' newbuilding projects. These banks were however adversely affected by the unprecedented events in the financial markets in 2008 as well as by the severe correction in freight rates and asset values in shipping.

As a result of the financial and shipping crisis, a number of shipping banks were faced with big problems in their shipping portfolios and increased regulatory (Basel III) constraints, which forced them to either scale down their lending or leave the industry altogether. The credit squeeze left a big funding gap for the shipping community, especially for shipping projects involving newbuilding vessels, which were still under construction. ECAs were quick to step in, providing a significant part of the necessary funding, either by extending direct funding to the shipowners or by issuing ECA guarantees/policies (assigned to the commercial banks) insuring commercial and/or political risks, managing, thus, to close that funding gap and supporting in that way their local shipbuilding activity.

Overall, during the last couple of years, as the availability of bank lending became tighter, the shipowning community has increased its interest in export credit finance. ECAs were there to meet this increased demand, and we have witnessed an important increase in lending volumes, particularly from ECAs of important shipbuilding nations such as Korea and China. The strong growth of ECA-backed financing is evident through figures published

Table 8.2 Examples of publicly reported export credit agency transactions concluded in the maritime, cruise and the offshore shipping sectors

Sector	Shipping company	Billion	Export credit agency	Newbuilding project
Cruise	Norwegian Cruise Line[3]	USD0.91	EULER HERMES	2 × Cruise vessels
Offshore	Ocean Rig[4]	USD1.35	GIEK & KEXIM	3 × Deepwater drillships
Cruise	Royal Caribbean[5]	EUR0.89	COFACE	1 × Mega-cruise vessel
Shipping	Scorpio Bulkers[6]	USD0.23	CEXIM	7 × Capesize vessels
LNG	Nigeria LNG Ltd[7]	USD0.72	KEXIM & KSURE	6 × LNG vessels
Cruise	Star Cruises[8]	EUR0.60	EULER HERMES	1 × Cruise vessel
LPG	Dorian LPG[9]	USD0.5	KEXIM & KSURE	18 × VLGC vessels

by *Seatrade Asia Week*,[1] which showed that the Chinese Export Import Bank (CEXIM) committed USD14 billion in loans to the shipping industry, up from USD12 billion in 2012 and USD11 billion in 2011.

Export credit finance is at present considered an important source of capital for the shipping industry, especially for expensive and capital intensive maritime projects. Under the present conditions, commercial banks would find it difficult to commit to such expensive projects, thus we are seeing ECAs playing an increasingly important role for such "high-value" projects in the cruise, offshore, LNG, LPG as well as in the traditional sectors. Some examples of publicly reported ECA transactions that have been concluded in the recent past are provided in Table 8.2.

8.2.3 ECA Ship Financing Structures

ECA involvement in maritime projects takes predominately two forms. The shipowner will either raise funding from international commercial banks, on the back of a guarantee or an insurance policy issued by an ECA, or he or she will raise the funding directly from the ECA. Under the first scheme, the "ECA-guaranteed" financing structure, the ECA promotes and facilitates the export of a maritime asset by issuing a guarantee/insurance product. Foreign commercial banks extend the necessary financing (a term loan facility) to the overseas buyer/importer of the maritime asset being constructed on the back of this ECA guarantee/insurance policy. Under this arrangement, the commercial bank is effectively assured that it will receive payment, by the ECA, in the event of a payment default by the shipowner (provided of course that the policy's conditions and requirements are met), whether connected to any insolvency event, any other commercial event or in connection with any political event. Since the guarantee/insurance cover is backed by the ECA's

government, the commercial bank's guaranteed exposure is no longer considered and treated as a shipping risk but rather as a sovereign risk. K-SURE in Korea, SINOSURE in China and NEXI in Japan are common providers of such ECA-guaranteed financing schemes.

Figure 8.1 provides an outline of a basic ECA guaranteed/insured financing structure. It should be noted that an ECA guarantee involves costs related to its insurance policy, which must be borne by the shipowner; the most typical of these costs being the ECA cover fee (ECA premium). The amount of such a fee is calculated on the country risk of the importer. However, in shipping, due to the industry's international element and with a number of different jurisdictions coming into play, the ECA will first decide on the country to which it will allocate the risk of this financing; the ECA cover fee will be determined accordingly.

