
Discussion Paper

Object finance: The characteristics of shipping finance

August 2016

This document aims to foster debate on the future regulatory capital treatment of shipping finance, part of the specialised lending asset class. It is part of a series of AFME discussion papers looking at the specific characteristics of specialised lending asset classes, their risk profiles and regulatory capital treatment.

The paper sheds light on the shipping industry and its financing, which is key to supporting the conveyor belt of global trade. In addition to describing how shipping finance works in practice, it puts forward and industry-wide default and loss data. Moreover, it describes the structures shipping finance providers build into their deals to ensure they have several layers of protection and collateral acting as credit risk mitigants. It also looks at the other features that contribute to the low risk profile of this business. The paper suggests an alternative approach to Standardised capital treatment for these exposures, taking inspiration from commercial real estate capital treatment given its similarities with shipping finance: long life assets used as collateral. Nevertheless, the paper maintains that the most risk sensitive approach to capital requirements, i.e. the IRB approach, should continue be used by those banks who qualify for this method.

1. About shipping finance

Shipping finance is often classified within the Specialised Lending asset class and is a type of object finance.

IN terms of order of magnitude for market size, the construction of new vessels amounts to an underlying new building market valued in three-digit billions of dollars (about USD 100-125 billion per annum) and the annual sale-and-purchase activity amounts to a notional of one-fifth to one-fourth of such amount.

Ships are mobile units operating in international waters with global trading patterns. They are the conveyor belt worldwide industrial and commercial activities, providing transportation services and floating infrastructure to clients (shippers) across the globe.

The shipping industry is made up of many segments (e.g. dry-bulk, tankers (of many types, i.e. for crude oil, chemicals, or other products) container boxes carriers, LNG/LPG gas carriers, offshore services, cruise liners, etc....) with differing underlying supply-demand markets¹. Vessels are derived from a few, standard technical designs in order to allow for their proper and efficient integration in logistical supply chains. Shipyards must build ships that comply with various strict international (IMO), port and state registry regulations as well as requirements from insurers (class certifications) and even shippers (vetting), covering safety, security, pollution and efficiency standards.

¹ Note : leisure ships or yachts bought by individuals are not included in the Object Finance (Specialised Finance) category.

The various segments further subdivided according to vessel sizes, mostly according to transportation capacity and port/terminal constraints (e.g. draught, length of quay, availability of cranes...). The various dynamics – i.e. supply & demand- of the underlying markets allow for a high degree of positive diversification of financing portfolios.

Notwithstanding this variety in market types, financing arrangements usually share common security features based on legal frameworks having hundreds of years of history and which have been tested in many parts of the world over the years (hence the absence of a need for an international registry, such as the Cape Town convention and its various protocols for aircraft and newer assets, given that for ships there is broad recognition by courts over the world of national public registers).

Ship owning groups are generally not externally-rated companies given the size of their balance-sheets and the fact they generally have limited, if not no access to capital markets, due in particular to the effect of structural subordination. They range from shipping arms of large state-owned companies in emerging countries to small private family one-vessel businesses, through a very wide spectrum of corporate forms. Many ship-owners are active in more than one shipping segment. Depending on business model type, they may either operate in-house or outsource some commercial, operating or technical functions.

Lending by banks, either on bilateral or syndicated basis, is of paramount importance for such clients, given:

- (i) The expertise and operational flexibility required, and
- (ii) The lack of alternative source of funding (i.e. no access to capital markets)

A secured loan is typically granted to finance the acquisition of a new building or second-hand vessel and is amortised over a long duration (generally five to seven years' tenor (after the ship's delivery), calling for a balloon refinancing upon maturity.

Before delivery, a redelivery loan is sometime proposed to finance upcoming instalments to shipyards - secured through the assignment of the shipbuilding contract and of refund guarantees assigned to the lender - and is to be refinanced at delivery. Repayments of the loan flow from the revenues generated by the vessel, thus enabling the borrower to service the secured loan.

Use of the ship can vary widely, depending on which segment/subsegment it is categories as and may in fact vary over her life depending upon market conditions: bareboat chartering, time-chartering, pool employment, spot earnings, etc. In any case, the identification of a committed employment over a definite period after delivery which is payable by a third-party shipper enhances the repayment capacity of the vessel under the secured loan.