As an alternative to the ECA-guaranteed/insured financing structure, the export–import bank of the exporting (shipbuilding) country may extend a direct loan to the shipowner (importer/buyer of the maritime asset). Under this arrangement, it will either issue a term loan facility to the borrower or will participate in a banking consortium with other commercial lenders, which has been put together for the purposes of financing the specific asset (see Fig. 8.2). As an example, in Korea, China and Japan the respective

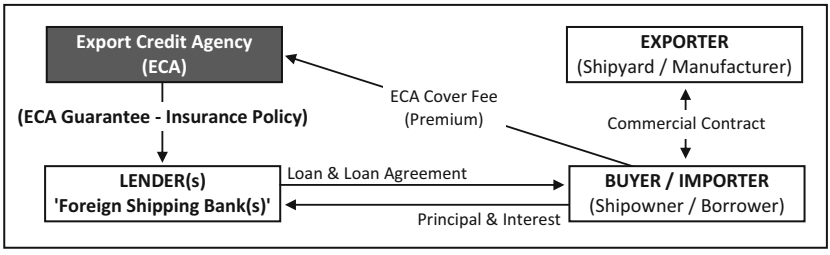

Fig. 8.1 Export Credit Agency guaranteed financing structure

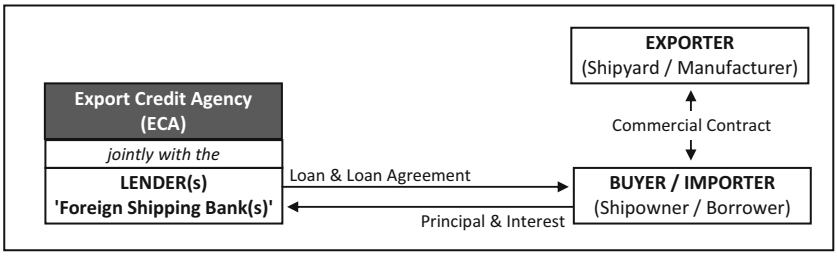

Fig. 8.2 Export Credit Agency direct loan to buyer/importer

export–import banks Korea Export Import Bank (KEXIM), CEXIM and Japan Bank for International Cooperation (JBIC) will be involved as direct lenders in such financing arrangements.

A financing may also be offered by an ECA in the form of an interest rate subsidy, whether with respect to a floating market rate (LIBOR plus a fixed margin) or, alternatively, to a fixed interest rate determined on the basis of the commercial interest reference rate (CIRR). Under the CIRR scheme, interest on the relevant facility accrues at a minimum interest rate, the CIRR rate, which is set monthly[2] by the OECD for government supported export credits.

8.2.4 ECA Requirements and OECD Guidelines

The role of ECAs is to promote exports and, as already mentioned, an ECA financing structure is usually government backed or funded. As a result, a key requirement that exists for these financings is for the transaction to have a strong element of local content. In shipping, this requirement is typically met in a transaction involving a newbuilding vessel constructed at a local shipyard. Another possibility would be for the asset to have a major equipment component that has been manufactured locally. In addition to the local content requirement, ECAs tend to be involved in large shipping transactions (involving either a large number of vessels or high-value shipping assets) as these have a larger impact on the local industry. Furthermore, ECAs tend to work and support big shipping clients who have a long track record and a critical mass in shipping as well as a transparent corporate holding structure and audited financials.

In their effort to support their local industries and economy, ECAs may enter into intense competition, which can have devastating effects on the international trade and shipbuilding. As a result, a number of countries have realized that some level of discipline is required and the OECD has formulated a set of principles and guidelines to be followed by all ECAs.

ECAs and shipping, in particular, is treated by the OECD guidelines in the "Sector Understanding on Export Credits for Ships (SSU)", which provides a set of non-binding guidelines for government-supported export credits for ships. This has been agreed with the participation of Australia, the European Community, Japan, Korea, New Zealand and Norway but, interestingly, Brazil and China are not members of the OECD. There have been recent talks about a more formal binding agreement, which would also involve Brazil and China, so the OECD guidelines may be revised in the near future. An overview of the OECD's SSU is provided in Table 8.3.

Table 8.3 OECD guidelines: export credits for ships

Ship	OECD guidelines apply for any new sea-going vessel of 100 GT and above
Repayment term	The repayment term for an export credit must be a maximum of 12 years after delivery
Cash payment	The importer (shipowner) who is buying the ship is required to make minimum cash payment of 20 % of the contract price by delivery
Repayment	The principal repayment of the export credit must be repaid in equal installments at regular intervals of normally 6 months and a maximum of 12 months
Interest	Interest must be paid every six months minimum and the first payment of interest shall be made no later than six months after the starting point of credit

Source: OECD Council Working Party on Shipbuilding (WP6), Sector Understanding on Export Credits for Ships (SSU)

8.2.5 Advantages and Disadvantages of ECA Ship Finance

ECAs play an increasingly important role for the shipowning community. These are institutions which have significant capacity and liquidity resources to support shipowners' fleet expansion, modernization and, in many cases, diversification strategy in high-value shipping sectors. Strategic objectives as such may not be possible to realize by the shipowners' traditional shipping banks, in view of the significant capital adequacy restrictions applied to them and their limited capability to provide funding of the magnitudes required, especially during periods of financial turmoil when shipping banks generally tend to cut back on lending. In addition to facilitating a shipping company's expansion, ECAs allow shipowners to diversify their finance. They represent a long-term, attractively priced, ship financing source for newbuilding projects, complementing shipping companies' capital structure and enhancing their value through the reduction of their overall weighted average cost of capital (WACC). ECA ship finance also allows shipowners to retain capacity of other capital sources (debt from their house banks as well as equity resources) for other shipping projects.

Export credit finance has a number of merits, but it also has some disadvantages. As discussed, the OECD guidelines introduce the requirement for the repayment of the export credit finance (down to zero) within a maximum period of 12 years. This can be considered a disadvantage of the overall financing arrangement when compared with commercial ship financing terms for newbuildings, which generally provide a repayment profile of 14–15 (and in some special cases even up to 18) years, depending on the type of the shipping

asset and the financial strength of the shipowner. Moreover, the introduction of an ECA in a ship financing structure will invariably cause delays in the overall procedure. The agency will have to familiarize itself with the shipping client and the project under consideration, whilst there will be a number of internal processes that will have to be followed. Finally, from a documentation perspective, the loan agreement, the security documents as well as the guarantee/insurance issued by the ECA will necessitate the involvement of a number of experienced lawyers who, through their experience and use of new standardized terms, would enable the swift conclusion of a transaction. As a result, export credit finance often represents a more structured, complex and costly arrangement when compared with a traditional term loan shipping facility.

Overall, export credit finance has the attractiveness of being able to facilitate and promote exports, imports and international trade, and to finance assets by way of making available to borrowers products and terms which commercial lenders are simply not in a position to offer. This is particularly important during periods of slowing economic activity and financial instability. At present, their role in stimulating the global economy, manufacturing and employment is recognized globally by all governments. Thus, they are expected to continue being an important capital source for the maritime transportation industry in the near future.

8.3 Leasing Ship Finance

Despite the capital intensive nature of shipping, and contrary to all other capital intensive industries (e.g. aviation, rolling stock, telecoms, mining), shipping has historically lacked the benefits of organized alternative sources of capital, such as leasing and mezzanine finance, and has been dominated by plain vanilla debt and owners' equity. The reasons contributing to this can be summarized as follows:

(a) A high degree of fragmentation and non-transparency: there are thousands of unrated owners with different fleet sizes, fleet compositions in terms of age profile and vessel type, capital structures and operating standards.
(b) A non-standardization of assets classes, even when referring to the same asset type: a Panamax bulk carrier built in China could be significantly different to one built in Japan.
(c) A highly cyclical nature of the industry and unpredictability of earnings and asset values.

(d) The banks' dominant position in the ship finance space that has historically provided high advance ratios and low pricing, setting the pricing tone for all transactions (even if banks have, more often than not, mispriced the risk return profile of their loans).

The combination of the above has resulted in the reluctant participation of established alternative capital providers, such as leasing houses and mezzanine finance providers. Yet combinations of appropriate leasing and/or mezzanine finance structures can offer relevant benefits on companies' balance sheets to release capital for growth and prove accretive to equity returns; these benefits are discussed in detail below.