The borrower under a secured loan is typically a special purpose company (the “SPC”) set up by the borrowing ship-owner thus enabling:

- (i) the segregation of the ship, her financing and maritime liabilities from other ships, financings, maritime liabilities (and trade-debt) within the borrowing ship owning group,
- (ii) the lender to directly monitor the vessel’s earnings and
- (iii) the lender to benefit from securities over the vessel. This is achieved through implementing a security structure comprising, among others, a security on the ship (first priority mortgage under the law of the jurisdiction where the ship is registered), the general assignment of earnings and the specific assignment of a time-charter contract or her earnings (earnings accounts are generally pledged) and insurance proceeds in case of incidents or losses, as well as standard corporate and/or personal guarantees.

In jurisdictions recognising the lender’s senior rights (such as within the European Union where rights in rem are recognised as a carve from general insolvency rules (cross-recognition as per Regulation 1346/2000 – see article 5 -), the lender can secure the financing of the acquisition of the asset via a mortgage loan granted to a European-based corporate. In such a case, the repayment of the debt will come, as above, via the cash flows generated by the mutualised business of the corporate, thus enabling debt servicing. The main security on a secured loan will be the registered mortgage on the vessel (and related deed of covenant).

In both cases, the loan is predicated upon the ship’s collateralisation, her capacity to generate positive operating cash flow for the ship-owner, the credit quality of the ship owning group, and the legal framework that enables the lender to rapidly arrest and auction the ship (in a jurisdiction which is often a bunkering port) in case of an unresolved default.

Some shipping financing deals are structured on multiple assets and/or tranches:

- Fleet financing is a way for ship-owners to raise a revolving credit facility, whereby the drawing under the loan is controlled by a Value-to-Loan covenant to be tested at drawing (borrowing base). Alternatively, (or in combination with the former structure), a term-loan on multiple vessels is often used to turn to the syndicated loan market in order to raise substantial amount of financing and achieve economies of scale in terms of financing transaction costs. In any case, the loan is split in tranches by vessel for ease of loan management and lenders take a pro-rata share in the loan. Sale of any collateralised vessel by the ship-owner will generally lead to an early repayment under the loan enabling the maintenance of the same value-to-loan level.
- In the case of Export Credit Agency (ECA) financing, a commercial loan tranche can be combined with the ECA loan to allow for a longer tenor / slower amortisation than a 12-year full-pay-out OECD-conventional ECA financing. ECA financing and commercial loans generally have pari passu treatment and share same security package.
- Financing with tranches benefiting from a differing level of subordination is not very common:
 - In a few case of a stressed newbuilding market, a shipyard can offer seller-loan type financing to borrowers. Such financing are secured on the assets, but based on a second-ranking mortgage and subordinated bullet repayment.
 - When these types of financing are implemented, securities will generally be differentiated (2nd ranking mortgage, 2nd ranking assignment of earnings, 2nd ranking insurance assignment, etc.) and an intercreditor agreement will co-ordinate both first and second mortgagees’ rights (2nd mortgagee being generally deeply subordinated and having no rights to arrest vessels, but rather buy-out rights of the first mortgagee).

2. The risk benefits of the structures underlying Shipping Finance deals

- **Shipping finance benefits from tools enabling the tight supervision and management of the exposure**

Shipping finance relates to long life assets and from the fundamental underlying global trade in raw materials or finished goods, thus enabling visibility of underlying cash flows over the long run.

Loans are conservatively structured through the following pillars that all account for the strength of the structure:

- The assessment of the credit quality of the ship owning group: this is derived from the technical and commercial efficiency of the ship-owner, as well as its risk profile. Contractually binding financial covenants allow for controlling against any deterioration in the business or the financial risk of the client.
- The assessment of the legal structure: the vessel is generally segregated in a bankruptcy remote structure which enable the lenders to access the value of the asset in a cost-effective way.
- Computation of a proper advance rate of the loan at origination based on the committed employment of the vessel (relayed by time-charter equivalent breakeven rate calibrated on reasonably low market environment for the specific vessel type) over an amortizing profile that allows for a headroom in the expected economic life of the vessel. This initial loan amount should be compared to the assessment of the value of the asset at origination (certified by reputable independent brokers) and its future amount is to be compared to the projected value ranges over the duration of the loan.
- To deal with the potential volatility of the ship's collateral value and particularly to provide downside protection for the lender, it is typically contractually covenanted that the borrower must abide by a Value-to-Loan covenant at all times (sometimes also referred to as Security Maintenance Clause), which stipulates that if the value of the ship falls below a threshold – generally between 120 % to 140 % - of the loan outstanding, either the loan must be partially prepaid or additional collateral be posted (under the form of a cash-collateral or second mortgage) in a short period of time, if not leading to a default situation. The vessel's value can be requested from a number of brokers active either in specific shipping segments or across its wide spectrum and who are generally recognised within the shipping industry.

- **Powerful levers are available to lenders to positively turnaround any default situation**

In the case of a default, the secured loan can be either (i) rescheduled through the postponement of its initial maturity in exchange for increased margin and additional securities, which is usually possible given the long residual vessel life available after the initial maturity, or (ii) repaid through the judicial sale of the ship after her consensual (or conflictual) arrest.

The market liquidity of the ship is an important factor, notably linked to the operating performance of the asset. Therefore, lenders will cautiously select the type of vessels to be financed at origination and will implement physical inspection of the vessel in order to ensure proper maintenance and integrity of the vessel.

Repossession and recovery costs are also taken into account in structuring the deal which implies that the advance rate is much lower than 1, depending on the credit quality of ship owning group, and the type of ships. These parameters are fine-tuned on a case by case basis.

➤ **The risks of Ship Financing portfolios are diversified**

Diversification of risk is an important feature of shipping finance and banks benefit from favourable portfolio effects: while some segments of the shipping industry can be affected by periods of low rates on the spot market, and low vessel values, all the different types of vessels will not be at the low point of their cycle at the same time. Shipping is cyclical as it depends on demand which itself is driven by GDP growth, trade exchanges, etc. while the offer progressively adapts to changes in demand, but possibly with a certain delay when vessels have already been ordered and not yet delivered. For example, dry bulk transport is currently in a low cycle period, due to the reduction in coal transport for example, whereas tankers are in a good period of their cycle. When faced with a segment in a low cycle period, banks would generally restructure the loan and wait for rates to get back to a more favourable trend, which generally occurs when offer realigns with demand, as no new orders are passed given the depressed market, and as demand comes back to a more favourable trend.

3. Low loss rates

For all these reasons, shipping finance has experienced low losses. GCD² data pooling shows an average historical LGD of 8% for shipping finance.

	ODF	LGD	Loss Rate
Shipping finance	3,13%	13%	0,41%

ODF : Observed Default Frequency.

Source GCD . Risk free discounting rate, +5% were conservatively added to the historical LGD.

Assertions that specialised lending exposures (i.e. including shipping finance) exhibit higher risk/losses than other types of corporate exposures are therefore do not appear justified. Such statements are inconsistent with industry experience and data, as notably shown in the table above for shipping finance. Indeed, an average loss rates of 0.41% is much lower than for an unsecured corporate loan.

Generally, it is the secured and structured nature of this asset class (as shown above) that drives its low risk profile. Also, diversification between different types of vessels and charterers enable banks to have favorable portfolio effects.

² Global Credit Data Consortium

4. The proposed RSA approach

On an indicative basis only, and without taking into account a margin of prudence, we assessed the RW that would result from the default rate and LGD observed on historical data (see above).

	RW based on historical data	SA proposal	SA proposal/ RW with observed data , 5 years
Shipping finance	49 % - 43%	120%	2x ; 3x

RW calculated with an assumption of an average life of 5 years (49%) or more specifically 3-4 years (43%) given amortizing profiles generally with balloons and 5-7 years maturity.

Although not strictly comparable, the Basel Revised SA proposal would imply a RW around two to three times higher than what would be calculated with the observed default frequency and LGD data.

=> The Revised SA proposal seems overly conservative.

Indeed, the current RSA proposal does not reflect the underlying risk levels of these exposures and fails to recognise the value of the underlying collateral.