8.3.1 Ship Leasing

Leasing structures offer companies the opportunity to raise higher levels of financing compared with what they can traditionally access from the debt market. Leasing structures offer up to 100% asset financing, while it is also possible to support predefined working capital needs, resulting in 110–115% financings. As such, they can prove to be very useful tools in capital-intensive industries and allow companies to pursue growth opportunities (fleet renewal programs) with minimal upfront capital expenditure. Alternatively, they can be used as liquidity instruments during depressed freight markets and assist companies to raise liquidity by monetizing the equity value locked up in their assets (sale and lease back of assets).

However, and despite the potential attractiveness of 110% financing, lease structures can only be accessed by companies that are able to demonstrate an ability to service obligations of such instruments; in shipping, more often than not, this translates to a requirement for a strong balance sheet or a need for long-term employment backing for the financed assets.

When compared with senior, secured, plain vanilla debt finance, leasing structures effectively offer higher levels of leverage. As a result, leasing structures entail a higher level of default risk whilst their overall pricing is invariably higher compared with that of senior debt finance. Under normal circumstances, a leasing structure that offers 100% finance, at an overall pricing that is equal to or less than that of the shipping company's WACC, should be accretive to the company and should thus be pursued. Leasing structures rely on equity committed by the leasing company and senior debt sourced from banking institutions. As a result, the main two parameters that ultimately determine the overall cost (pricing) of a leasing structure are driven

by the leasing company's return on equity requirements for undertaken risks and its ability to source adequate levels of debt at competitive pricing. This is why a wide variation on pricing exists between leasing companies.

As shown in Fig. 8.3, in a typical ship leasing structure, a leasing institution sets up a Special Purpose Company (SPC), which will own the vessel. The vessel is then acquired by a combination of equity capital, which is committed by the leasing institution and debt capital raised from a debt financier (shipping bank), which is secured by a first priority mortgage on the vessel. The raising of debt capital is also the responsibility of the leasing institution. The SPC then leases out the vessel to the shipowner, or, more specifically, to his or her leasing-in SPC. The leasing institution is referred to as the "lessor" (the asset legal owner) whilst the shipowner is referred to as the "lessee" (the asset disponent owner). At the inception of the lease arrangement, the shipowner provides to the leasing institution a performance guarantee for all obligations of his or her leasing-in SPC whilst, during the lease, he or she makes lease payments to the leasing company as per the terms stipulated in the lease contract.

Another significant factor that should be considered when evaluating a lease structure is the effect of the lease payment on the project's cash flow. As discussed above, lease finance structures involve equity committed by the leasing company and senior debt sourced from banking institutions. As a result, lease payments have to amortize and remunerate (a) the underlying debt component of the lease structure and (b) the leasing institution's equity component. Consequently, lease structures tend to have higher cash-flow servicing requirements than plain vanilla debt financings.

8.3.2 Types of Ship Leases

Leasing structures are classified in two categories: operating lease and finance lease. The first effectively results in off-balance sheet financing, and the latter is on-balance sheet, as per the current accounting rules, under which the distinction between on or off-balance sheet, and thus operating versus finance lease, depends on whether substantially all of the risks and rewards of ownership of the leased asset have been transferred from the lessor (the company leasing out equipment) to the lessee (the company leasing in equipment). Under an operating lease, the leased asset is recorded only on the balance sheet of the lessor and both lessee and lessor recognize rentals under their income statements for the duration of the lease. Under a finance lease also the lessee is obliged to record the leased asset on its balance sheet at the lower of the fair value of the asset or the present value of the minimum lease payments.

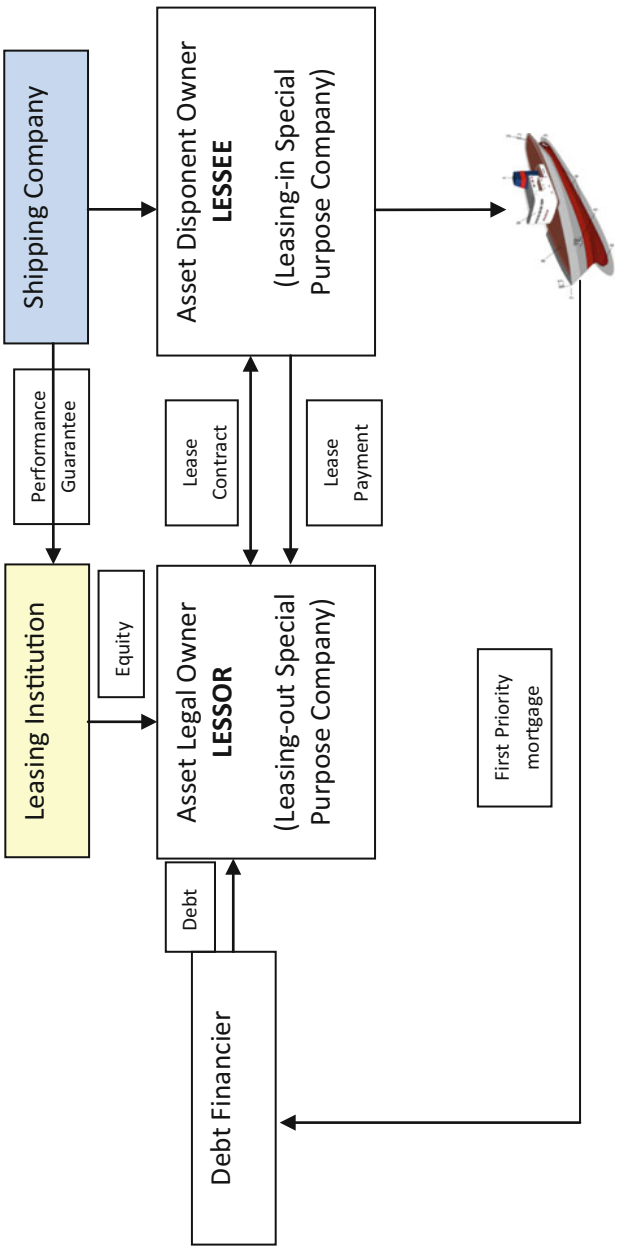

Fig. 8.3 Ship leasing structure

A lessee is classified as a finance lease if any of the following four criteria are met:

1. the lease contract specifies that ownership of the asset transfers to the lessee;
2. the agreement contains a bargain purchase option price, that is option price(s) that can be reasonably argued to be at a significant discount to a reasonably expected price level;
3. the fixed and non-cancelable lease term is equal to 75% or more of the expected economic life of the asset;
4. the present value of the minimum lease payments is equal to or greater than 90% of the fair value of the asset.

If none of these criteria is met, the lease can be classified as an operating lease.

8.3.3 Ship Leases: Benefits and Drawbacks

Both operating and finance leases offer lessees the ability to pursue growth opportunities with no, or reduced, upfront equity commitment from their side; both structures can be used as liquidity instruments for the conversion of the equity of assets into cash during low freight markets; and under both structures, asset ownership is held by the lessor.

Lessee Benefits of an Operating Lease There is no requirement to report the lease transaction on the lessee's balance sheet, meaning that operating leases result in "invisible" leverage, allowing the lessee to pursue growth opportunities without affecting its balance sheet's financial ratios (e.g. gearing) and improving return on assets. At the end of an operating lease, the lessee simply redelivers the leased asset(s) to the lessor; as such, it is the lessor who bears the full residual risk of the asset. In fact, sale and leaseback transactions can be pursued by lessees simply for the transferring of asset residual risk at later years while retaining use of the assets. In such operating lease arrangements, the shipowner charters in the vessel, operates it for a number of years and at the end of the charter period the vessel is delivered back to the leasing company, which, thus, assumes all asset residual risk, technical risk and operational risk. Dry-docking/special survey downtime is also borne by the lessor, who has the obligation to crew and maintain the asset.