For example, under the new proposals, lending to a corporate without security on a vessel would receive a lower RW (100%), than lending with a specialised lending structure, ie with a 1st ranking security on the vessel (120% under the RSA proposal). In other words, the value of vessel under the SA proposal is not only considered to be 0 but actually makes a negative contribution to the risk weight.

Too much simplicity in capital treatment can have negative consequences:

- With the proposed RWAs not adequately reflecting the risks, the same RWA would apply to transactions of very different levels of risk. This can lead to the choice of the riskiest transactions by the lender, as they will have higher margins for the same amount of RW. Decision making by banks between transactions of different levels of risk may become biased and the quality of banks' portfolios over time would deteriorate.
- Conservative structuring would not be incentivised.
- The current SA proposal would strongly and negatively impact the Shipping Finance activity of banks and have strong negative impacts on the real economy, in both developed and emerging countries, implying a strong reduction of the volumes financed and a steep increase in the cost of financing.
- RWA is a key parameter in the allocation of their resources by banks. The current SA proposal would render the Shipping Finance activity uncompetitive at current pricing levels and it is likely that some banks would leave this market because of increasingly lower returns on equity.
- It would imply a development of the shadow banking, i.e. the development of non-regulated finance.

5. Alternative SA capital treatment

The nature of the underlying assets in shipping finance (long life assets, etc.), means that this category of asset finance is substantially similar to commercial real estate. Therefore, SA risk weights should be based mainly on the collateral securing the relevant exposure. Indeed:

- The general comment in paragraph 49 **page 34 of the RSA consultative document** (Real estate exposure class) can apply to object finance exposures where experience demonstrates “sustainably low credit losses associated with the exposures”;
- The requirements laid out in paragraph 50 **page 34** can be applied *mutatis mutandis* to aircraft/rail/shipping financing loans (with relevant drafting); in particular legal enforceability of creditors’ claims is effective and valuation of assets is generally appraised independently;
- **Object Finance assets are more standardised and loan repayment schemes are amortising versus bullet profiles.**
- The current RSA proposal does not reflect the low loss rates, of around 0.22-0.41 basis points observed on these asset classes, i.e. more than twice lower than for a corporate unsecured exposure.

⇒ **Proposal for an alternative SA for shipping finance:**

- **Based on observed loss rates for object finance, which are more than twice as low as unsecured corporate exposures, the following matrix for senior positions in Shipping Finance could be used (and is built on tables 11 and 12 from page 37 for CRE of the RSA consultation paper):**

Table 11 secured loan with recourse

	LTV <=70 %	70 <LTV <=85 * %	85% <LTV <=100 %	LTV >100 %
Risk weight	Min ([40 %-50%], RW of counterparty)	Min ([50%-75%] , RW of counterparty)	Min ([75 % -85%], RW of counterparty)	Min ([85%-100%], RW of counterparty)

Table 12 secured loan without recourse

	LTV <=70 %	70% <LTV <=85 * %	85% <LTV <=100 %	LTV >100 %
Risk weight	[50 %-60%]	[60%-85%]	[85%-95%]	[95%-100%]

*OECD consensus is [80 - 85 %] for Object Finance

- Using LTV buckets should trigger a progressive risk weight calculation in order to avoid cliff effects.
- **Should corporate exposure RW be reduced (e.g. from 100% to 75%), then the above mentioned matrix should be adjusted downwards accordingly.**

6. Conclusion

The Basel 2 framework has contributed to a more risk sensitive capital framework. Preserving this risk sensitive approach is fundamental to meeting the challenges of specialised lending and in particular of **object finance** and its ability to respond efficiently to market demand. Only risk sensitive approaches are able to select the most suitable lending activities, contributing to the stability of the banking sector.

A significant rise in specialised lending risk weightings would force banks to allocate much more capital against those exposures, which could only be achieved through a combination of increases in pricing conditions, degradation of loan terms to the detriment of the borrower (e.g. lower advance rates, shorter tenors). This process may ultimately lead to a large reduction in the volume of funds allocated to those activities by affected banks with a detrimental effect on the global economy.

RW levels should reflect the risk profile of these loans which are essential for the real economy in both developed and emerging countries.