Lessee Drawbacks of an Operating Lease As already discussed, lease structures generally tend to offer higher levels of finance than senior, secured,

plain vanilla debt finance. The overall (high-leveraged) lease structure will, thus, have an increased pricing when compared against a (lower leveraged) traditional, senior, secured debt facility—this is one of the main drawbacks of operating leases in exchange for the benefits they offer. Furthermore, the increased leverage increases the financial and default risk, and before lease structures can be accessed, the lessee has to evidence to the leasing company a successful track record and creditworthiness. With operating lease rental payments expensed in full under the income statement, a deterioration of earnings before interest, taxes, depreciation and amortization (EBITDA) and reduced net profit is also experienced, adversely effecting possible company valuation when the EBITDA multiple method is used. Finally, the lessee has no control over asset quality and cannot modify it as its operating circumstances may require. Operating leases for the shipping industry typically manifest themselves as medium to long-term time chartering in of vessel(s), or sale and immediate time charter back of the same vessel(s). Such structures may grant the shipping company option(s) to terminate early the operating lease by acquiring the vessel(s) at pre-determined intervals and price levels. Care should be taken when structuring operating leases so as to avoid their possible reclassification into finance leases. A lease would be classified as a finance lease if any of the four criteria listed above are met.

Lessee Benefits of a Finance Lease Almost always, the lessee will retain control of asset quality and have responsibility for the crew and maintenance, at least according to predefined parameters. The direct results of such increased responsibilities for the lessee under a finance lease are typically expected to be translated into a more competitive cost of capital than in operating leases. Finance lease rental payments are split into an "interest" and "principal" portion based on the implicit cost of the capital of the lease, with only the interest element expensed via the income statement, resulting in a better EBIDTA and net profit (the "principal" portion is expensed under the cash-flow statement).

Lessee Drawbacks of a Finance Lease Finance leases are reported on the balance sheet of the lessee resulting in higher leverage and a reduced return on assets. Residual risk is typically borne by the lessee. Finance leases for the shipping industry usually manifest themselves as medium to long-term bareboat charter in of vessel(s) or as sale and immediate bareboat charter back of same vessel(s), and are accompanied with purchase obligations at the end of the lease. Careful structuring of bareboat-based transactions can result in these being classified as operating (off-balance sheet) leases as opposed to finance (on-balance sheet) leases.

8.3.4 Ship Lease Providers

Lease providers for the shipping industry can be classified into three broad categories:

1. Those with good understanding, active participation and long-term commitment to the industry (financing institutions engaging in ship finance).
2. Those who are incentivized to offer such products driven by specific accelerated depreciation rules on shipping offered by the legislation of certain countries (e.g. German limited partnerships, French leases, Japanese leases).
3. Occasional participants who enter and depart from the industry throughout its cycles (private equity firms, insurance companies, pension funds).

Under category 1, the drive for the finance institution is to lever on the existing client network, market coverage and industry understanding by offering a wider range of products to its clients, thus increasing the profitability per client. It is a model that a number of banks have adopted and offer. Lease structures under category 2 are driven by investors' interest in exploiting what effectively represent fiscal optimization techniques that exist within the tax legislation of a country. Within such legislation shipping assets afford accelerated depreciation during the first few years of their life that invariably result in net losses for those years. Owners of such assets (group of investors) are then able to offset tax liabilities they have from other businesses against such losses. Such schemes are usually further linked to specific requirements for the technical and commercial management of the vessels, flag and tonnage tax, all of which have to reside within the country schemes. The German KG is probably the most known and sizable scheme that has ever been developed in this field, but similar schemes exist in countries like France and Japan.

It has to be noted that, although administrators of such schemes may be experts about the risks and rewards of shipping, it does not necessarily mean that participating investors have a similar understanding; further, the incentives of such investors and scheme administrators can be significantly different and misaligned, which can result in irrational decisions. The collapse of the KG system and overcapacity of the container shipping segment post-2008 is such an example.

In relation to lease structures under category 3, it should be noted that post-2008 and in particular during the period 2010–13, significant influx of external capital has been attracted to the industry from the insurance, pension and PE sectors. Despite shipping not representing a typical industry for such capital providers due to high volatility and unpredictability of earnings and

values, it has nevertheless attracted such capital. The interest of this capital in the industry has been fueled by the significant correction of earnings and values noted during the post-2008 financial crisis, and the evaporation of traditional ship finance sources following the banking crisis, while memories of extraordinary shipping super-cycle returns from 2004 to 2008 were still vivid.

Such capital providers tend to "acquire" knowledge by co-investing with shipping investment professionals under leasing structures or via the acquisition of companies, and they aim to create value by driving consolidation. Almost always, such investors have to follow specific horizons for their allocations and they tend to target returns that shipping does not always deliver within such tightly defined time frames.

8.4 Mezzanine Ship Finance

8.4.1 Forms of Mezzanine Finance in Shipping

Mezzanine finance is a form of capital which may have debt and/or equity characteristics and is applied between senior debt and common equity. It usually represents 15–25% additional leverage on top of senior debt that ordinarily provides 50–65% leverage, and carries an incremental risk profile, compared to senior debt, as mezzanine financiers' security position typically ranks below (is subordinated to) that of senior lenders (see Fig. 8.4).

Most commonly, in shipping, mezzanine finance takes the form of a debt instrument, a "mezzanine debt", which is also frequently referred to as "subordinated debt", since its security package is in every respect subordinated to that of senior debt. Senior debt always benefits from a first priority security package, including first priority mortgage and priority of payments, while mezzanine debt ranks second. The rights and obligations of these two debt instruments, which are usually provided by different lenders, are governed by

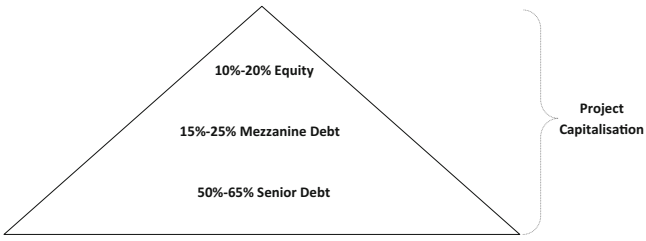

Fig. 8.4 Capital structure with mezzanine finance

what is commonly known as "an inter-creditor agreement" or "coordination deed". This document is negotiated between the senior and mezzanine lender and basically outlines that a mezzanine lender can enforce its securities only once the senior lender's obligations have been satisfied in full.

Mezzanine finance may also take other forms. It may be extended to a shipowner as a convertible bond, whereby the financier has the option to convert this debt instrument into a fixed number of shares of common (equity) stock in the shipping company. In view of their convertibility feature, convertible bonds offer to the financier an upside potential in case the company performs well and, as a result, they are issued with a relatively lower (coupon) pricing.

Mezzanine finance may also be extended to a shipowner in the form of preference shares, also known as "preferred equity". Under this form, mezzanine finance is not treated as a debt instrument. Preferred equity is not recorded on the liability side of a shipping company's balance sheet, but is instead recorded as equity, thus improving the company's gearing and leverage ratios. In their most common form, preference shares are issued with a fixed preferred coupon, usually as a percentage of the preferred equity portion par value (issue price). Preferred coupon payments take priority over common equity dividend payments; failure to pay the preferred coupon does not constitute a default of the shipping company's debt obligations.

8.4.2 Considerations in Mezzanine Finance

It needs to be highlighted that mezzanine financing not only is a riskier debt instrument, but that its "in-between" position in the capital structure also prevents it from exerting significant power or pressure on the borrower under stressed or workout situations. For example, in a scenario where the borrower is not performing his debt obligations as per the contract, a mezzanine financier may have difficulty enforcing his rights against his securities unless he fully aligns his interests with common equity, for example via a debt to equity conversion and surrendering all its securities, or taking out the senior lender in full (i.e. assuming full senior debt by pre-paying the senior debt amount in full). Therefore, mezzanine finance providers need to be flexible and always willing (and able) to accommodate such eventualities. Being a higher risk debt instrument, it always commands higher pricing and it is quite common to aim to enhance its pricing from equity linked performance parameters, such as an equity kicker or equity conversion rights.

Mezzanine facilities may follow an amortizing schedule, much like a senior debt loan, but may also offer what is known as a "bullet amortization", according

to which no principal amortization occurs during the duration of the mezzanine facility and the full amount becomes due at the end. Bullet structures offer lower strain on project cash flows but assume higher risk on maturity as vessels are depreciating assets with high volatility. Mezzanine structures can also offer "pay in kind" (PIK) interest structures, meaning payment in kind for interest. Under PIK interest structures no interest is paid in cash during the duration of the mezzanine facility; the interest cost is capitalized in the outstanding mezzanine facility amount and is paid in full at maturity. A bullet PIK mezzanine facility would be a very aggressive financing structure by a mezzanine provider and highly sought by the project's common equity holders.

8.4.3 Applications of Mezzanine Finance

Mezzanine finance can be used by a shipowner during a shipping company's expansion phase so as to reduce the equity injection needed for a new project. In addition, a shipowner may opt to use it to complement his or her company's capital structure during low markets, as a liquidity instrument, so as to convert the assets' locked in equity into cash. Provided that the cash flow from operations is adequate to service mezzanine debt obligations, and as mezzanine pricing ought to be less than the cost of equity, it will almost always be accretive to equity returns; however, in a cyclical industry like shipping, care should be taken because if the cash flow from operations cannot support such incremental debt, even for short periods of time, mezzanine lenders (who also tend to be more aggressive and proactive than typical senior lenders) will inevitably seek to use the opportunity to take control of the project, usually at the expense of common equity.

Mezzanine finance may also be used by senior lenders as a restructuring tool during low markets. In this context, senior lenders who experience a breach of loan to value covenants, which may in turn trigger lender needs for provisions under that facility, may have the flexibility to convert part of their top level senior debt exposure into a mezzanine tranche, thus reinstating compliance of the now reduced senior debt piece and commanding incremental remuneration for such accommodation; all under the same level of total exposure that in any case the lender held.

8.4.4 Advantages and Disadvantages of Mezzanine Finance

Mezzanine finance is particularly attractive as it reduces the shipowner's own equity capital contribution requirement during expansion phases and

is accretive to a project's cost of capital optimization. This form of finance is very flexible as it may be extended in different forms (the most typical of them being subordinated debt, convertible bond and preferred equity), its amortization and pricing can be structured according to the specific project's parameters, and it can be used creatively during stress situations. Last but not least, being a debt instrument, asset ownership and control continue to rest with the shipowner.

It should be noted that an important disadvantage of mezzanine finance (especially in its most typical form as subordinated debt) is that it can exert significant strain on cash flows during low shipping markets, increasing, thus, the risk and probability of default. Mezzanine finance is, therefore, best suited as a top-up leverage for vessels under long-term employment arrangements, as opposed to vessels trading spot. The incremental cost of mezzanine finance impacts on profitability, whilst equity performance-linked remuneration needs to be evaluated carefully so as to avoid mezzanine financiers from priming equity holders. Finally, mezzanine finance structures will generally increase complexity from a documentation perspective and will necessitate the involvement of experienced lawyers, representing an additional cost element for the shipowner.

8.5 Conclusion

Over the last couple of years and in particular since the credit crunch of 2008, structured finance has grown more popular in the shipping industry. As a consequence of the financial crisis and the ongoing problems in the traditional debt ship financing industry, structured ship financing methods are considered even more important than in the past. ECA-backed ship finance as well as leasing and mezzanine financing structures have been employed during the last couple of years by a number of shipping companies globally to support their capital-intensive projects. Invariably, leasing and mezzanine have also assisted shipowners in releasing equity that was tied up in their vessels, employing it for working capital purposes during the recent historically low freight rate environment.

During the last decade, the shipping as well as the ship financing landscape have dramatically changed. Almost all shipping sectors are characterized by significant overcapacity and, on the back of a slowing global economy, this is translated into a prolonged low freight rate environment and intense competition. At the same time, whilst the availability of traditional debt finance is significantly reduced, an increased amount of capital is being channeled into

shipping from other sources (such as PE investors, government supported export financing schemes and bond investors); this has increased complexity and sophistication. To survive in this highly competitive shipping environment, companies have to grow in size. Through the development of a critical mass, companies can establish themselves in the global shipping arena as a reliable service provider and achieve economies of scale, both in the operation of their vessels (commercial and technical management) as well as in the funding of their shipping investments. Following the financial crisis and with the debt market being in disarray, shipping companies are becoming more transparent, more sophisticated and investor friendly, in order to diversify their capital structure and achieve growth by tapping new sources of finance; during that process, the role of structured ship-finance has become more relevant and important.

Acknowledgement We are indebted to Nils Christian Hanke, Associate Vice President of KfW IPEX-Bank and Christoforos Bisbikos, Partner, Watson Farley & Williams for their valuable comments and contribution in respect of this section of the chapter.

Notes

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